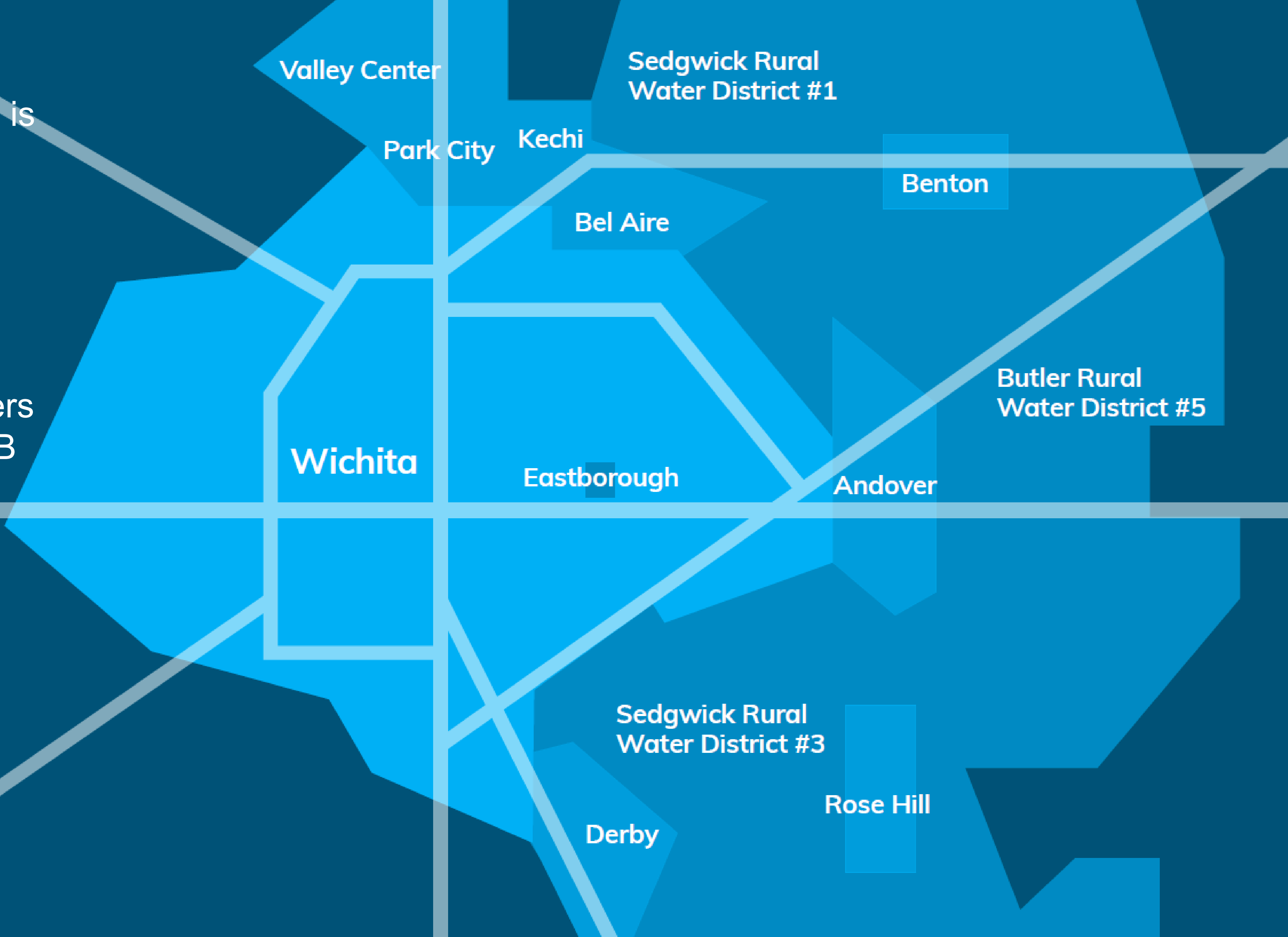
Governor's Conference on the Future of Water in KS – Solutions Beyond Ag

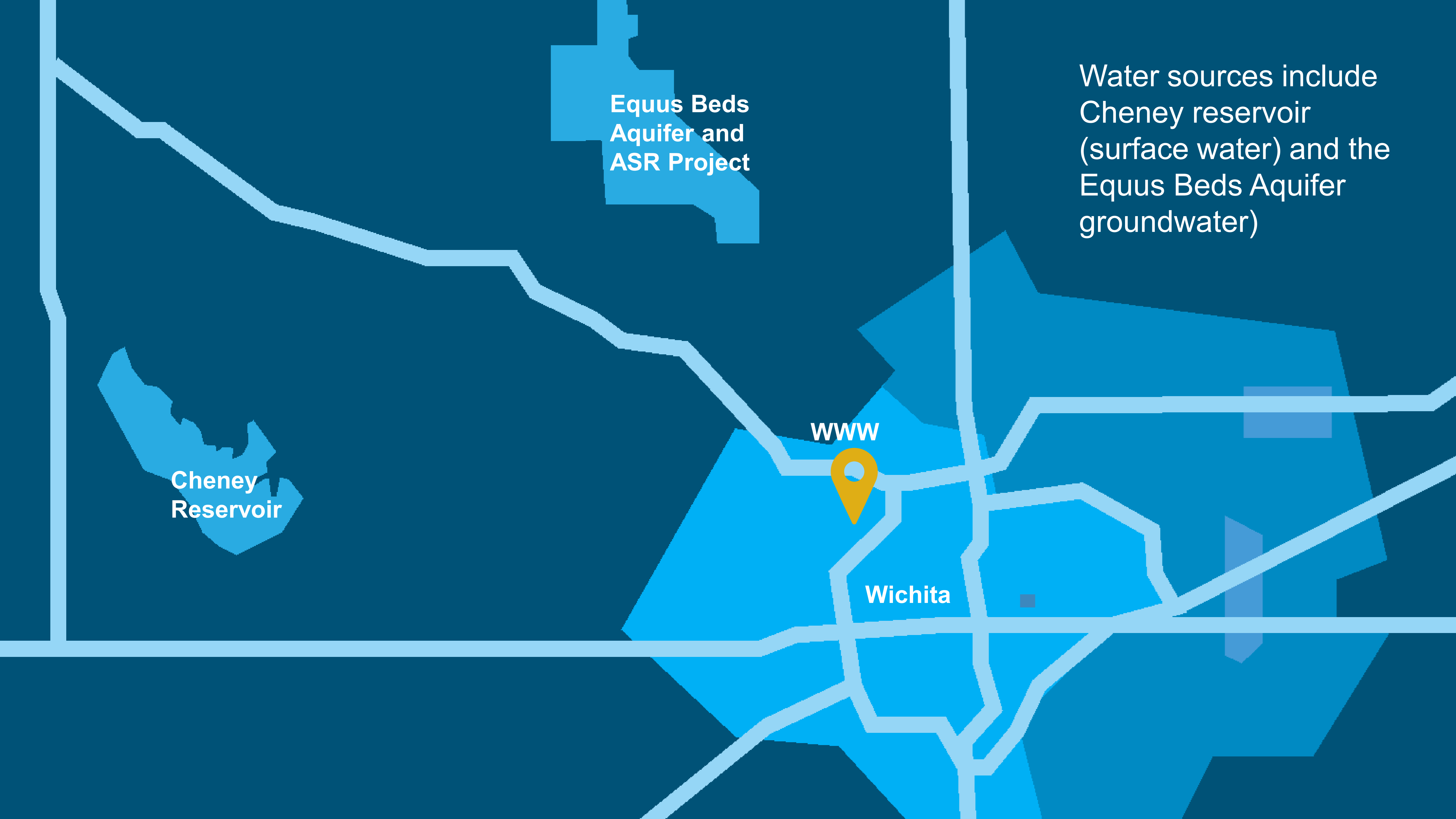
Wichita Water Overview

City of Wichita
Public Works & Utilities

November 12, 2025

The City of Wichita is a regional water provider to more than 500,000 customers in the Wichita area, including 11 wholesale customers and McConnell AFB





Water sources include Cheney reservoir (surface water) and the Equus Beds Aquifer groundwater)

Drought Response Plan

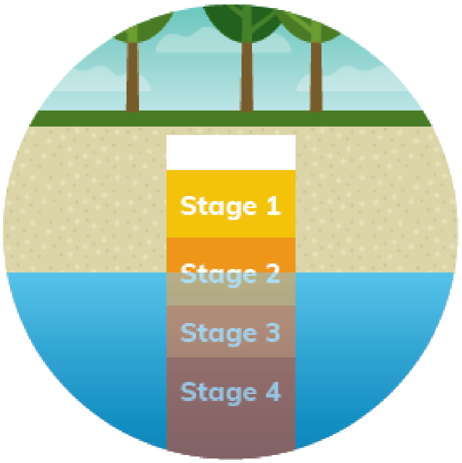
Escalating fines for watering infractions as drought stages progress

Stage 1

- Voluntary conservation
- City implement conservation measures

Stage 2

- Mandatory 1-day/week outdoor watering with exceptions
- Water rebates



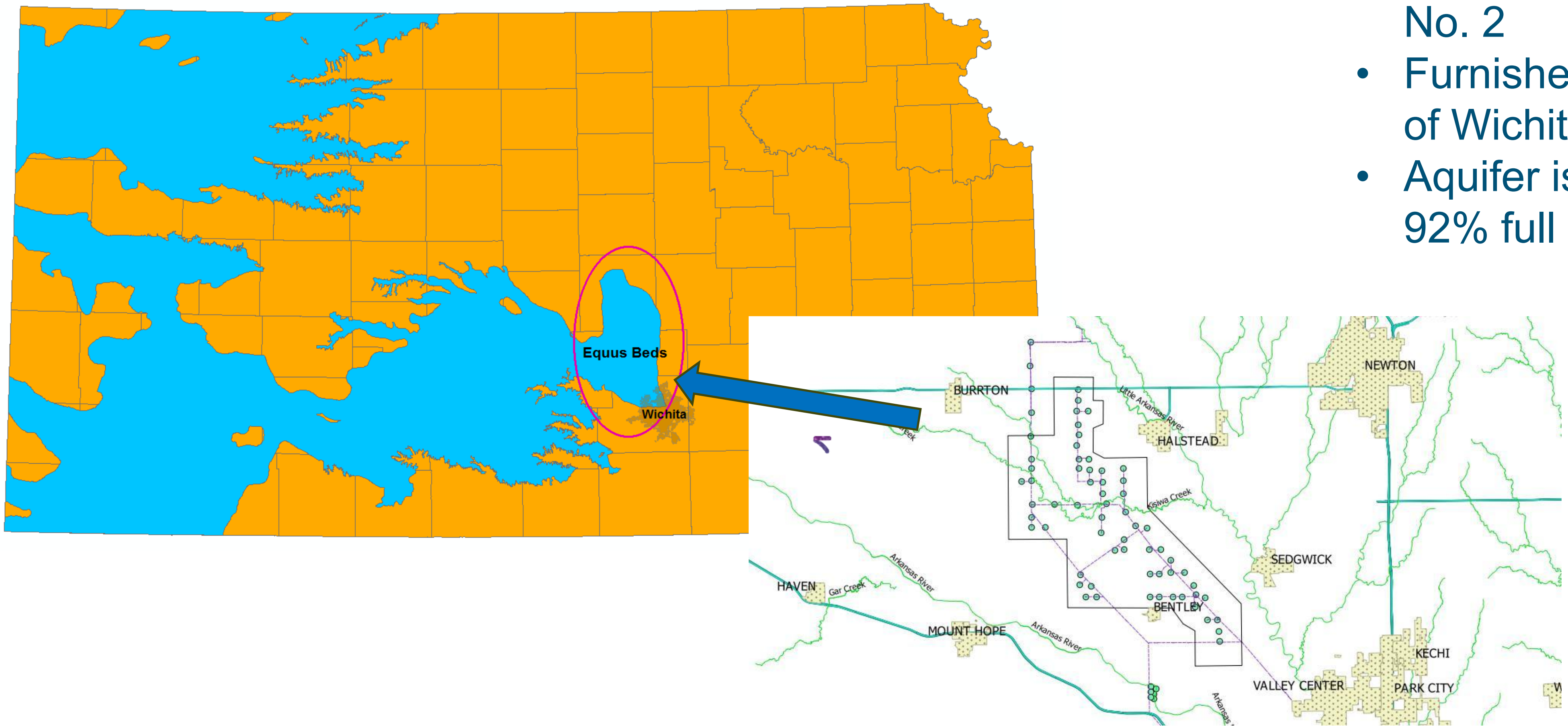
Stage 3

- **No outdoor watering**
- Food gardens still exempt
- **Core economic functions still exempt**

Stage 4

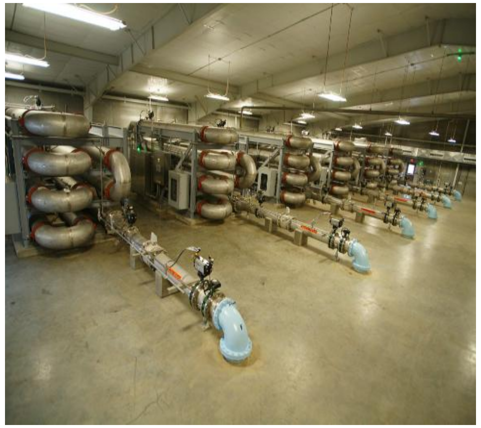
- Reduce indoor water use by 15%
- Eliminate all outdoor watering

Equus Beds Wellfield



- Wichita Central Wellfield is located within the Equus Beds in Groundwater Management District No. 2
- Furnishes about half of Wichita's water
- Aquifer is more than 92% full - ASR

Aquifer Storage & Recovery – ASR



- ✓ Divert
- ✓ Treat
- ✓ Inject

PROTECT

Wichita Water Works

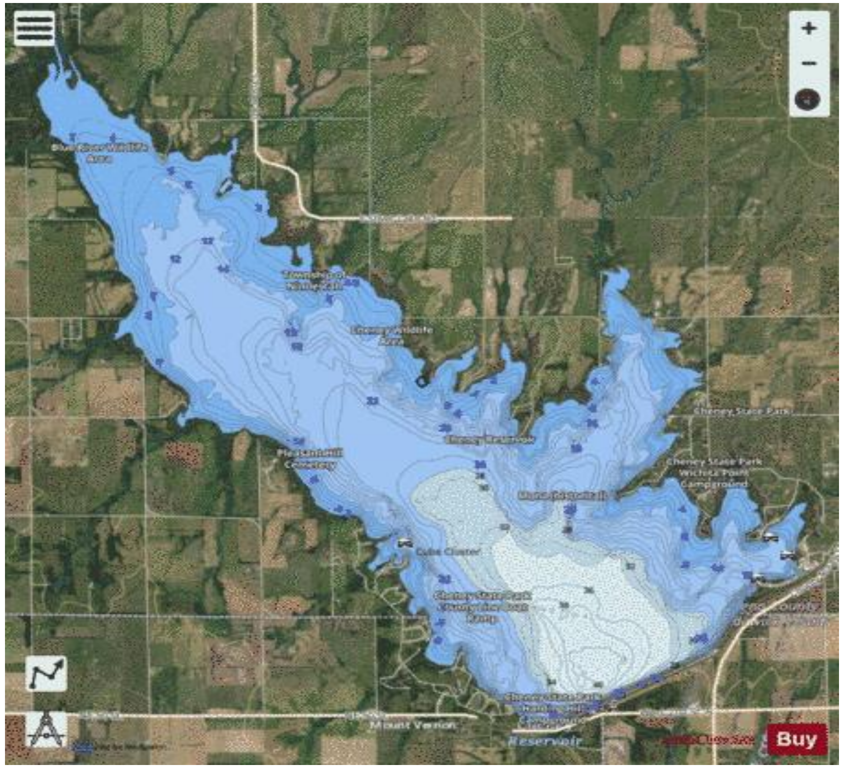
- State-of-the-art >$500,000,000 treatment plant
- Keystone for drought resiliency
- Will treat 100% groundwater or 100% surface water
- Built-in redundancy

New Ordinance and Conservation

Watering schedules plus:

- Customer rebate program
- Industrial reuse 1 MGD
- City internal conservation plan

Surface Water – Quality



The Cheney Lake watershed covers more than 600,000 acres across five counties.

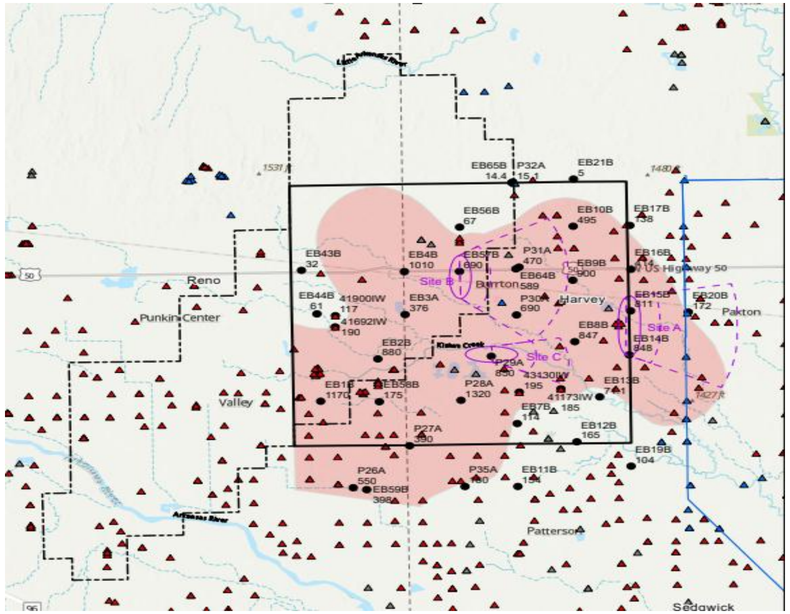
- Proactive collaborative watershed protection efforts have preserved capacity and quality.
- Partner with KSU, KS WRAPS, Cheney Lake, LLC, McPherson Conservation Dist. to fund BMPs, reducing sediment and nutrient runoff into the North Fork of the Ninnescah River and Cheney Lake.
- Includes converting farmed land to grazing, fencing of grazing pastures, and establishing feed and water stations away from streams and areas prone to runoff and erosion. Minimizing nutrients helps to prevent and reduce harmful algae blooms (protects water quality, guards against taste and odor, and protects recreation and wildlife).
- Ozonation: Breaks down Geosmin, naturally occurring compound in surface water that creates taste and odor issues. Also protects against HAB

Groundwater - Quality

- **Atrazine** – Advanced oxidation process (AOP) for ASR breaks down
- Partner with the Little Arkansas River WRAPS to fund BMPs aimed at reducing atrazine in runoff
- City's Offsite Stormwater BMP Program includes contractual requirements for atrazine BMPs where conventionally tilled fields are converted to no till. The program also greatly reduces sediment and therefore nutrients in runoff.
- **Bromide** – higher levels of bromide in the Little Ark appear to be associated with contamination in the Turkey Creek watershed. Care must be taken when running the AOP system as oxidation of bromide forms bromate. ASR cannot treat higher level of atrazine because of bromate formation.
- **Chlorides** are a concern in the Equus Beds due to historic petroleum activities near Burrton. Chlorides also emanate from the Ark River into the groundwater.
- Artificial recharge from ASR helps maintain higher aquifer levels. Higher aquifer levels help impede migration of chlorides into the City's wellfield. Wichita has the ability to blend water and keep chloride levels within required parameters.

Little Ark River Intake - ASR

Equus Beds – Burrton Chloride Plume



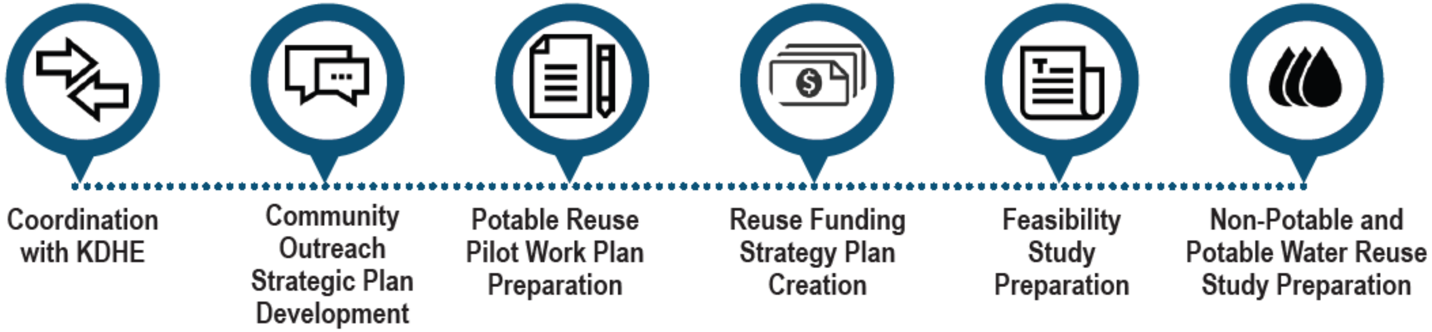
Recycling & Reuse

WICHITA WATER REUSE PROGRAM OVERVIEW

CITY OF WICHITA

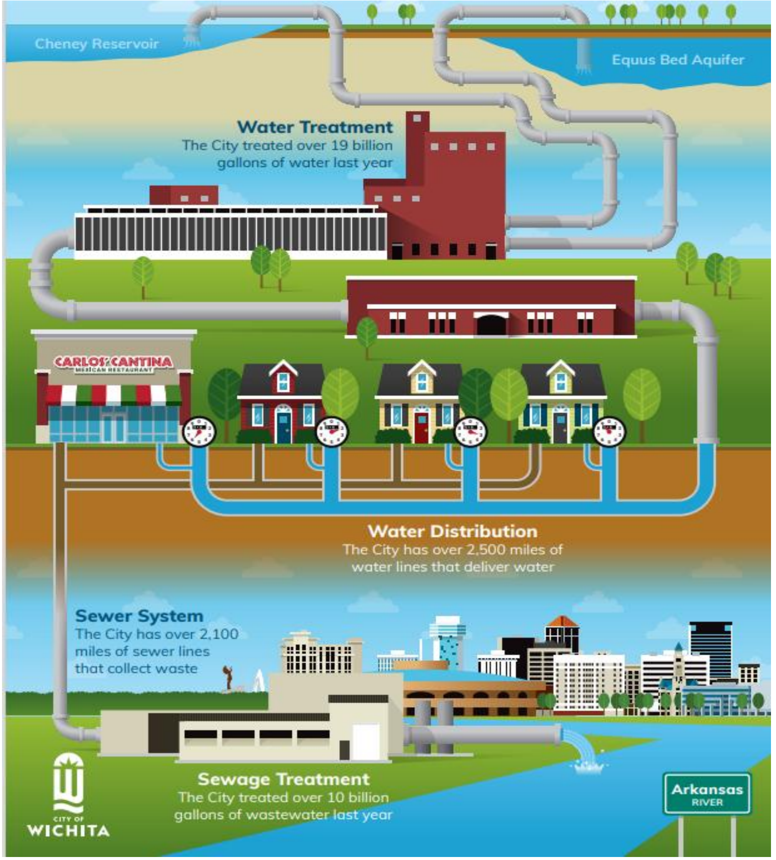
THE OPPORTUNITY: WATER REUSE MASTER PLAN

Wichita is actively developing a **Water Reuse Master Plan** to determine recommendations for creating new, reliable water supplies to support our growing community and provide resilience during drought conditions. The plan would provide the means for anyone in Kansas to undertake potable reuse. **Elements of the master plan include:**



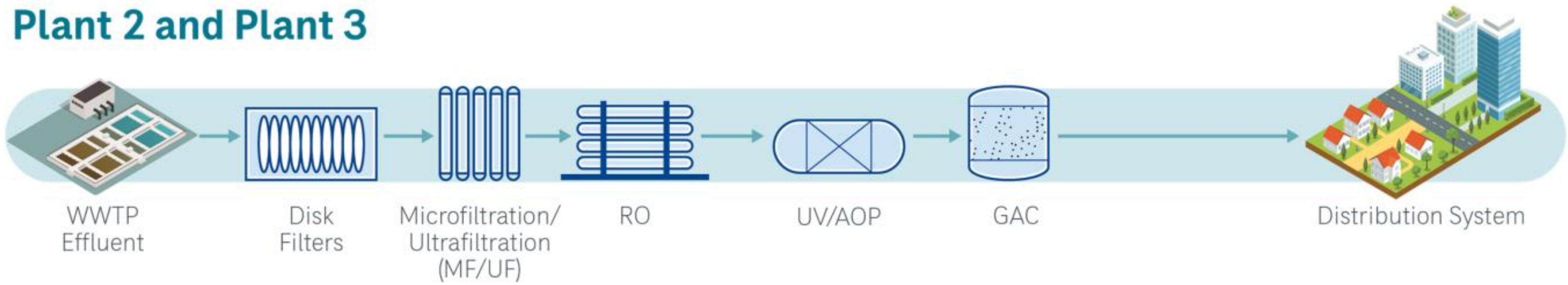
Reclaimed Water and Recycling

- The average base demand for Wichita is ~ 50 MGD.
- Plant 2 effluent alone could furnish almost half the daily supply.
- Bolster drought resiliency.
- Provide supply for emerging industries and future growth.



High quality effluent will be enhanced with BNR

Advanced Purification for Recycling - DPR



- Steering Committee, stakeholder engagement- public perception and acceptance will be key.
- State regulations will need to be developed and implemented.
- Redundant treatment trains ensure proper treatment.
- Studies and demonstration project will inform regs.
- Look to other state regulations – California, Colorado, Texas.

City of Wichita
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www.Wichita.gov
www.savewichitawater.gov

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