

Missouri River Floodwater Transportation POC

Action is needed to secure the unsecured surface water supplies that Kansas needs. A proof-of-concept (POC) project is a small realization of an idea in order to demonstrate some elements in principle with the aim of verifying one or more concepts have practical potential. Big water project ideas like moving floodwater across Kansas requires a series of small foundational POC's to illustrate key elements that may otherwise become confusing to stakeholders and impair the development of the ultimate preferred project. GMD3 seeks support for a POC project to verify key concepts of water transportation to bridge the gap between theory and reality.

POC project - The project proponents will execute a 6000-gallon interbasin transfer of Missouri River high flow (above target navigation) water and conserve it to the dry Arkansas River channel and inflow into the Ogallala/High Plains Aquifer in Finney County. Future transfers could occur in other dry streambeds. The potential for new water supply will be demonstrated in the results.

Key Water Transfer concepts:

- 1) Conserves Water for Kansas
- 2) Restores river flow in SW Kansas
- 3) Improves native poor-quality water
- 4) Adds local water storage
- 5) Successful government permitting

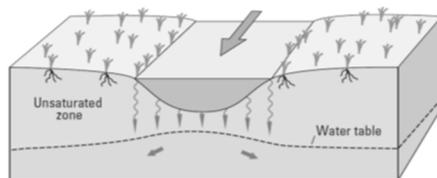
Authority – Southwest Kansas GMD3 has the authority to “*construct, operate and maintain such works as may be determined necessary for drainage, recharge, storage, distribution or importation of water, and all other appropriate facilities of concern to the district.*” (K.S.A.82a-1028(g))

Management Program - The groundwater management program activity seeks the right to transport additional sources of supply to close the 776,000 acre-feet gap between water use and water replenishment that will stabilize water levels. Access to the full draft GMD3 management program document is provided at <http://www.gmd3.org/what-we-do/management-program/>

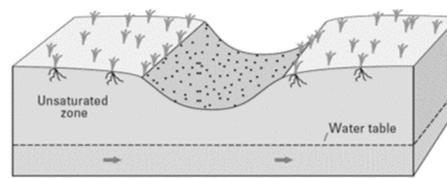
Stakeholders, Kansas Legislature, Kansas Water Vision and Upper Ark RAC - This project takes steps to act on the documentary “*Feast and Famine: Securing Kansas Water Needs*”, the 2019 Kansas Legislative Resolutions SR1729 and HR6018, the Kansas Water Vision *Additional Sources of Supply*, and supports a key recommendation of the Upper Arkansas Regional Advisory Committee (RAC) letter of November 2018 and presentation to the Kansas Water Authority in April, 2019.

Cost estimate. The estimated cost of this POC project involves permitting fees, \$4,500 cost for a water truck mode of transport to an Arkansas Riverbed release site, O&M, testing, and monitoring. The cash budget needed is not expected to exceed \$6000.

Funding. Options for funding in whole or in partnership may include project supporters, the GMD3 general fund, the Ark River Damage Award (WWCP) Fund at GMD3 and the non-profit Kansas Aqueduct Coalition Fund at the Kansas Rural Communities Foundation. Support is welcomed.



Import release flow distribution and delivery to declining local storage.



Arkansas River dry channel and storage condition before and after import release.

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Permitting. Government partners assure public interest benefits while addressing concerns. A brief summary of the review and permitting necessary from Kansas water related agencies:

KDA/DWR water appropriation

- Temporary Permit for groundwater recharge beneficial use appropriated from the Missouri River high flow surface water at a point of diversion where land access has been authorized by the landowner and released to the Arkansas dry riverbed for flow distribution and seepage into the local High Plains Aquifer place of use in Finney County, Kansas.

KDHE water quality:

- No permit required, but two sets of water quality samples captured and analyzed as necessary to assure aquifer recharge quality source water.

KDWP&T environmental review:

- Aquatic nuisance species (ANS) possession permit required. Use “Edwards Protocol.”
- Kansas Action Permit required for review of effects on threatened or endangered species (TES) inhabiting the source water or destination environment. Fish screen and operating strategy used.
- Interest is in public enjoyment benefits while protecting TES and applying ANS safeguards.