The Joplin Water Supply Project

Meeting the water supply needs of our community now and in the future.
The Water Supply Issue

• The Joplin service area uses 16 million gallons per day on average, with a peak usage of 23 million gallons per day.

• Most of the water is supplied from Shoal Creek.

• In addition to Shoal Creek, there are ten wells that can produce a maximum of 4 million gallons per day.

• In 2006, Missouri American Water was within hours of calling for mandatory conservation measures due to low flow in Shoal Creek on 10 separate occasions.
If the Drought of 1954 Happened Today

During periods of higher flow, water can be captured and stored if a reservoir is constructed.

Unable to supply average daily water demands for 278 out of 449 days while flow is below dashed line.

Restricted from using any water from Shoal Creek for 84 days while flow is below solid line.

Shoal Creek flows hit 500MGD on May 3, 1954.
Shoal Creek Flow Volatility – 1941 to Present

Drought of 1954

Flow has dropped below levels needed to meet current max daily demand on at least 25 separate occasions since 1941
Groundwater Level Decline From Predevelopment to 2006-07

300 feet decline or more under Joplin (red)

100 - 200 feet under most of Jasper & Newton Counties (green)

Source: Missouri Department of Natural Resources, Water Resources Center
Options

• Additional wells

• Water piped from Stockton or Table Rock Lakes

• Build up current dam on Shoal Creek

• Off stream reservoir
Reservoir Site Selection Process

- Twelve possible reservoir sites identified
- Ten sites eliminated due to environmental and cost issues
- Options narrowed to two potential sites
- Held meetings with property owners at both sites in December and January
- Final site selected and announced end of January
Selected Reservoir Site
Next Steps

- Begin permitting process with U.S. Army Corps of Engineers.
  - Permitting process will include addressing all environmental factors, historical society review, option analysis etc.
  - MAWC will need to prove the need for the reservoir.
  - Process will include several public meetings and reviews by many stakeholders including United States Fish and Wildlife, Missouri Department of Natural Resources, Missouri Department of Transportation, Missouri Public Service Commission and Newton County.

- MAWC Application for Certificate from PSC
- Property Acquisition
- Zoning
WIFIA Funding for Project

- Water Infrastructure Finance and Innovation Act of 2014 established a credit program administered by the Environmental Protection Agency.

- The WIFIA program is designed to accelerate water infrastructure investment by providing long-term, low-cost supplemental loans for significant projects.

- Loan amount submitted $103 million.
Timeline

- 2018: Site Evaluation
- 2019: Design & Permitting, Land Acquisition
- 2020: Design & Permitting, Land Acquisition
- 2021: Design & Permitting, Construction
- 2022: Construction
- 2023: