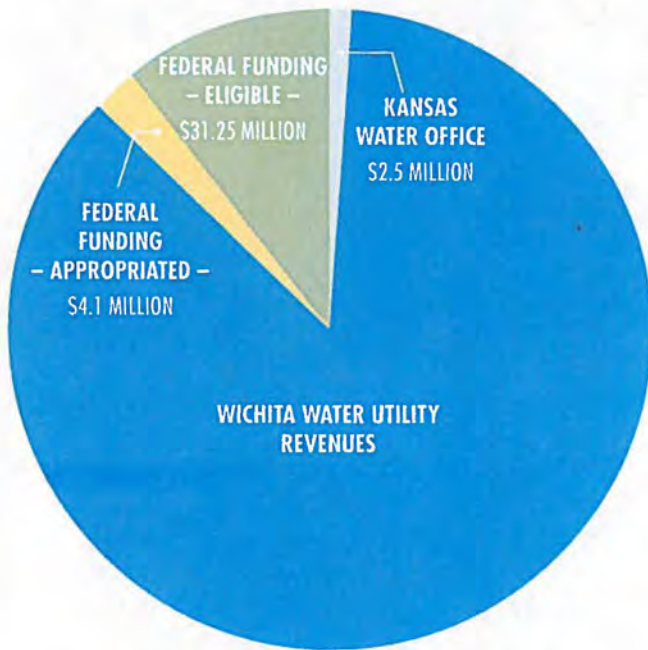




FUNDING SOURCES

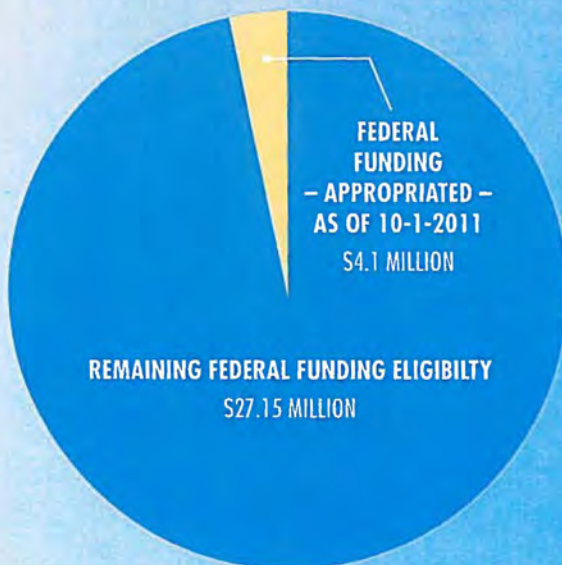
FOR EQUUS BEDS AQUIFER STORAGE AND RECOVERY (ASR) PROJECT



Total Project Funding \$227 million

- Kansas Water Office
\$2.5 million
- Federal Funding
\$31.25 million (eligible)
- Federal Funding
\$4.1 million (allocated)
- Wichita Water Utility Revenues
(rate payees and wholesale customers)
\$220.4 million

\$31.25 million Federal Eligibility



Federal Funding: 25% of \$125 million in Eligible Costs = \$31.25 million

- Federal Funding Approved
\$4.1 million
- Remaining Federal Funding Eligibility
\$27.15 million



Water for the Future 2050 and Beyond

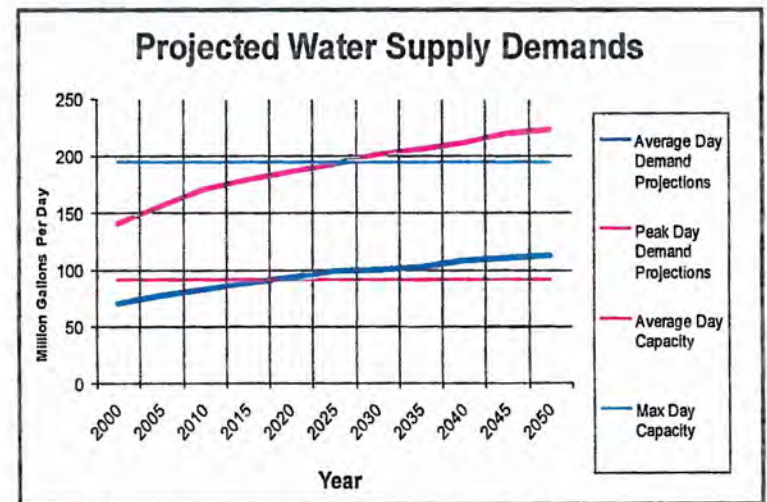
City of Wichita 2010

- Population - 380,000
- Population supplied with Water - 430,000
- 12 Water Systems served
- 164 Square Mile Service Area
- Miles of Water Lines - 2,359
- Miles of Sanitary Sewer Lines - 2,134
- Miles of Storm Sewer Lines - 780 +
- Average Water Use - 57.3 MGD - (63.2 2011)
- Peak Water Use - 101.82 MGD - (107.07 2011)
- Peak Hour Use - 154.69 MGD - (178.47 2011)

Wichita's Water Supply



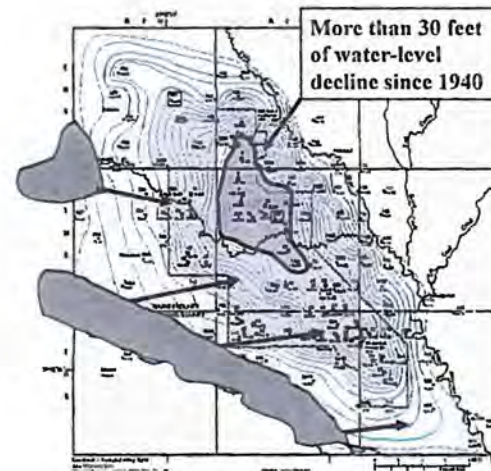
2000 Projected Demands



Integrated Local Water Supply Plan (ILWS Plan)

- Greater use of Cheney Reservoir - DONE
- Conservation Plan - In Place and in Progress
- Build a 100 MGD Aquifer Storage and Recovery (ASR) system - In Progress
- Re-develop the Bentley Reserve WF - 10 MGD - DONE
- Expand Local Well Field - 45 MGD - Permit Process
- Install additional raw water pipelines.
- Add a new water treatment plant - 65 MGD

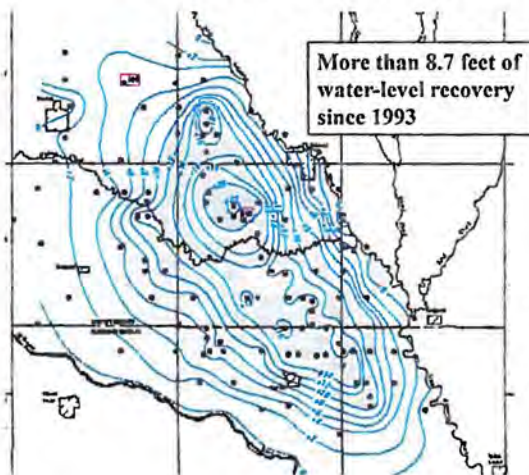
1993 Status of the Equus Beds



Since 1940, agricultural and municipal pumping created a depression encouraging migration of chloride plumes toward the well field

65 billion gallons available for storage to return to 1940 water levels.

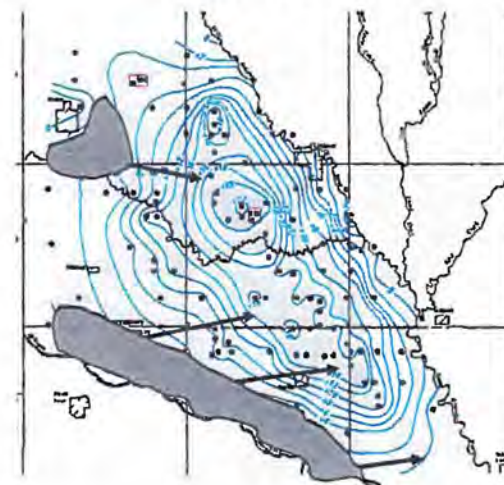
2010 Status of the Equus Beds



Since 1993, changes in Municipal water use and above average precipitation, water levels rose an average of 8.7 feet through January 2010

33 billion gallons recovery From 1993 in the Central Part of the Study Area.

Continued Risks to the Equus Beds



Chloride sources will always be present

Permitted Water Rights exceed safe yield. Maximum allowed withdrawal will deplete all gains within 4 years.

ASR Project

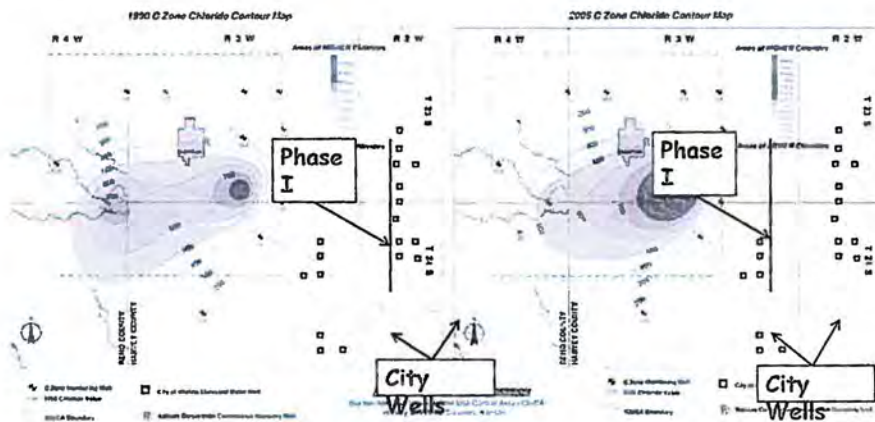
- Captures above base-flow from Little Arkansas River
- Uses both diversion wells and surface water intakes.
- Recharges the aquifer through recharge wells and recharge basins.
- Demonstration project recharged over 1 billion gallons
- 10 MGD ASR Phase I recharged 945 million gallons to date



Funding Sources

- The majority of ASR will be paid for by Wichita Public Works & Utilities Customers
- Both Federal and State agencies have appropriated funds for ASR.
- Bureau of Reclamation - \$30 Million
- Kansas Water Office - \$5 to \$7 Million

ASR Phase I - 10 MGD



ASR Phase II - 30 MGD



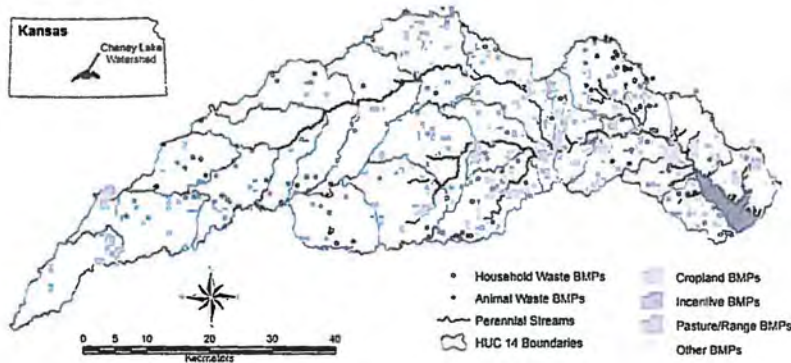
Cheney Reservoir – 1965 – 2065?



1992 Task Force Created
 Farmers saw high erosion of stream banks
 Wichita was experiencing taste and odor issues
 Cheney Lake Watershed Inc., and the Citizen's
 Management Committee

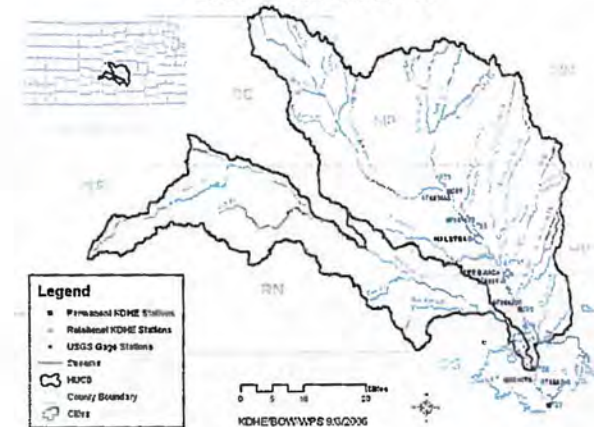
Can we extend the life of the reservoir from 100 to
 200 years?

1994 to 2006
 1369 projects implemented
 60,000 acres, or 13% of agricultural land has
 been treated and 112,000 acres in CIP



Little Arkansas Watershed

Little Arkansas River



Water Conservation

Water Management and Conservation Plan
(WMCP) December 3, 1991

- Water Metering and Accounting
- Water Pricing that encourages Efficiency
- Information and Education Services
- Water Conservation Coordinator

Water Conservation

- Landscape Programs
- Distribution System Audit Program
- Drought/Water Shortage Contingency Plan
- Conjunctive Use

Water Conservation

The City moved to an inclining block rate structure for water in 1993

- A customer's average winter consumption is used to establish the allocation volume for the first block
- Water use 111% above the AWC is charged at 250% of the base rate
- Water use 310% above the AWC is charged in excess of 440% of the base rate

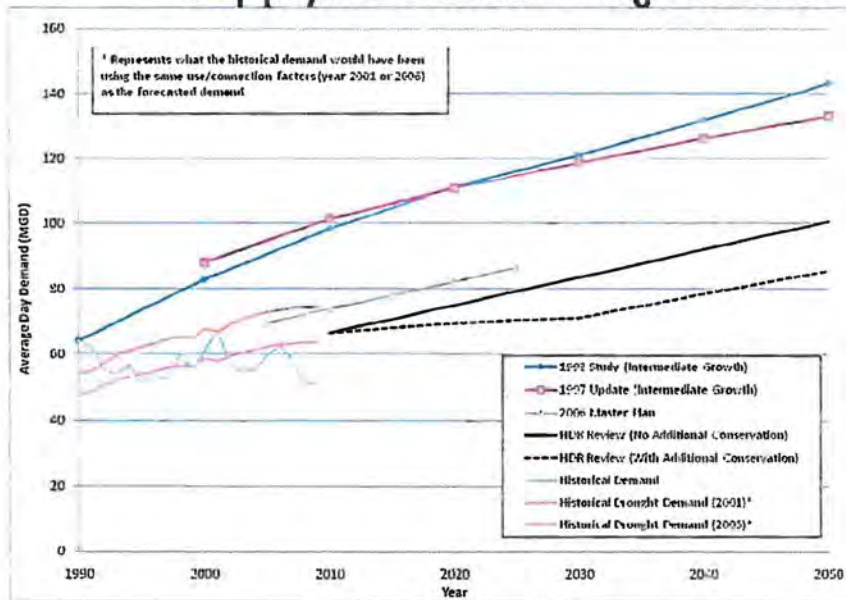
Water Conservation Challenges

Peak Demand

2010 1.78 x Average Day

2011 1.69 x Average Day (estimated)

Supply/Demand Projections



Updated Water Supply Needs

- 2010 Projected Demands through 2050
- Planning area - Wichita, all of Sedgwick County and western Butler County
- Average Day demand increases from 60 MGD to 85 MGD with conservation
- Peak Day Demand increases from 120 MGD to 171 MGD with conservation

Storm Water

Utility formed in 1992 and guided by a Storm Water Management Program to protect water quality, and to satisfy the requirements and goals of the Clean Water Act, and the City's National Pollutant Discharge Elimination System (NPDES) Permit.

The goal of the Storm Water Utility is to create a SWMP that fits Wichita well.



Storm Water

NPDES Implementation Phase II

Wichita/Sedgwick County Stormwater Manual - March 16, 2011

Stormwater Advisory Committee

2005 Flood Plain Task Force created

2009 RiverCity WRAPS launched

Storm Water

- Supports unique solutions for smaller sites
- Partnering with the Park Department and construction of pervious parking lots
- \$88 million in Storm Water and Flood Control improvements planned through 2018
- Floodplain Development Management Plan

Challenges

Aging Infrastructure (and staff)
Reactive vs. Preventive Maintenance
Increasing Service Areas
Ever Increasing Regulatory Requirements
Economic Development vs. Environmental Protection needs
Need for increased/continuous/consistent public education
Irrigation Practices and public perception
Funding/Economy

Storm Water Goals

Cost of Service Study

Future credit policy for homeowners and businesses who can eliminate runoff from their properties

Aging Infrastructure

- 2,359 Miles of Water Lines - Goal is to replace 6+ to 9 miles a year
- 2,134 Miles of Sanitary Sewer Lines - Goal is to rehabilitate 12+ miles a year
- City growth is projected at 0.77% a year and service territories are constantly growing

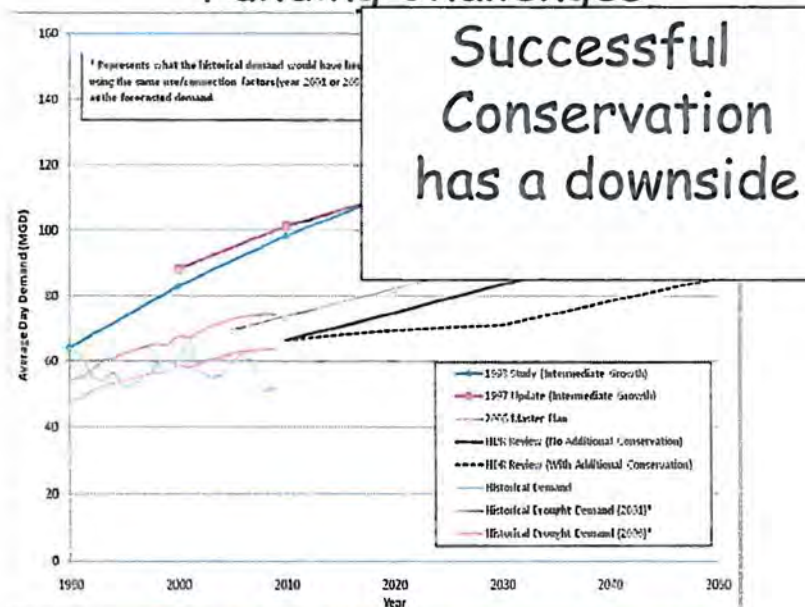
Aging Maturing Workforce

41% of Public Works & Utilities is eligible for retirement in the next 10 years

Regulatory Challenges

- Biological nutrient reduction in sewage treatment plant effluent (BNR)
- Chemical Facility Anti-Terrorism Security Act (CFATS)

Funding Challenges



Water only

2008 Electrical - \$102/MG

2009 Electrical - \$113/MG Water Treated

2011 Electrical - \$122/MG

2000 Treatment O&M - \$76/MG

2005 Treatment - \$94/MG

2009 Treatment - \$110/MG

2010 Review of Integrated Local Water
Supply Plan

2011 Cost of Service Analysis

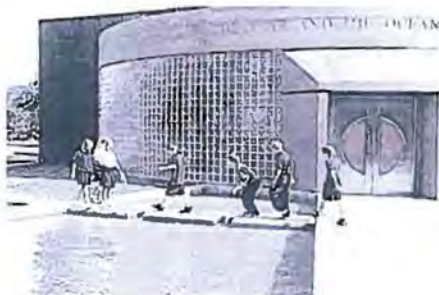
2010 Merge of Water and Sewer
Utilities with Public Works

Opportunities

- Grey Water Reuse
- Expand utilization of BioGas to generate electricity or sell
- Current Biosolids program
- Current lime residuals sales contracts

Water Center

2003, the Wichita Area Treatment,
Education & Remediation (WATER) Center,
the treatment center for the Gilbert-
Mosley Project



Where do we go next?