

# GMD3 Report to ARCA

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**2021 ARCA Annual Meeting**

**Mark Rude, Executive Director**

**Southwest Kansas Groundwater Management District  
No. 3**



# GMD3 Management Program Document



# Water

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## Official Management Program Southwest Kansas Groundwater Management District Number 3 (GMD3)

2009 E. Spruce Street, Garden City, Kansas 67846 (620) 275-7147  
URL: [HTTP://www.gmd3.org](http://www.gmd3.org)

12/08/2021

The activities of this management program add to the success of all stakeholders. Policy and methods expressed herein are adopted to advise and assist all in the management of water resources in the District. They are not considered enforceable apart from Kansas statute and administrative rules. Supporting program implementation plans, and other supporting reference documents are to be posted on the website.

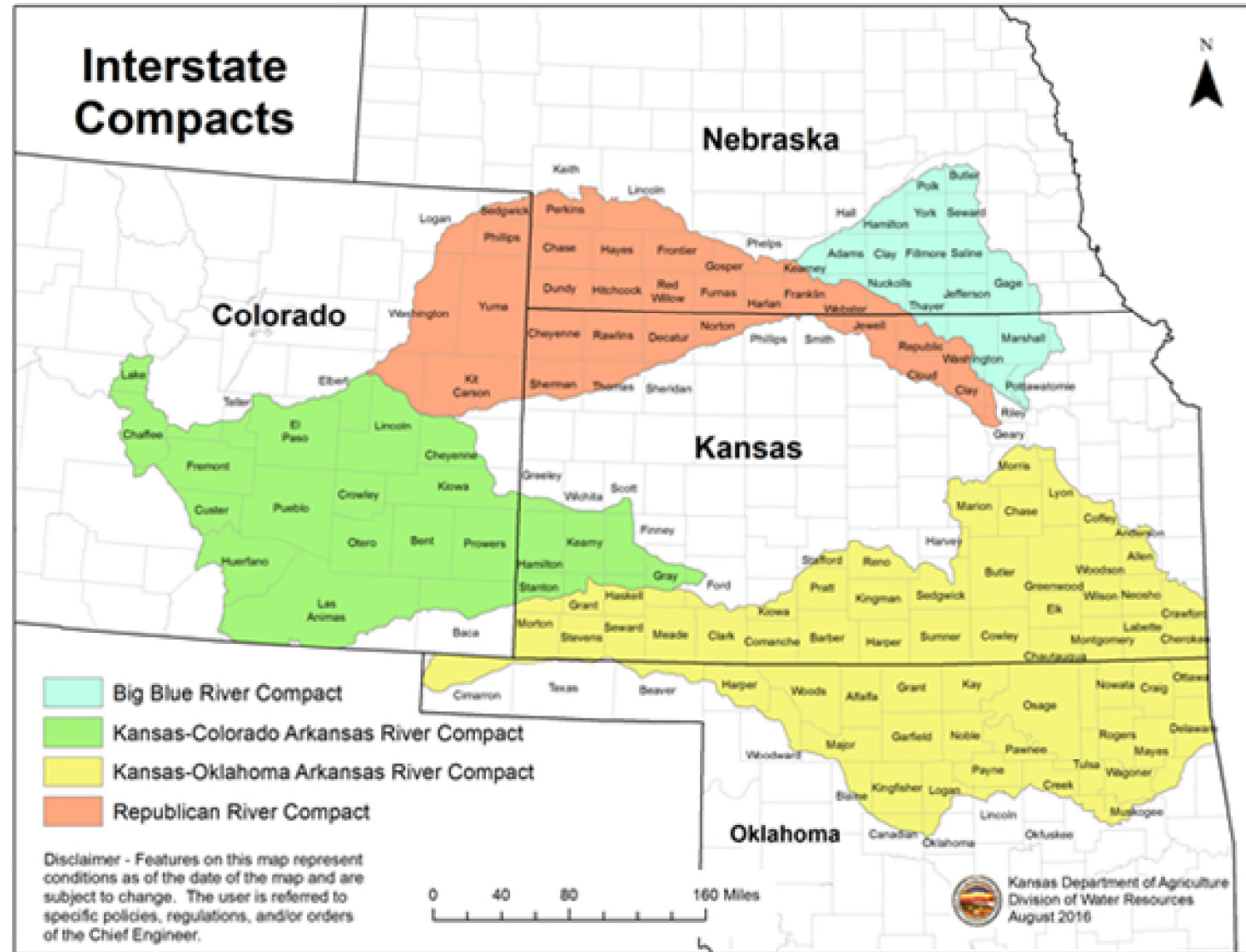
**2021-2022 Board of Directors:**

- Bret Rooney, President - Haskell County
- Fred Jones, Vice President - Municipal at large
- Garret Love, Secretary - Gray County
- Mike O'Brate, Treasurer - Funney County
- Dave Casterline, Director - Ford County
- Harrison Kraey, Director - Morton County
- Kent Dunn, Director - Seward County
- Ben Amerin, Director - Meade County
- Zachary Gale, Director - Hamilton County
- Randy Hayzlett, Director - Surface Water at large
- Matt Johnson, Director - Stevens County
- Chad McCormick, Director - Industrial at large
- Seth Nelson, Director - Stanton County
- Hal Scheuerman, Director - Kearny County
- Clay Scott, Director - Grant County

Southwest Kansas Working Water – Conserving Every Day Since 1976

# Kansas has four river basin compacts

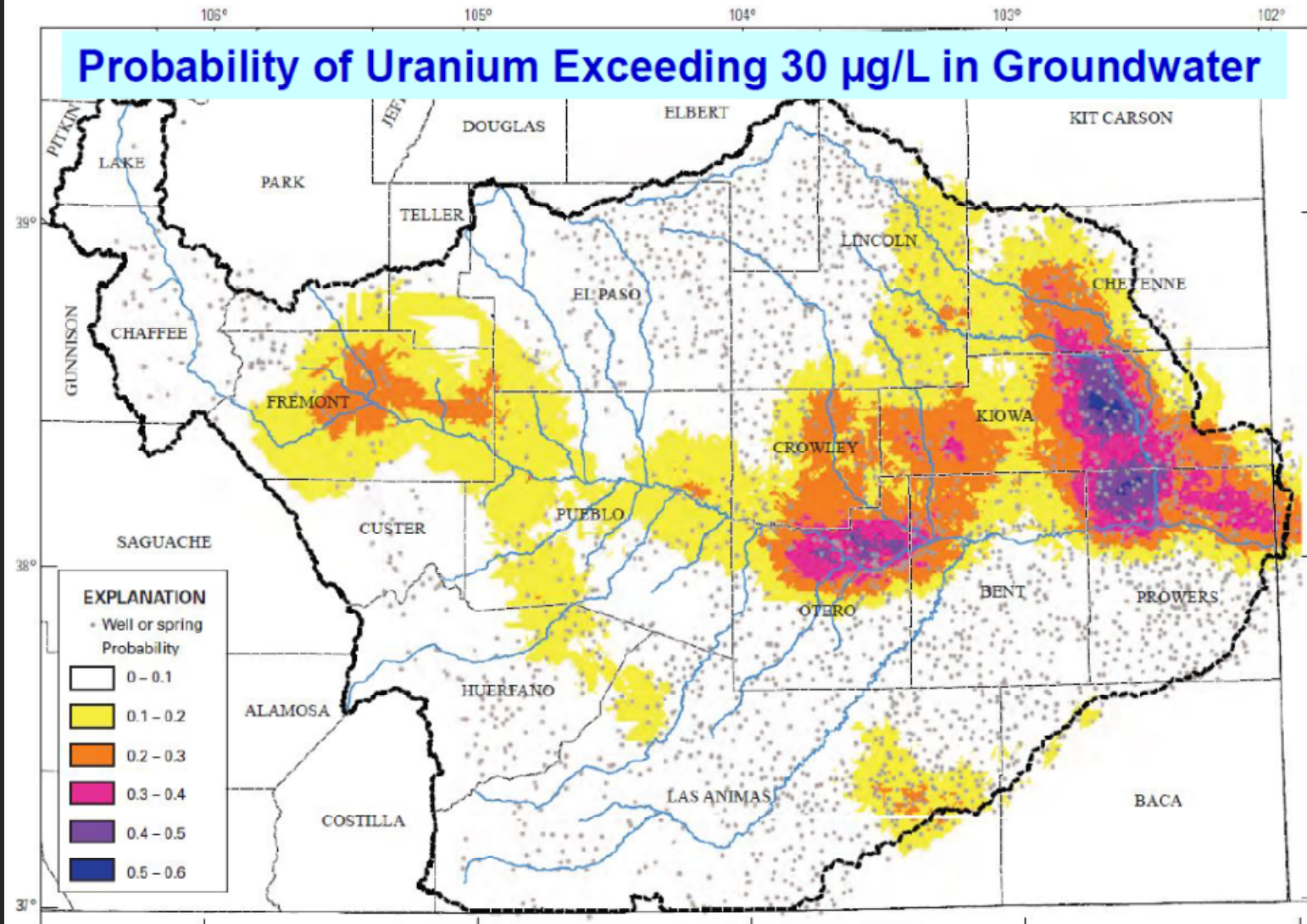
The 1949 Kansas – Colorado Arkansas River Compact apportions the waters of the Arkansas River basin (in green) and their utilization as well as the benefits of John Martin Reservoir based on 1949 conditions.



# Colorado basin groundwater quality hot spots

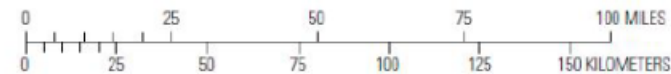
GMD3 receives water from the Stateline from three sources:

- Storage from John Martin Reservoir
- Rain runoff events
- Irrigation return flows



Base from U.S. Geological Survey Data, 2009, various scale  
Universal Transverse Mercator projection  
Zone 13

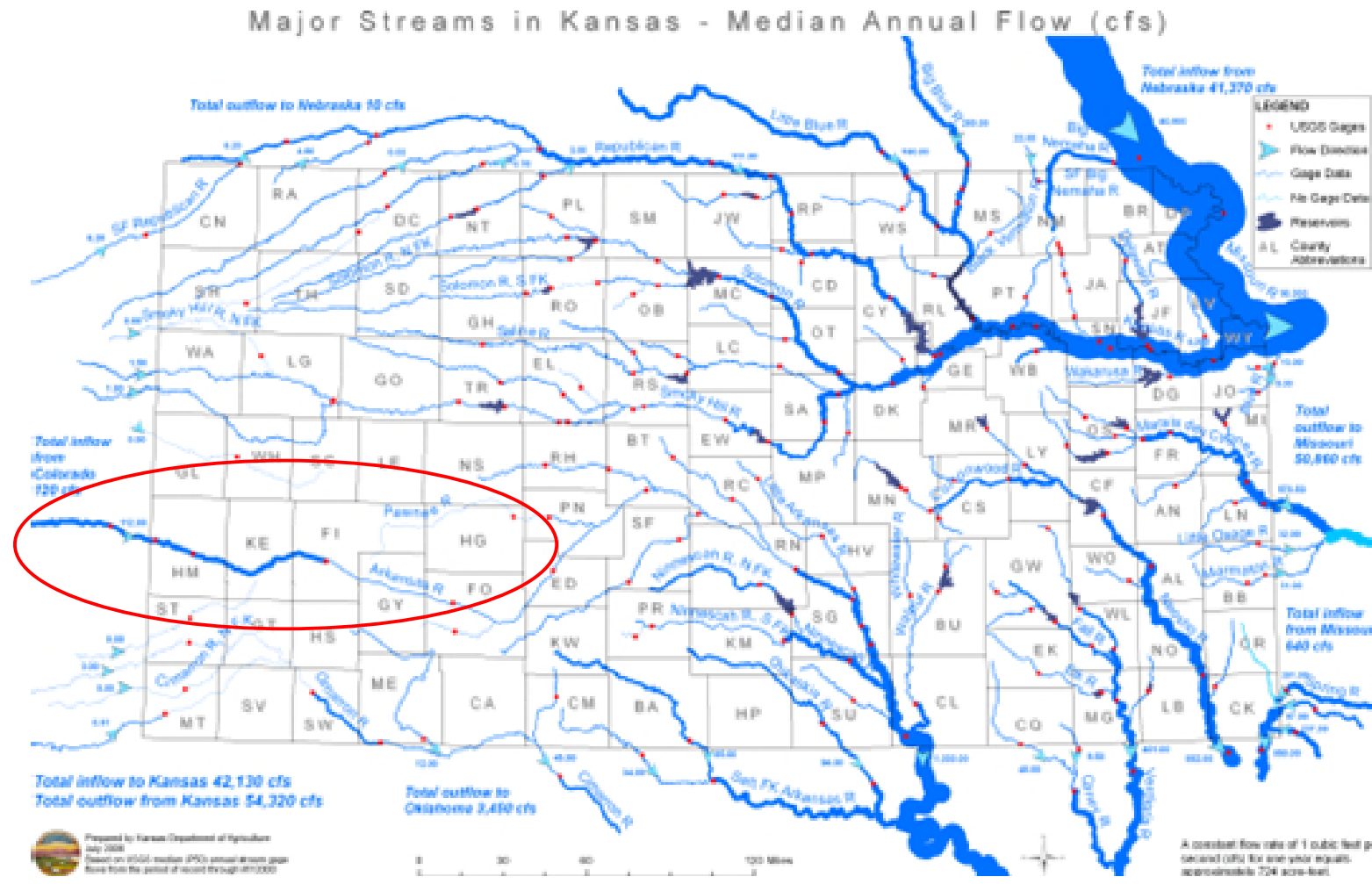
Miller, Watts, Ortiz, and Ivahnenko, USGS Sci. Invest. Rep. 2010-5069



Water quality is basically the amount and type of material in the water

The amount and type of material in river water affects how the water can be used and what or who it encounters.

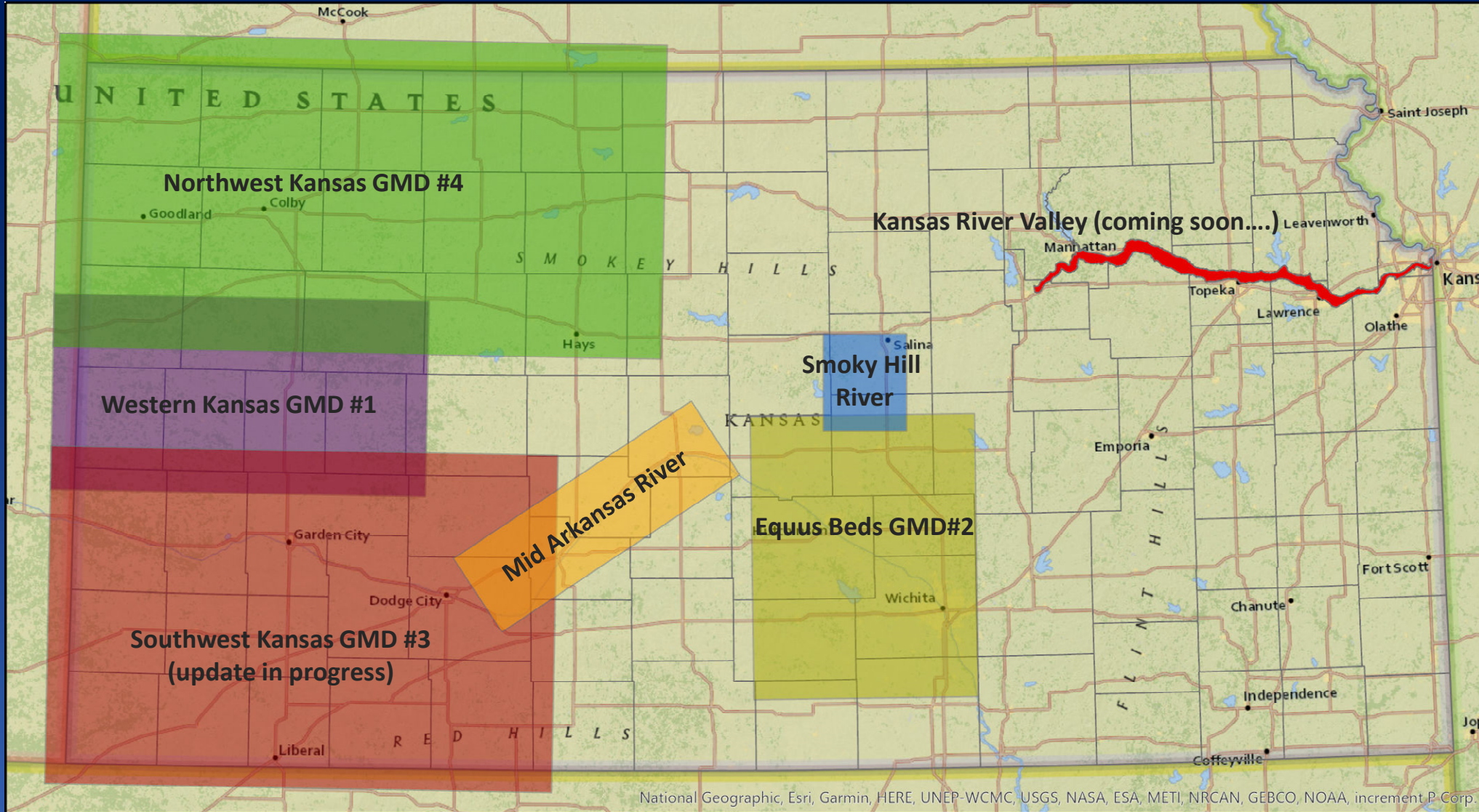
Shared Arkansas River basin functions as a closed basin.





Conservation Projects  
Improving water  
management system

# Past and current KGS modeling activities in Kansas



# Colorado ArkDDS

- From yesterday's committee presentation
  - Extensive work with measured and simulated data for detail modeling, including different colors of water in the historic water deliveries.
- Consider that including quality detail with color detail would provide a much-needed common knowledge base for the basin.



Helpful Colorado  
Watershed planning

GMD3 is forming a  
Watershed group -  
WaterSMART



## Lower Arkansas River Watershed Plan

John Martin Reservoir to Stateline

Healthy  
cooperative  
measures for  
BMP's in  
Colorado  
below JMR

Thank you

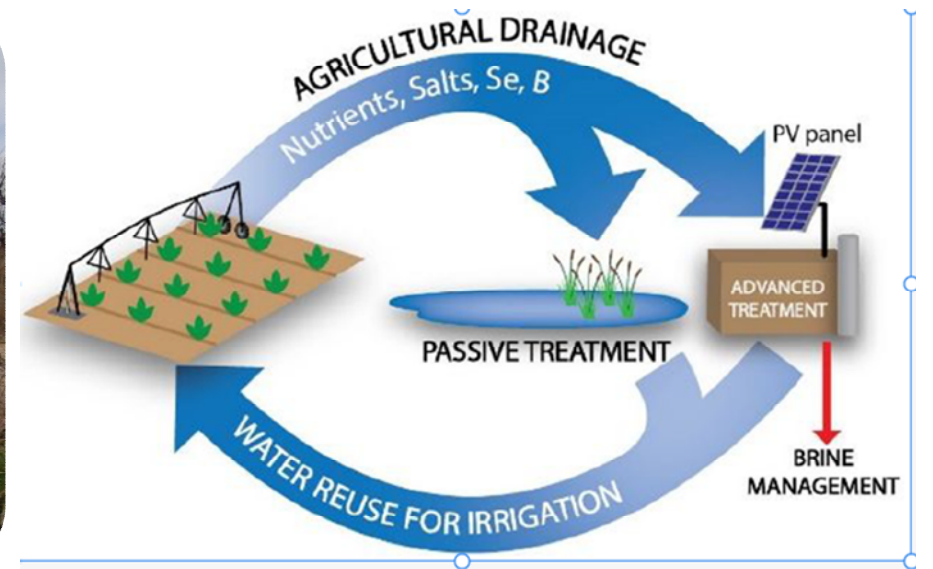




# Deerfield to Lakin municipal system

- Necessity for regional drinking water systems – Clean Water Act

# Supporting research - Ag water treatment options



# Compact - 1949 basin condition

- Article IV-D express terms prohibit future beneficial development which involve the improved or prolonged functioning of existing works and which materially deplete the waters of the Arkansas River in usable quantity or availability for use to water users.

# QUESTIONS

ARCA Annual Meeting  
December 2021

