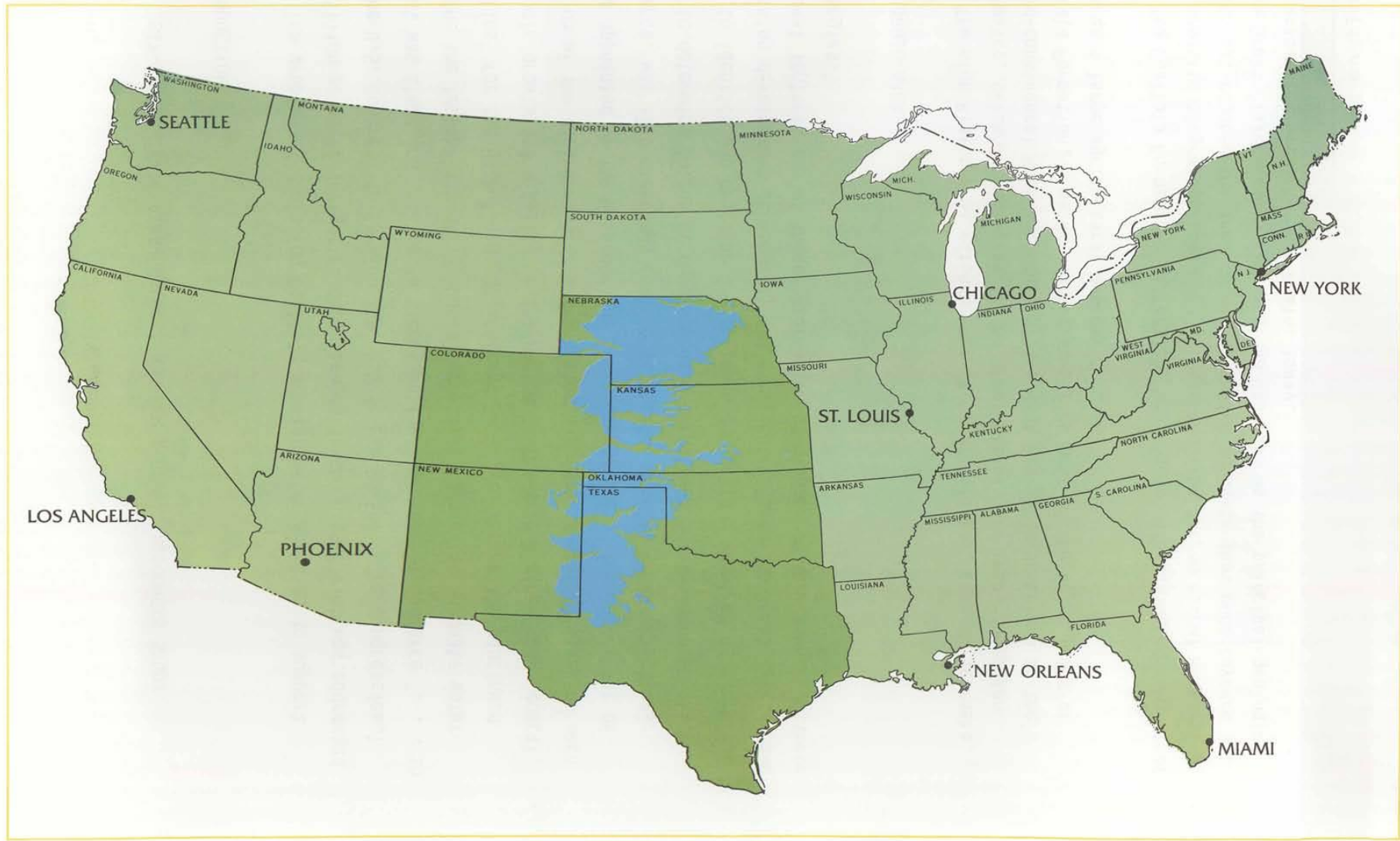
Missouri River Transfer Project to Mitigate Flooding and Protect the Six-State Ogallala-High Plains Regional Socio-Economic Viability

Proposal: July 2021

FIGURE 1: THE HIGH PLAINS REGION—OGALLALA AQUIFER



Request and Objectives

- **Request:**
  - Encourage Congress to authorize and appropriate funds
  - Update water transfer route feasibility options from previous studies
  - Potentially enlarge and extend previously considered routes from the Missouri River south through Colorado, Kansas, Nebraska, New Mexico, Oklahoma and Texas
- **Objectives:**
  - Mitigate flooding in the Missouri River Basin
  - Increase water supplies in the Ogallala-High Plains Region
  - Ensure food security and economic stability

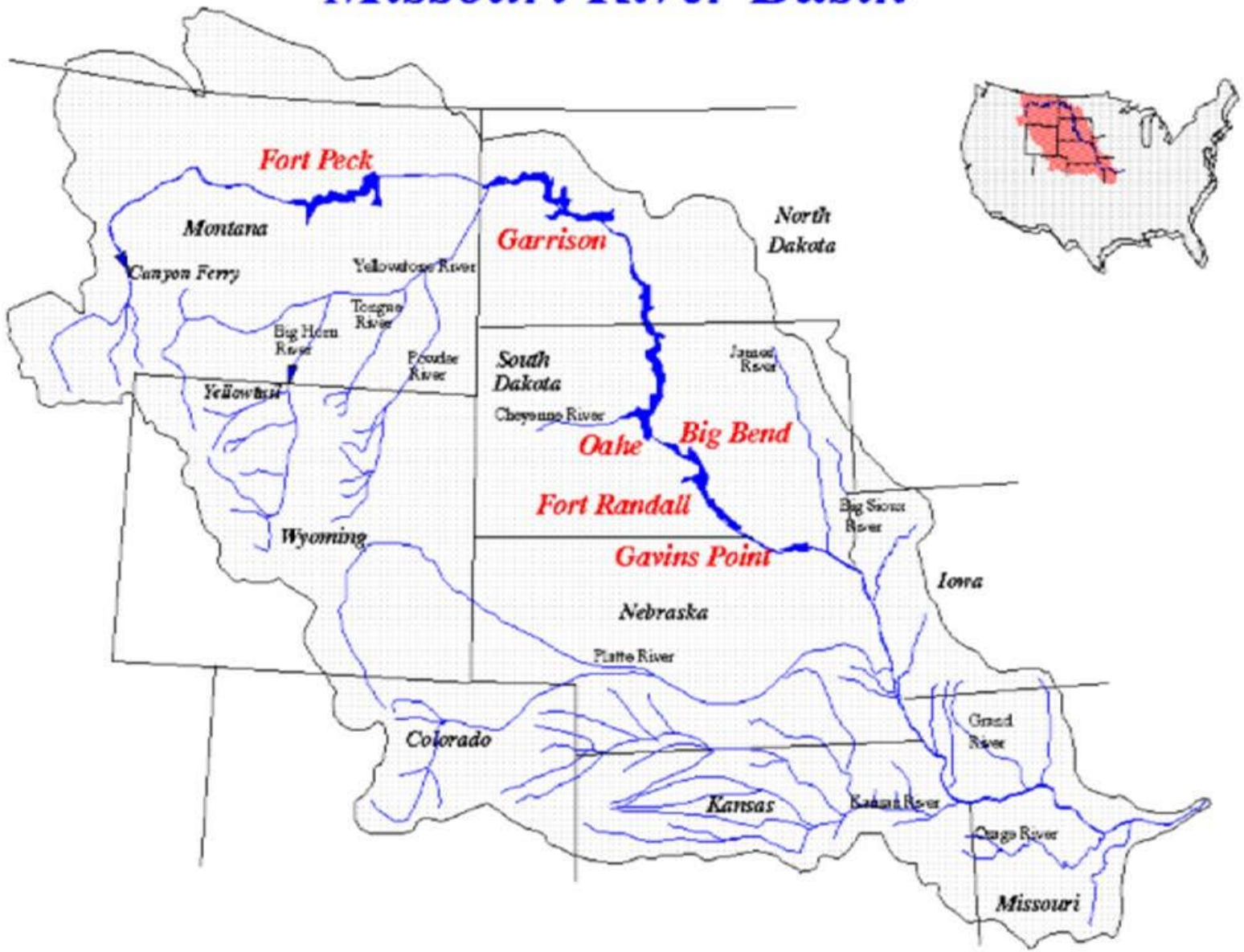
Scope

- Estimate the amount of water available
- Perform a comprehensive water demand analysis
- Identify water transfer system components
- Provide preliminary cost estimates
- Evaluate the legal and environmental constraints
- Establish stakeholder group
- Build system

Background

- Missouri River watershed is the longest drainage basin in the U.S.
- Encompasses most of the central Great Plains
- Missouri River has a long history of severe and devastating flooding events
- Army Corps of Engineers and the Bureau of Reclamation developed plans to mitigate flooding on the Missouri River that became a major part of the Omnibus Flood Control Act of 1944.
- Missouri River has continued to set flooding records causing several billion dollars in losses through multiple states as recently as 2019.

Missouri River Basin



Background

- The anticipated impacts of not meeting the regional water needs of the water user groups in the High Plains states are immense
- $35 billon in crops are grown each year on the High Plains
- Ogallala–High Plains aquifer is the primary water source
- Farmland in the region produces nearly one-fifth of the wheat, corn, and cotton and approximately one-half of the sorghum and cattle in the U.S.
- The aquifer supports all other user groups including municipal, manufacturing, mining, and steam-electric power
- The aquifer continues to be the only water supply for most small communities and a primary water supply for larger communities
- Groundwater withdrawals continue to outpace recharge, causing generally widespread depletion of the aquifer.

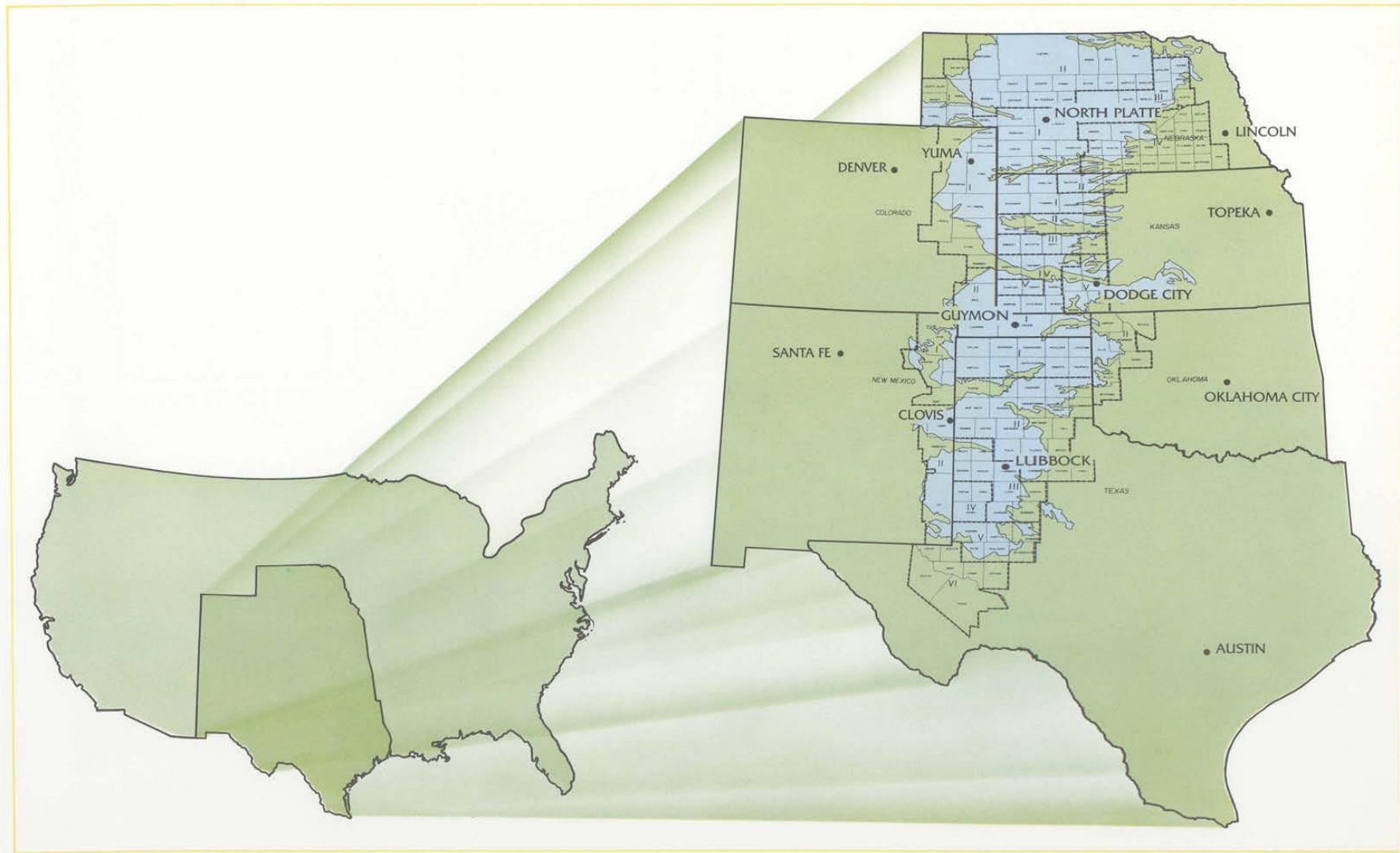
OGALLALA AQUIFER

STUDY AREA

I-VI SUB-STATE REGION

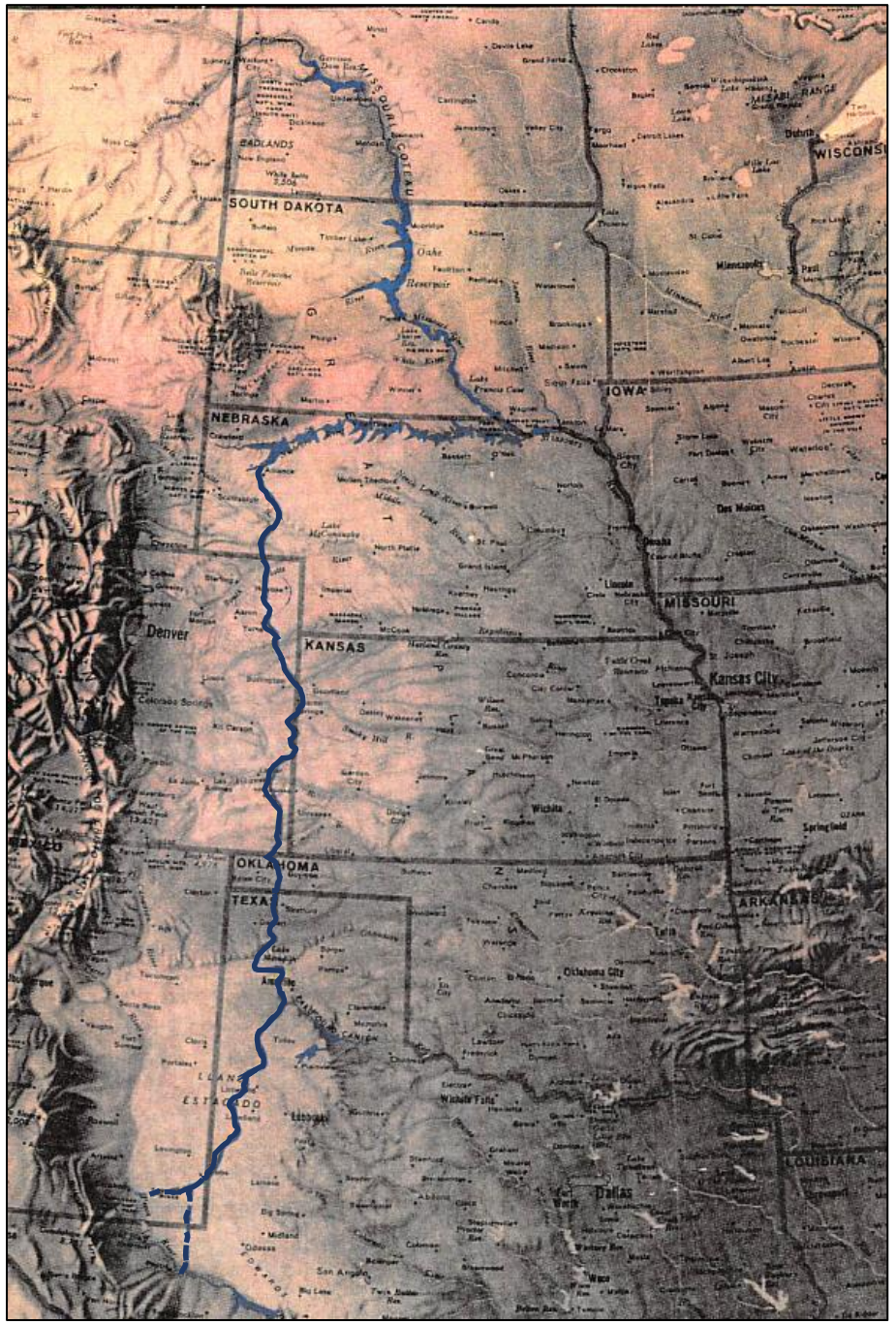
FIGURE II-1: THE SIX-STATE HIGH PLAINS STUDY REGION

SIX-STATE HIGH PLAINS OGALLALA AQUIFER REGIONAL RESOURCES STUDY



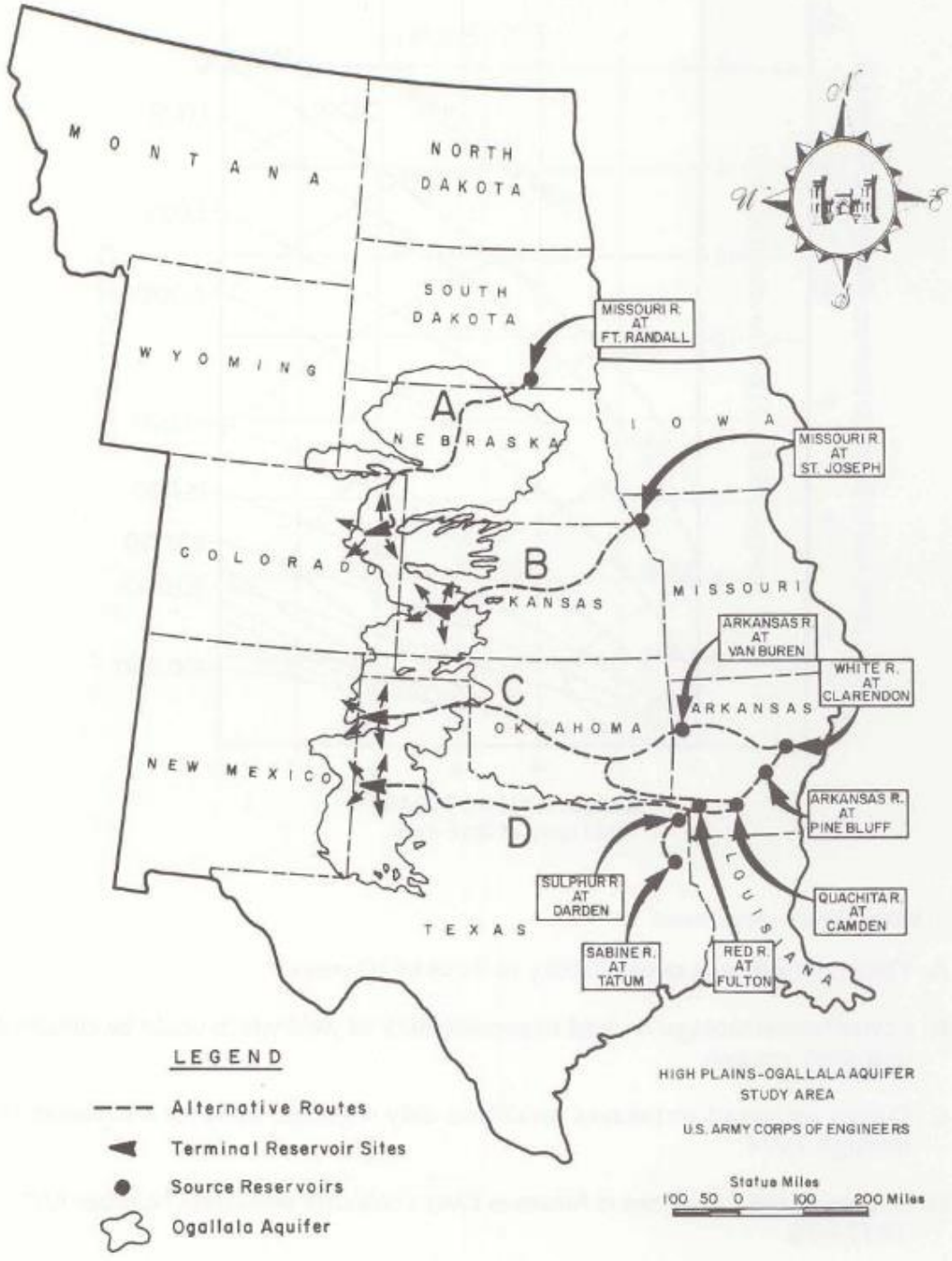
Background

- Beck and Associates (1967) proposed a transfer plan that would divert Missouri River water from near Fort Randall Reservoir in South Dakota to just above Lake Amistad



Background

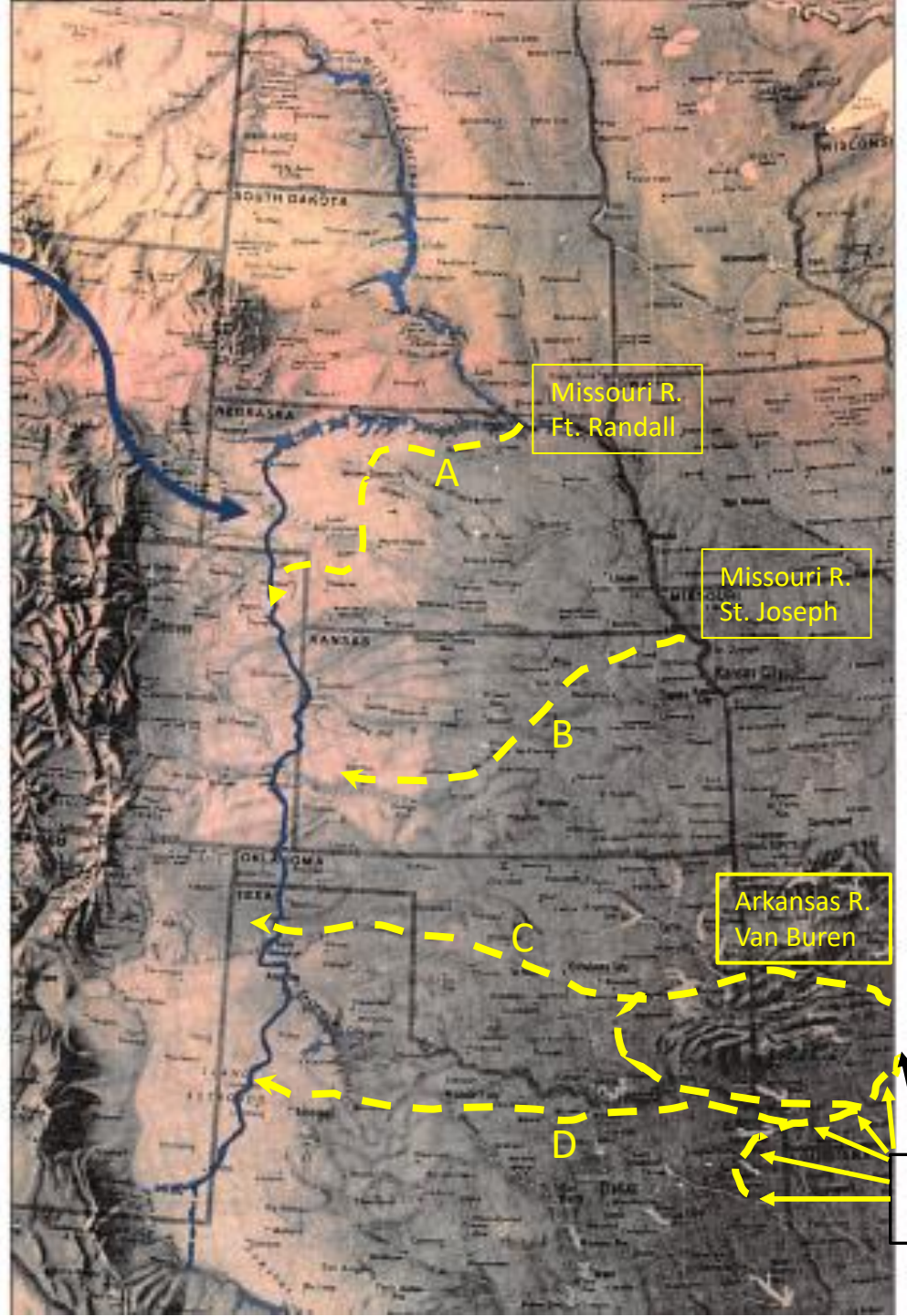
- Water Resources Development Act of 1976 authorized the Six-State High Plains-Ogallala Aquifer Regional Resources Study (High Plains Study) that was completed in 1982
  - U.S. Department of Commerce, in coordination with the U.S. Army Corps of Engineers and other federal, state, and private entities, examined various alternatives
  - To “assure continued economic growth and vitality of the High Plains region.”



Background

- The Kansas Water office and the U.S. Army Corps of Engineers (2015) updated the High Plains Study for Alternative Route B
  - Technically feasible.
  - The update also identified alternative ideas for water transfer systems, including ideas for moving water to the six states in the 1982 High Plains-Ogallala Study (TX, OK, KS, NE, CO, NM).

A New Water Resource Plan for the Great Plains – Beck and Associates 1967



Six-State High Plains Ogallala Aquifer Regional Resources Study - High Plains Associates 1982
(Alternate Routes A, B, C, D)

Update of 1982 Six State High Plains Aquifer Study
Alternate Route B – USACE 2015

Looking to the Future

- Change the paradigm from managed depletion of current supplies to one of increasing future water supplies for future generations (long after any of us are still here)
- Help our neighbors to the north mitigate and potentially avoid future catastrophic flooding events that result in the loss of life, property, food production and negative environmental impacts
- Updating the 1982 study would:
  - Build on the past work
  - Confirm the feasibility of moving water
  - Identify the systems needed to do it and estimated costs
  - Provide a basis for the system to be funded and constructed