

Parker Water and Sanitation District – Water Reuse

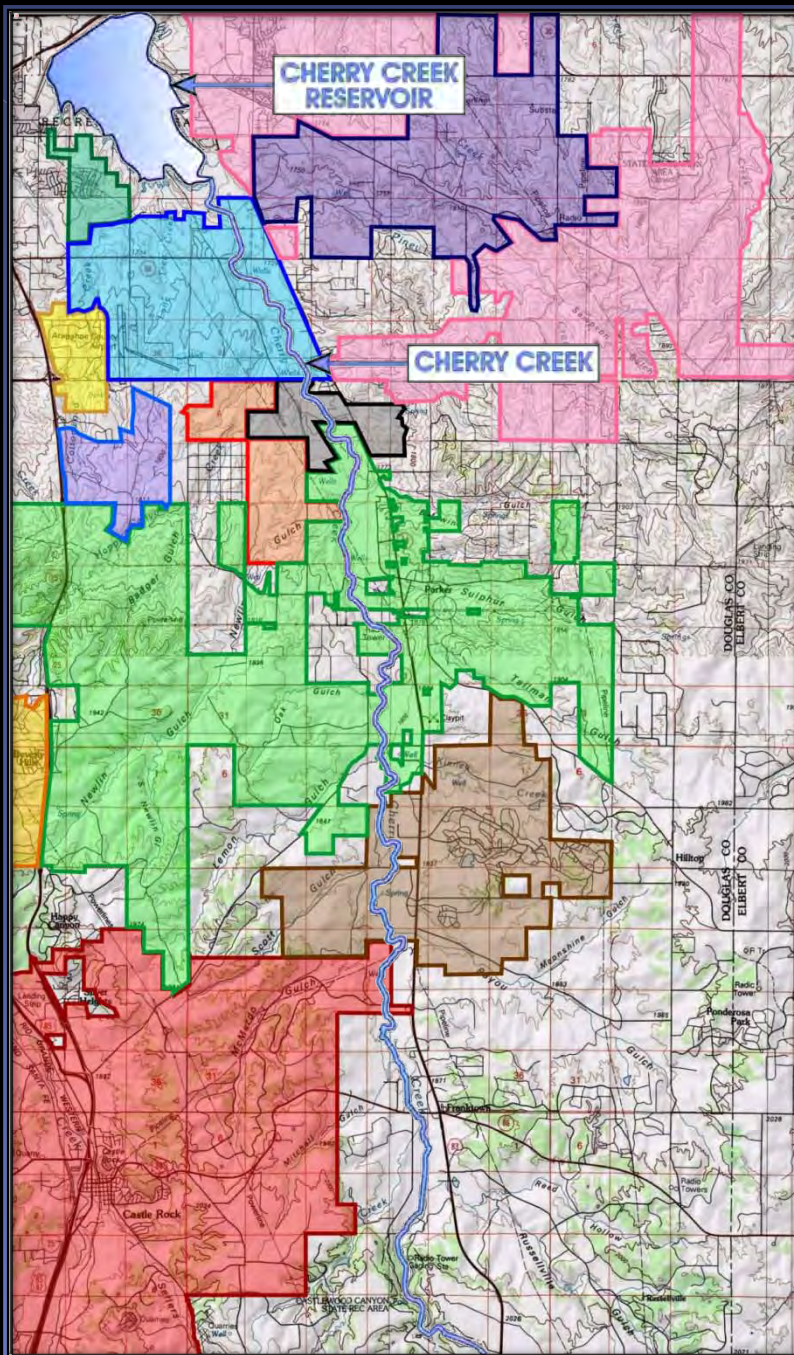
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Lytle Water Solutions, LLC

Presentation Overview

- Introduction to Parker Water and Sanitation District (PWSD)
 - Why is Reuse Important?
- PWSD's Reuse System Through Time
- Rueter-Hess Reservoir's Impact on Reuse
 - Looking Forward

SERVICE BOUNDARIES



PWSD Through Time

- 1962 PWSD is formed
- 1973 – Serving 400 single-family equivalent (SFE) taps.
- 1985 – Serving 1,200 SFE taps.
- 1985 - Work begins on identifying a reservoir site.
- 1988 – Advanced Wastewater Treatment (AWT) plant constructed
- 1992 – Obtains 1st augmentation plan allowing use of alluvial wells

PWSD Through Time

- 1999 – EIS Permitting on Rueter-Hess Reservoir begins and continues until 2008
- 2004 - Second AWT plant constructed
- 2012 – Rueter-Hess Reservoir completed.
- 2012 – Water Treatment Plant construction begins.

MAXIMIZING REUSE

RESIDENTIAL CONSUMPTIVE USE

IN-HOUSE: $0.25 \text{ ac-ft/yr} \times 0.1 = 0.025$

OUTDOOR: $0.25 \text{ ac-ft/yr} \times 0.85 = \underline{0.213}$

REUSE

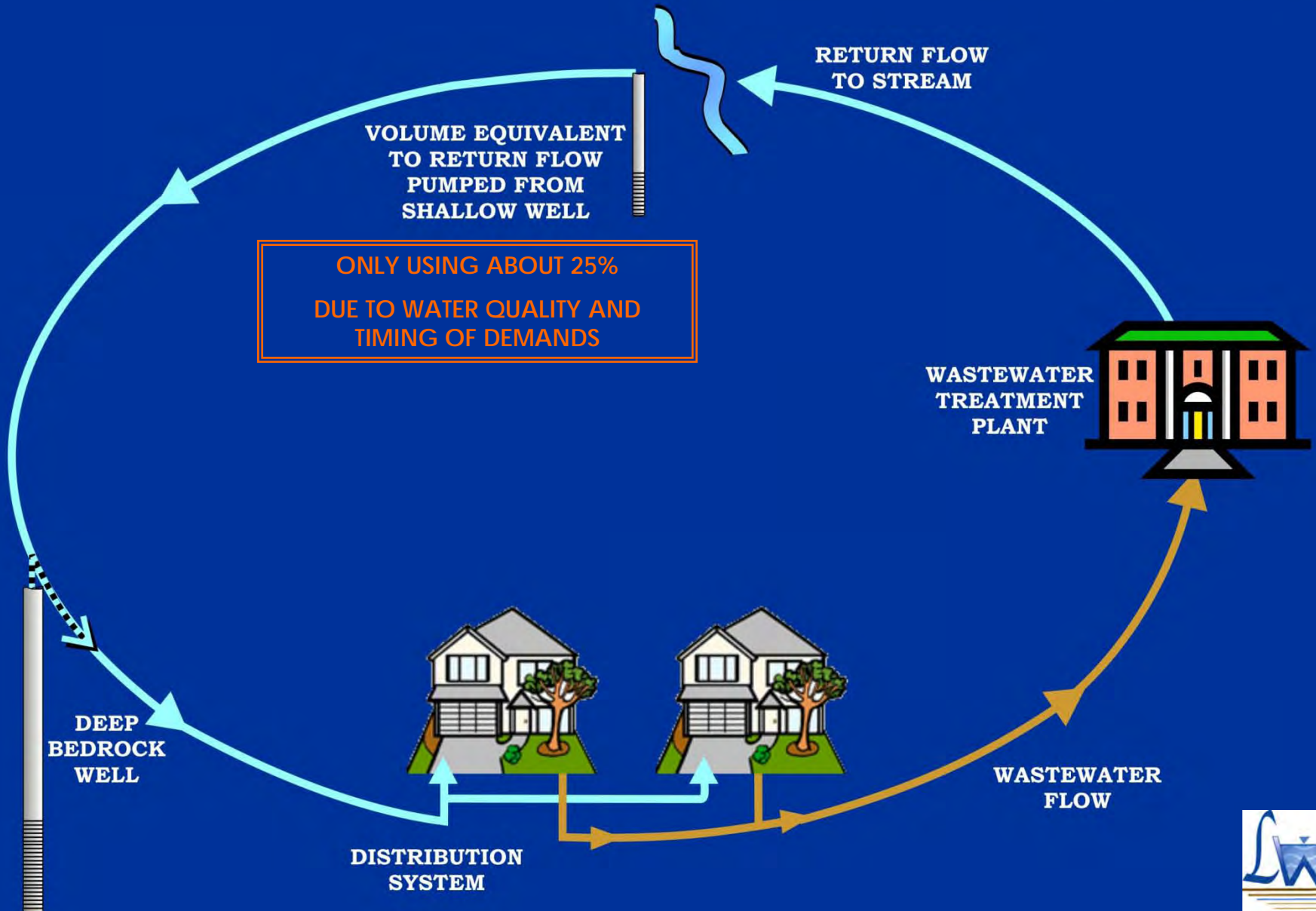
0.238 (48%)



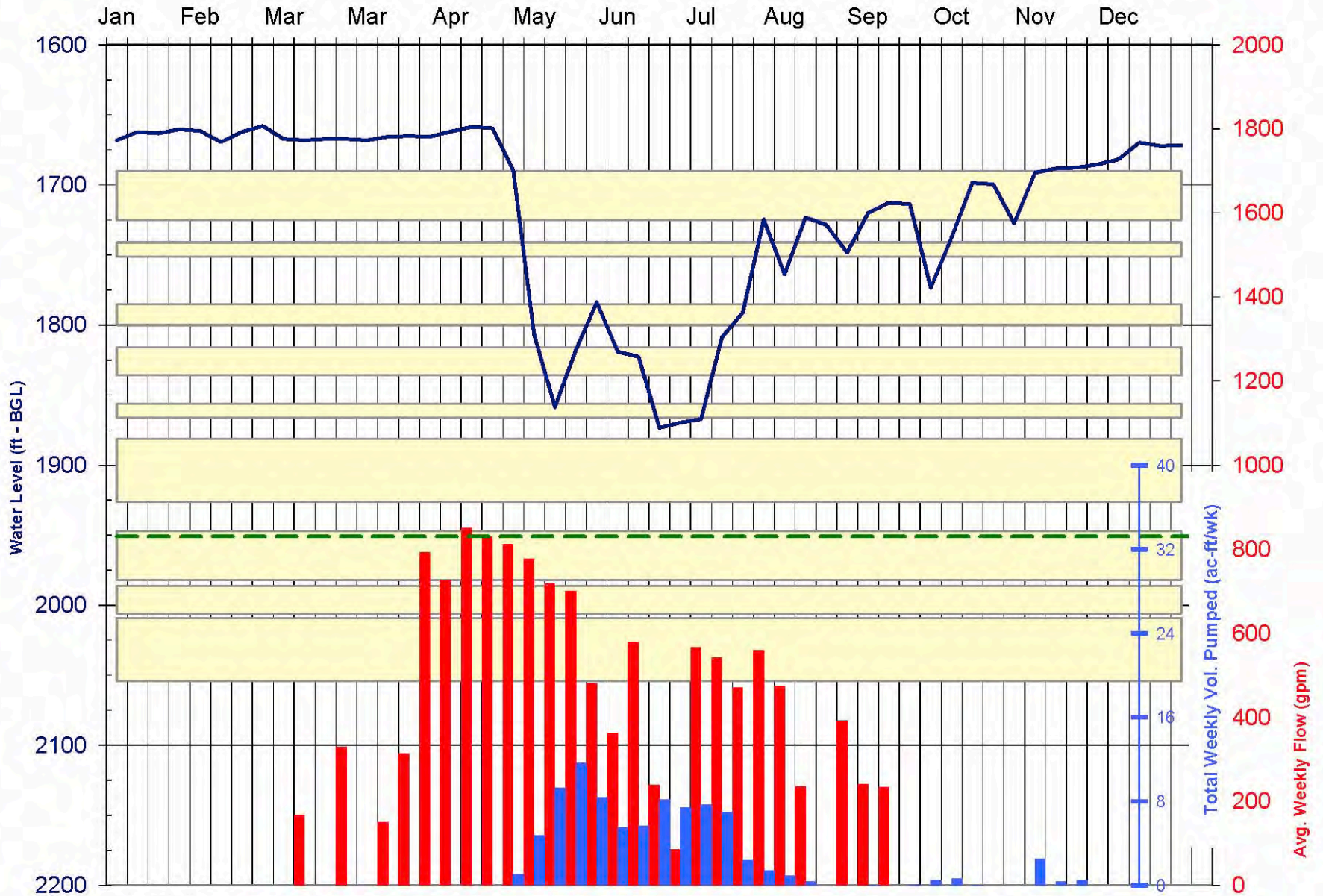
**REUSE DOUBLES THE USE OF
FIRST-USE WATER**



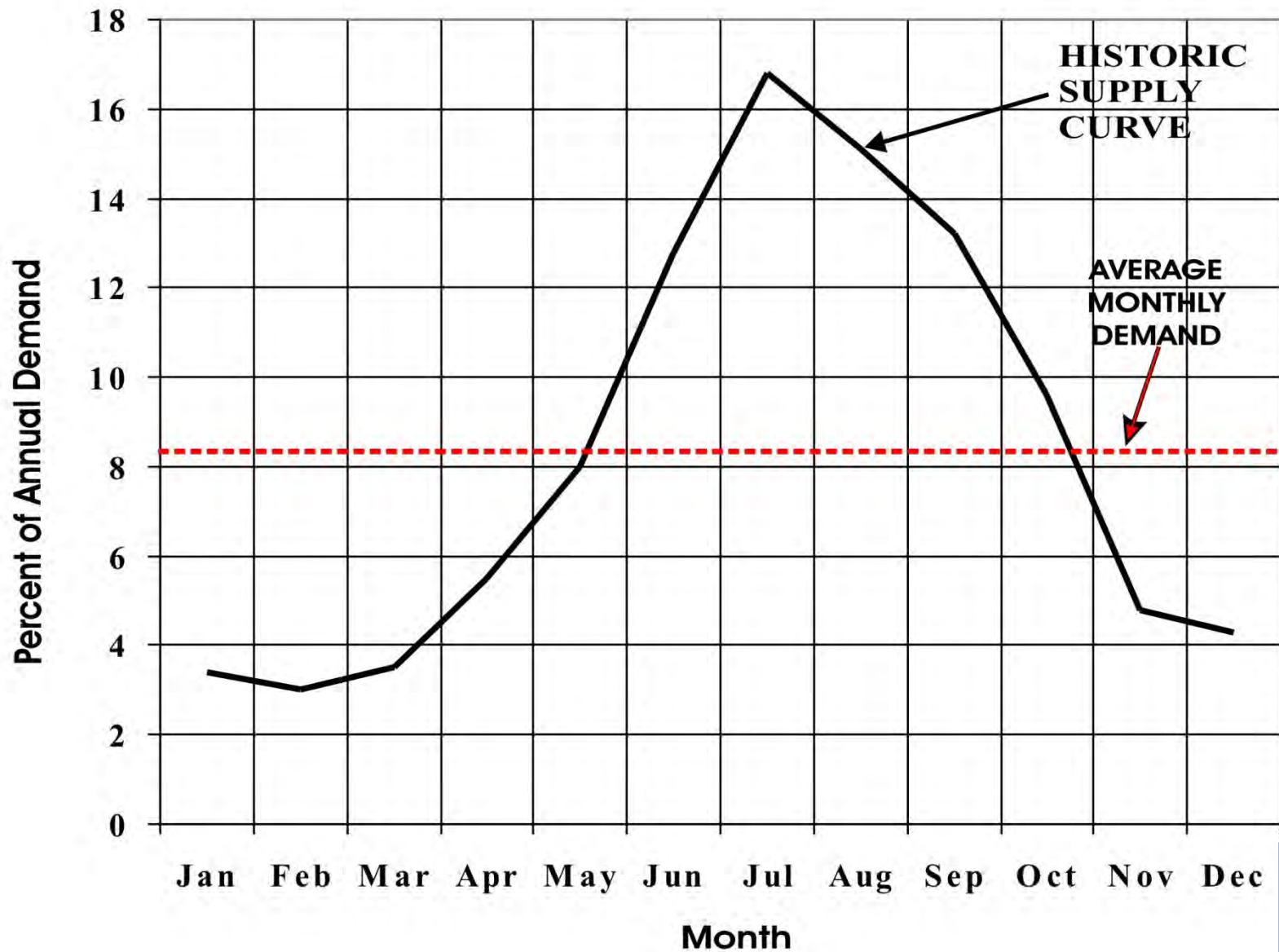
HISTORIC WATER REUSE



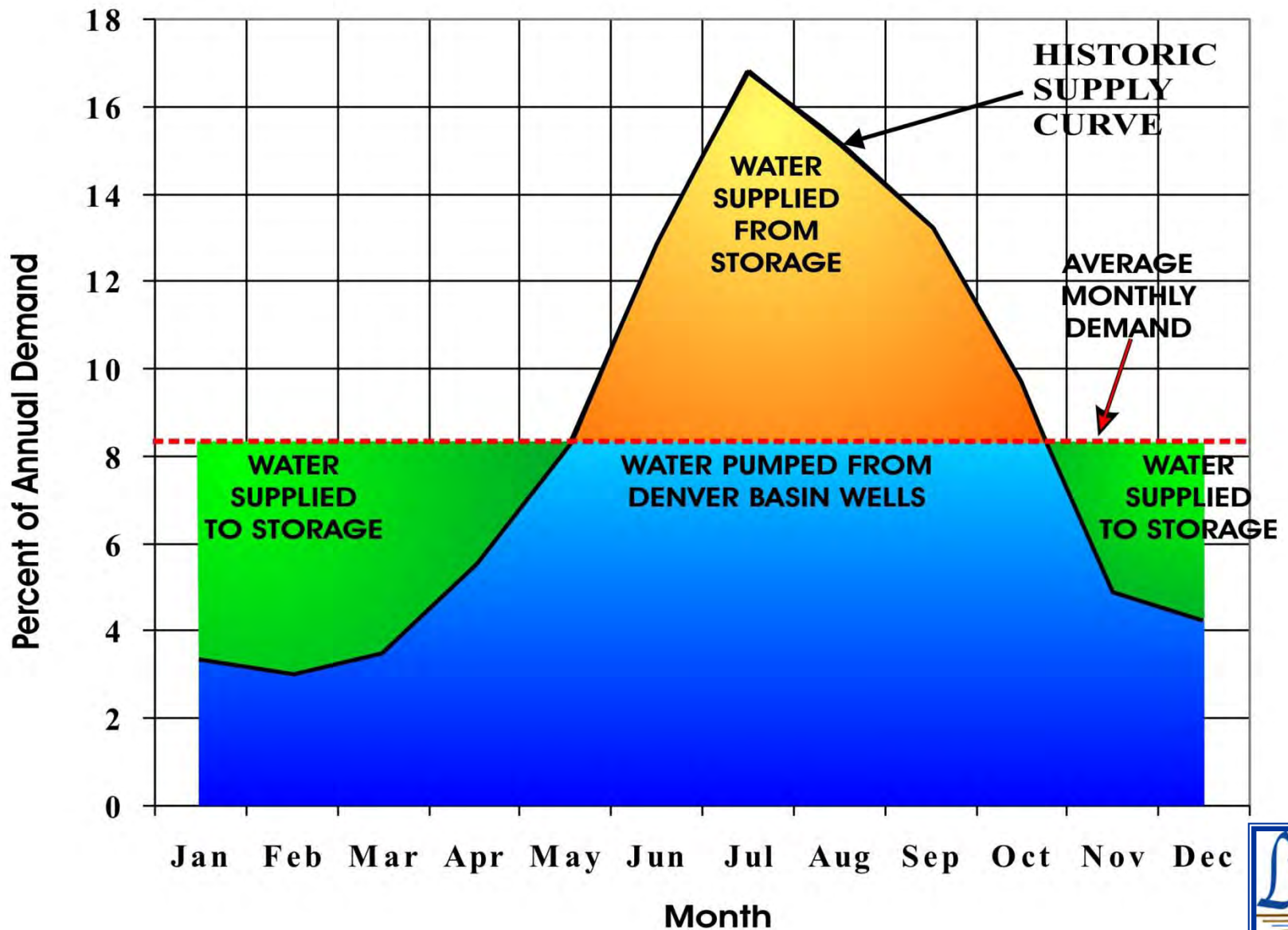
DENVER BASIN PEAKING



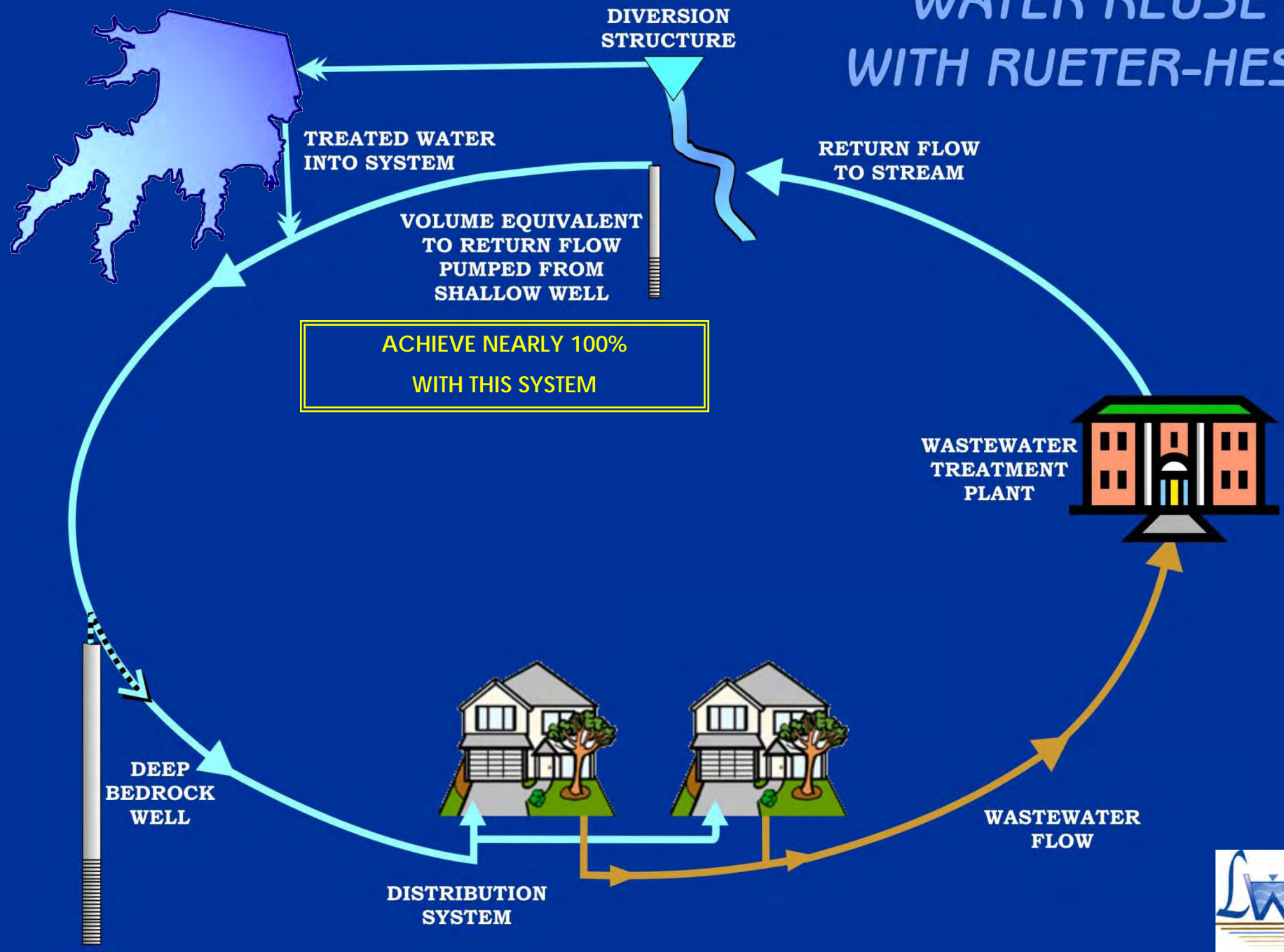
MODIFIED WELL SUPPLY CURVE



MODIFIED WELL SUPPLY CURVE



WATER REUSE WITH RUETER-HESS

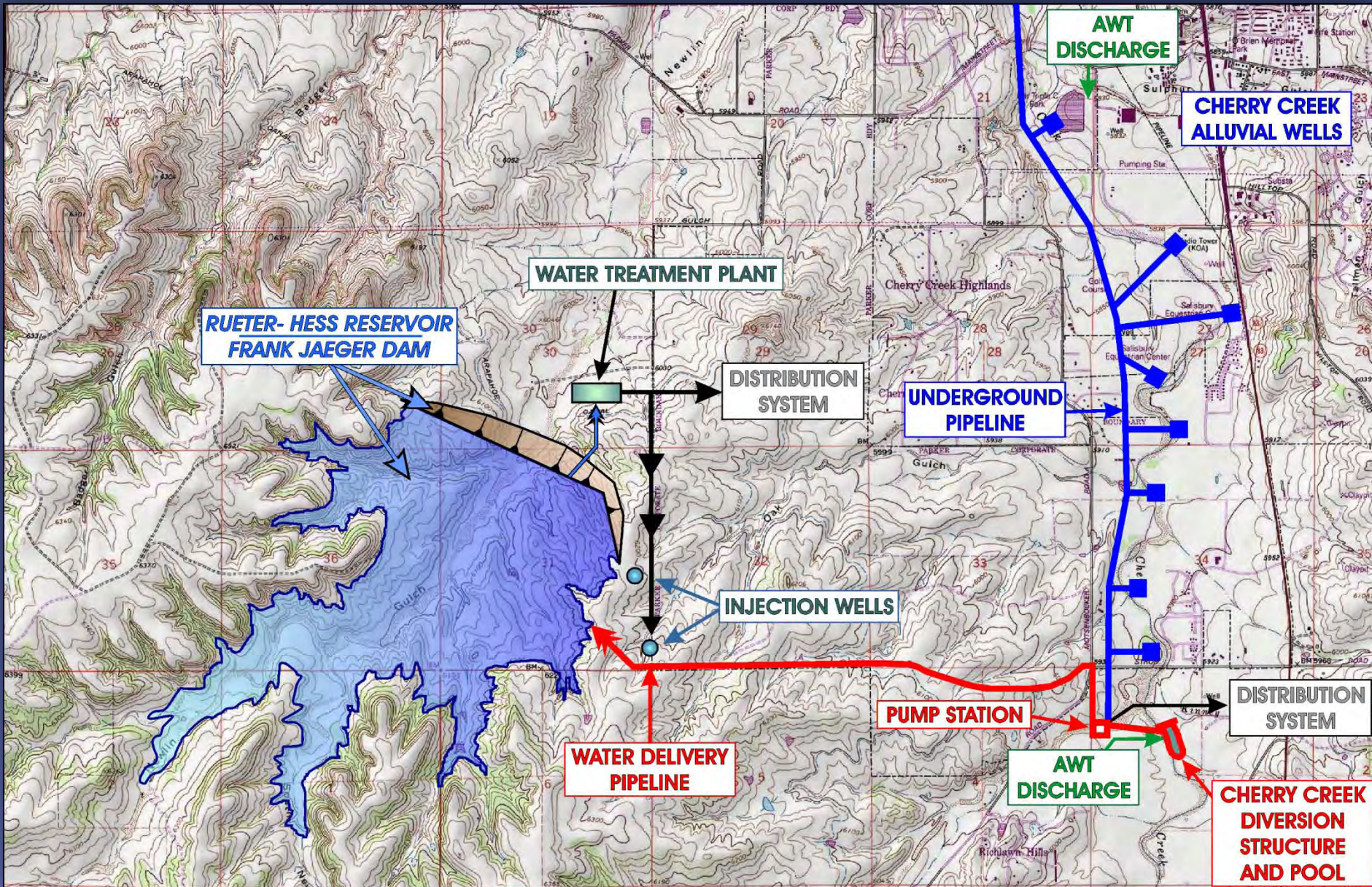


WATER STORAGE

- SUPPLEMENT DIRECT FLOW, AUGMENTATION, AND EXCHANGE RIGHTS
- RE-TIMES WATER FROM FLOW AVAILABILITY TO DEMANDS
- EFFICIENT WATER MANAGEMENT TOOL



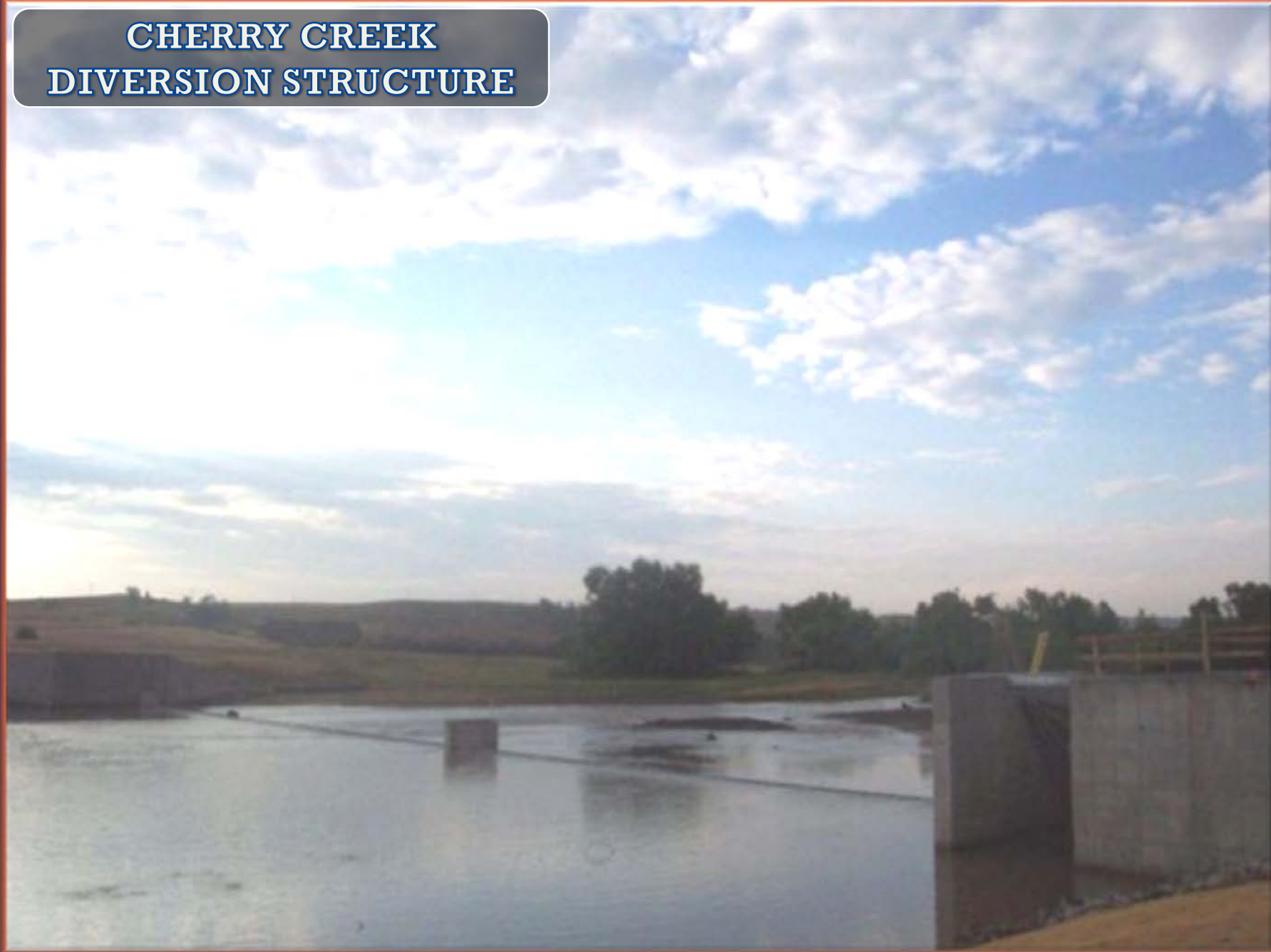
RUETER-HESS RESERVOIR COMPONENTS



CHERRY CREEK DIVERSION STRUCTURE



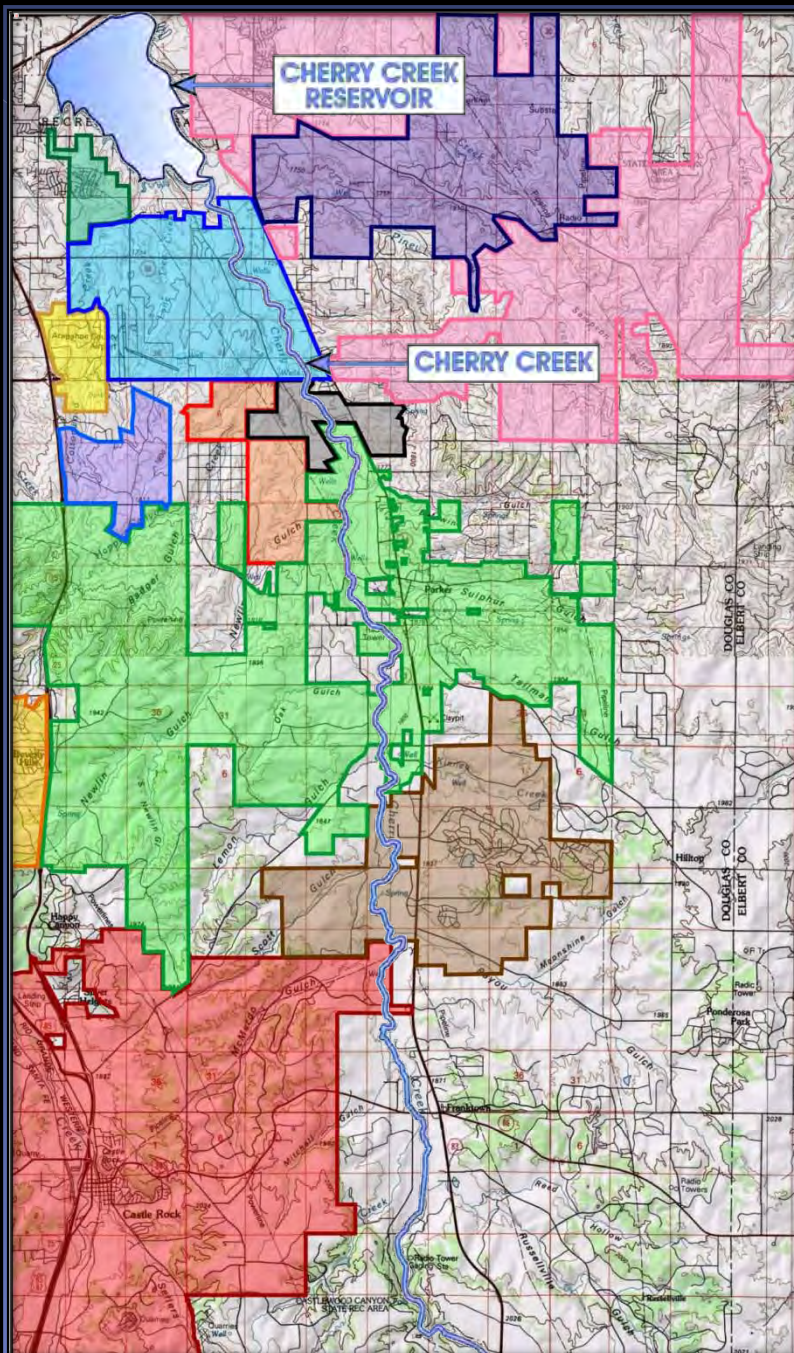
CHERRY CREEK DIVERSION STRUCTURE



PWSD – Looking Forward

- Local cooperation to better manage the Cherry Creek Basin
- Other Reusable Water sources
 - WISE Project
 - Parker Farms

SERVICE BOUNDARIES

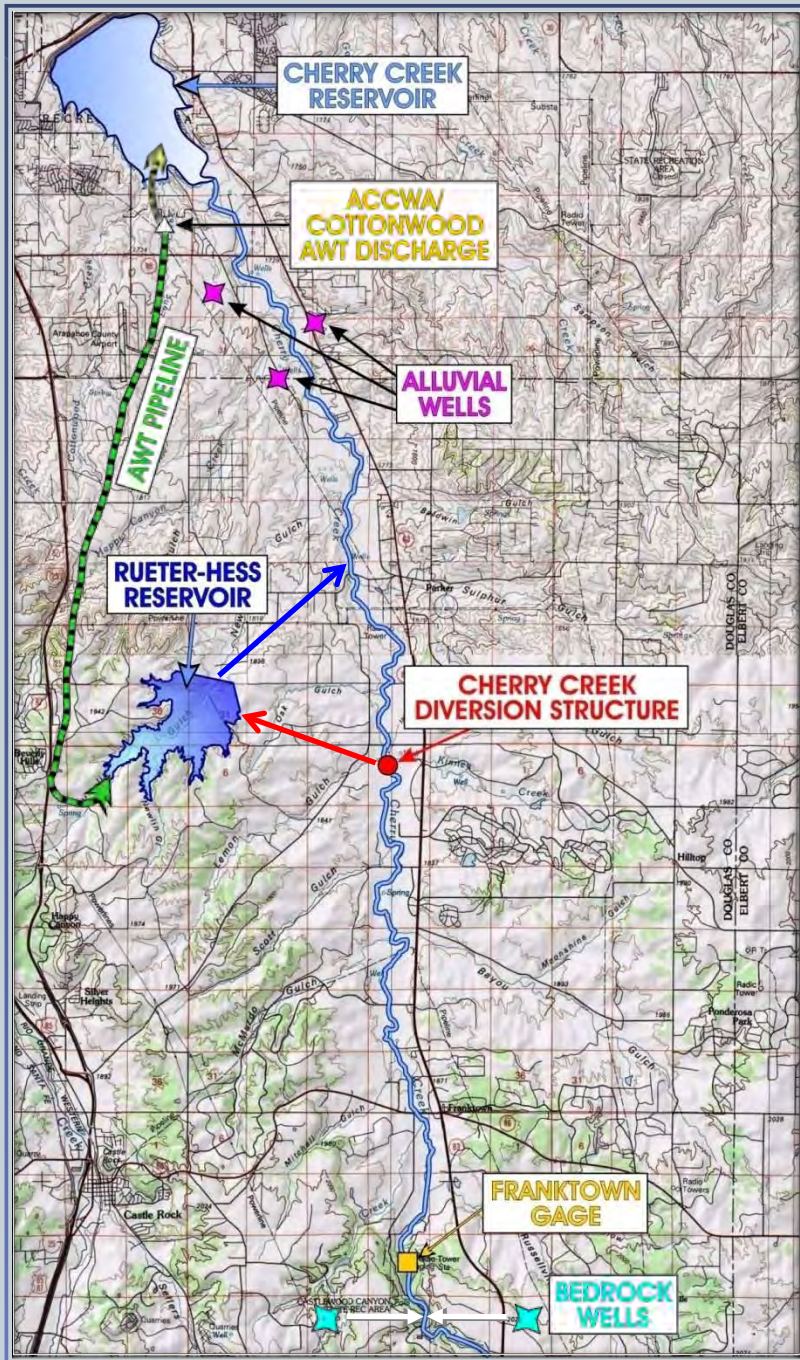


FUTURE WATER MANAGEMENT (AND WHAT IT MEANS TO CHERRY CREEK)

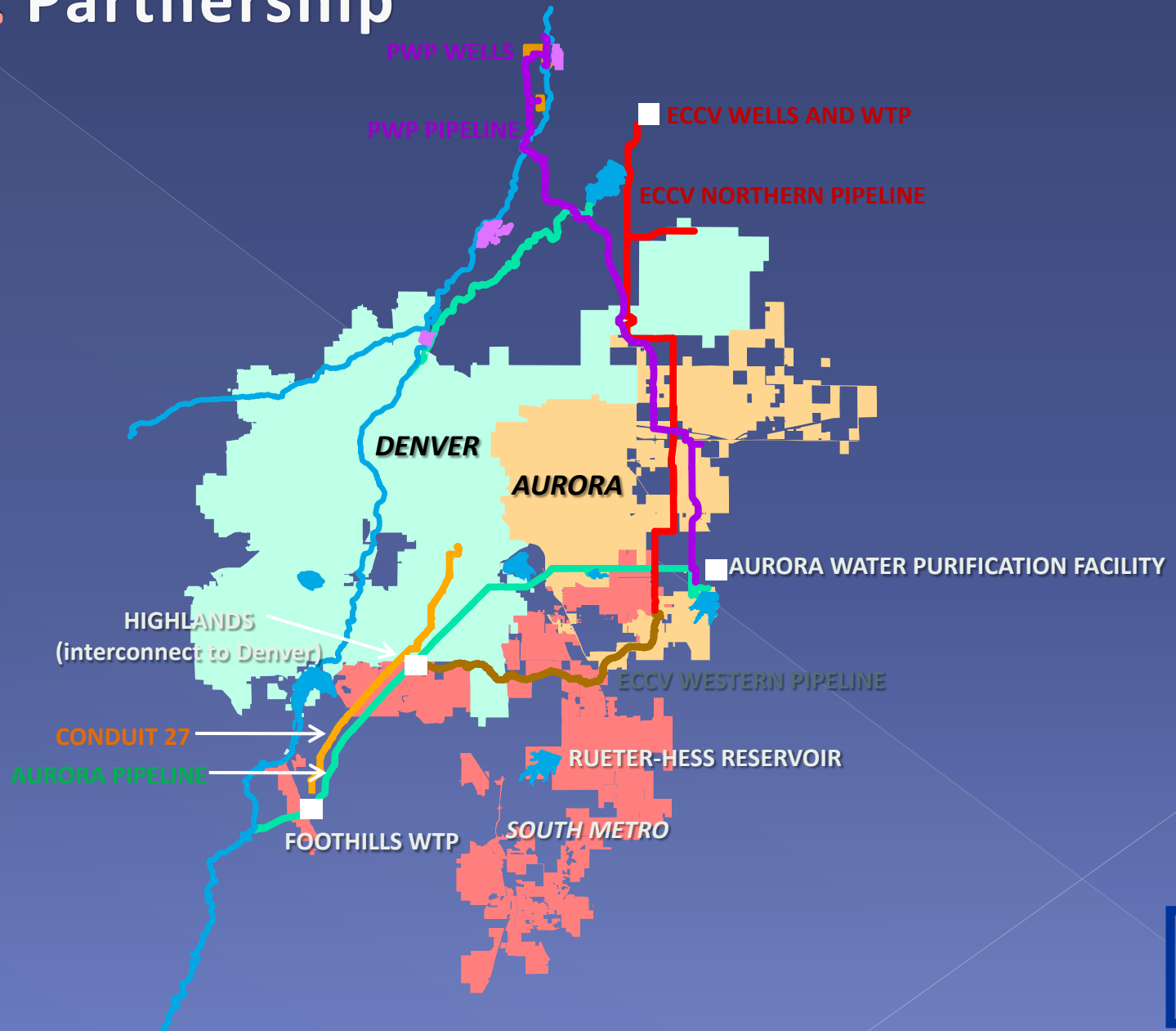
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- ➔ FULL REUSE WILL LESSEN CHERRY CREEK FLOWS
 - ➔ WATER MANAGEMENT WILL CHANGE TIMING OF FLOWS (LESS PEAKS, MORE LIVE STREAM)
 - ➔ WATER LEVELS MAINTAINED AT CHERRY CREEK RESERVOIR (THROUGH UCCWA/CCAMP)
 - ➔ LESS FLOW THROUGH AT CHERRY CREEK RESERVOIR



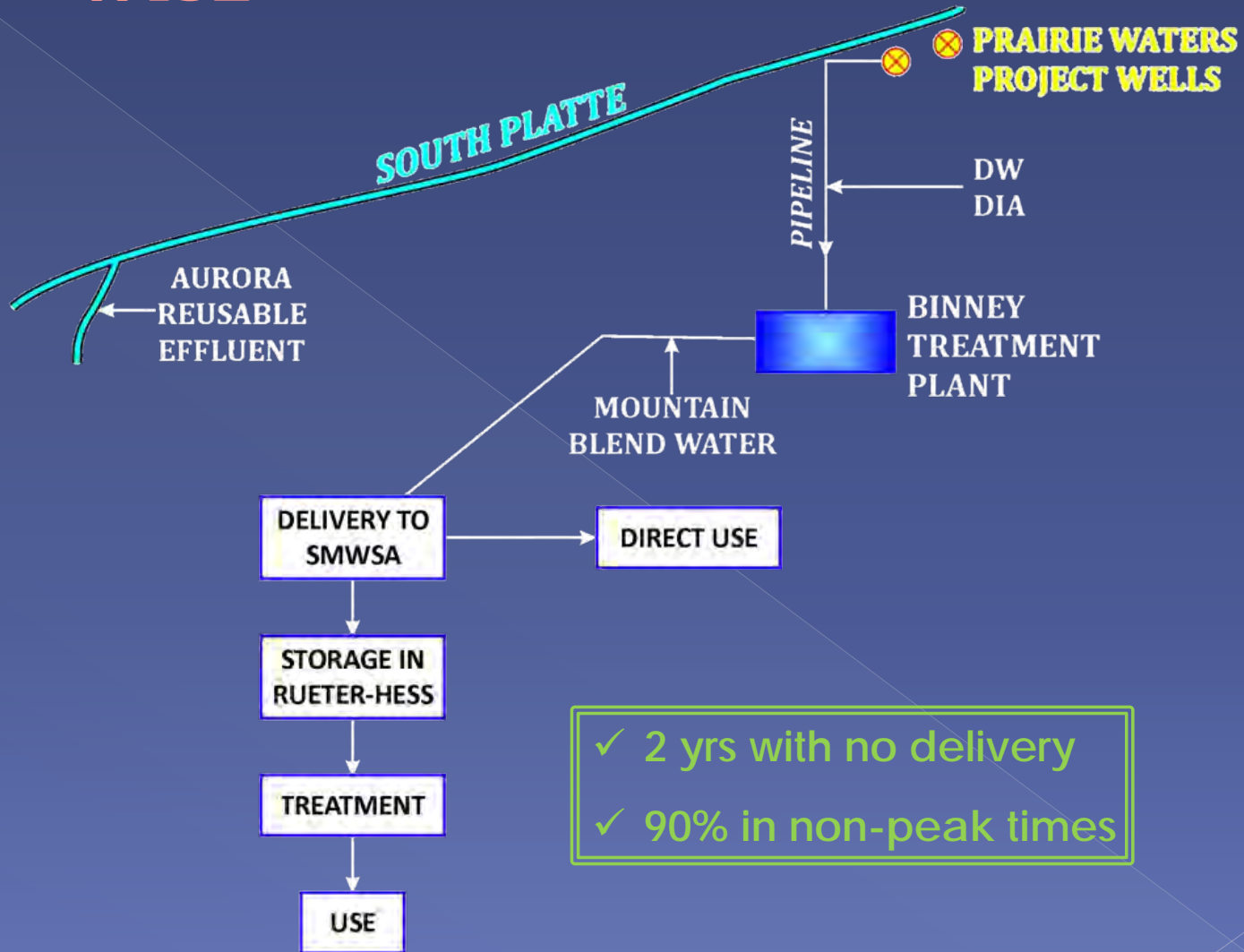
WATER MANAGEMENT POSSIBILITIES



WISE Partnership



HOW *WISE* WORKS



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