

Watershed Restoration and Protection Strategy

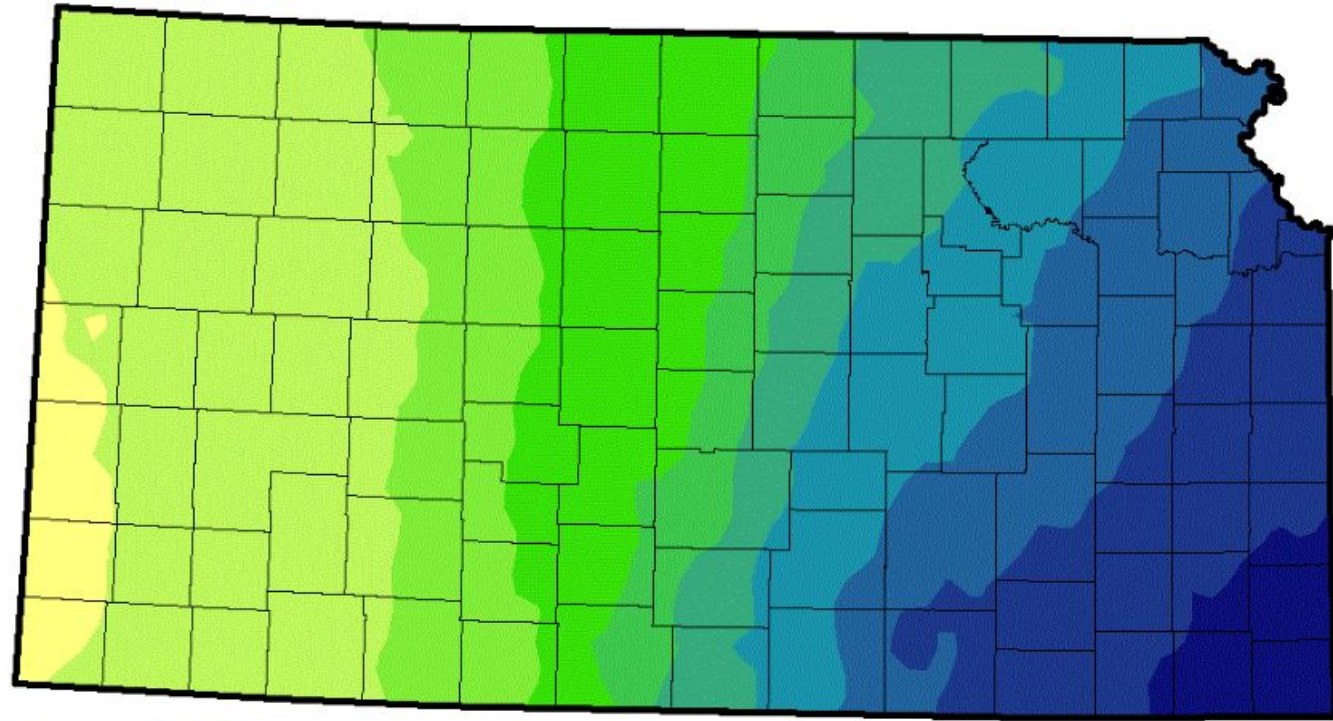


KANSAS

wraps



Normal Annual Precipitation based on data from 1991-2020

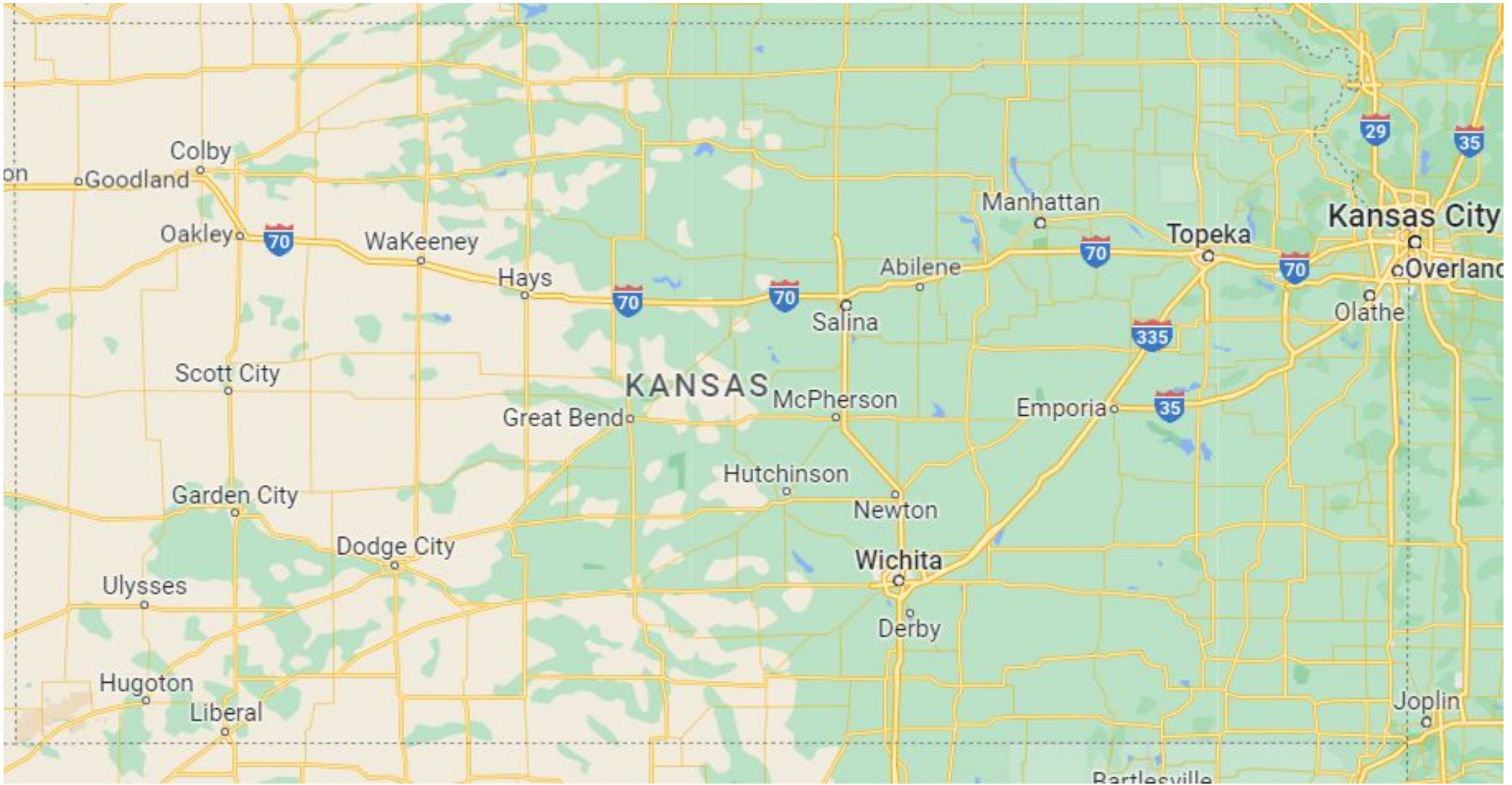


0 25 50 100 Miles

Total Precipitation (Inches)

13.13 – 18.00	31.00 – 33.00
18.00 – 23.00	33.00 – 36.00
23.00 – 26.00	36.00 – 39.00
26.00 – 29.00	39.00 – 44.00
29.00 – 31.00	44.00 – 49.97

Produced by Weather Data Library
Department of Agronomy
Kansas State University





Funding Sources

- EPA Clean Water Act (CWA) Section 319 Funds
- Federal Grants
 - EPA Farmer to Farmer
 - National Fish and Wildlife Foundation
- State Revolving Loan (SRF)
- State Water Plan
- Industry
- Municipalities



For \$1.00 SWP

KDHE leverages ~\$4.25



WRAPS Tool Box

Land Purchase

Land Lease

Land Sub-Lease

Equipment Purchase or Lease

- Interseeder
- No-Till Planter
- No-Till Drill
- Sprayer
- Air Seeder



Custom Cover Crop Planting

Custom No-Till Planting

Cost - Share

Fence and Water Source
on Cropland

14 Active WRAPS Projects

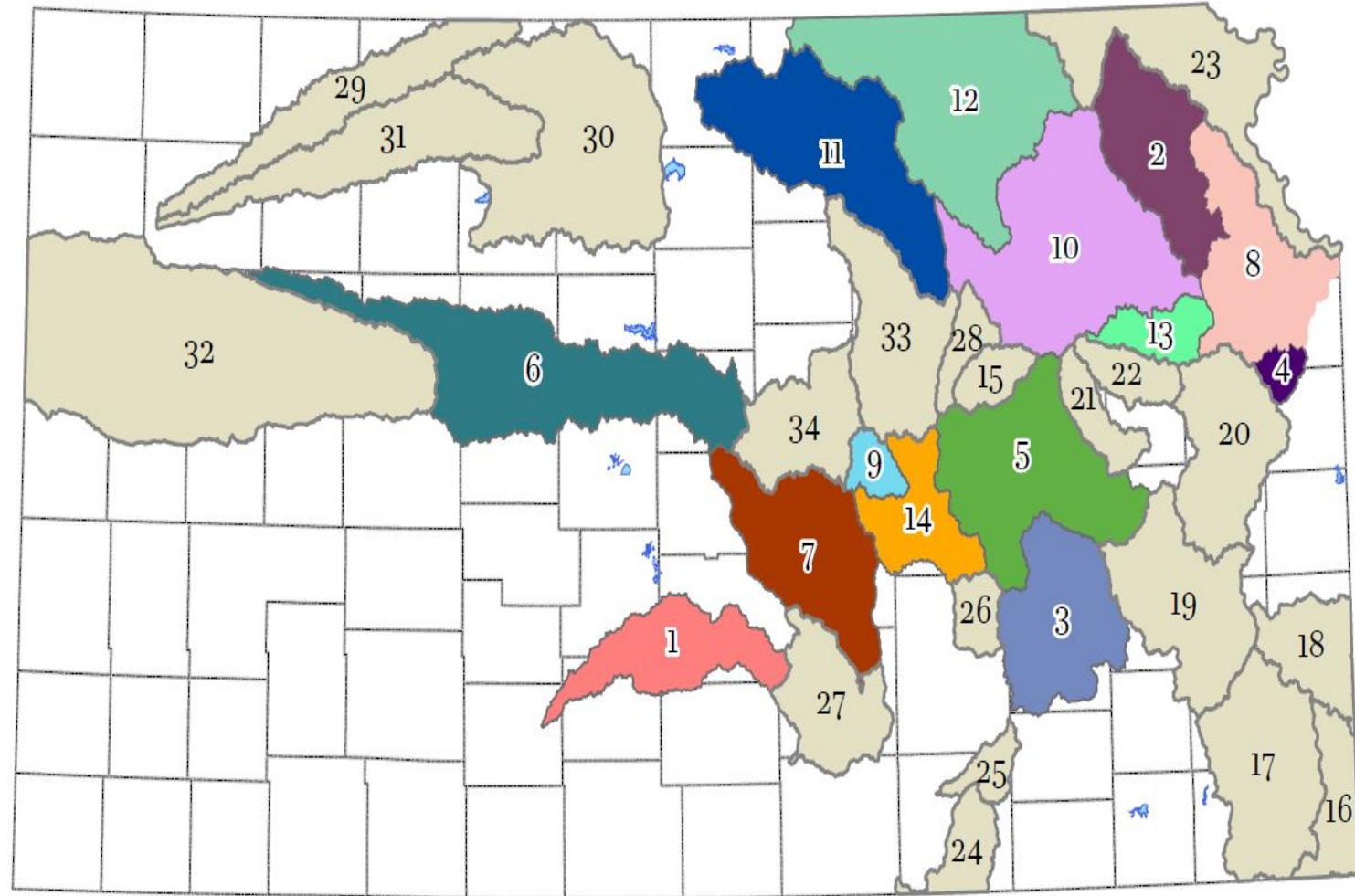
- Coordinators
- Stakeholder Leadership Teams

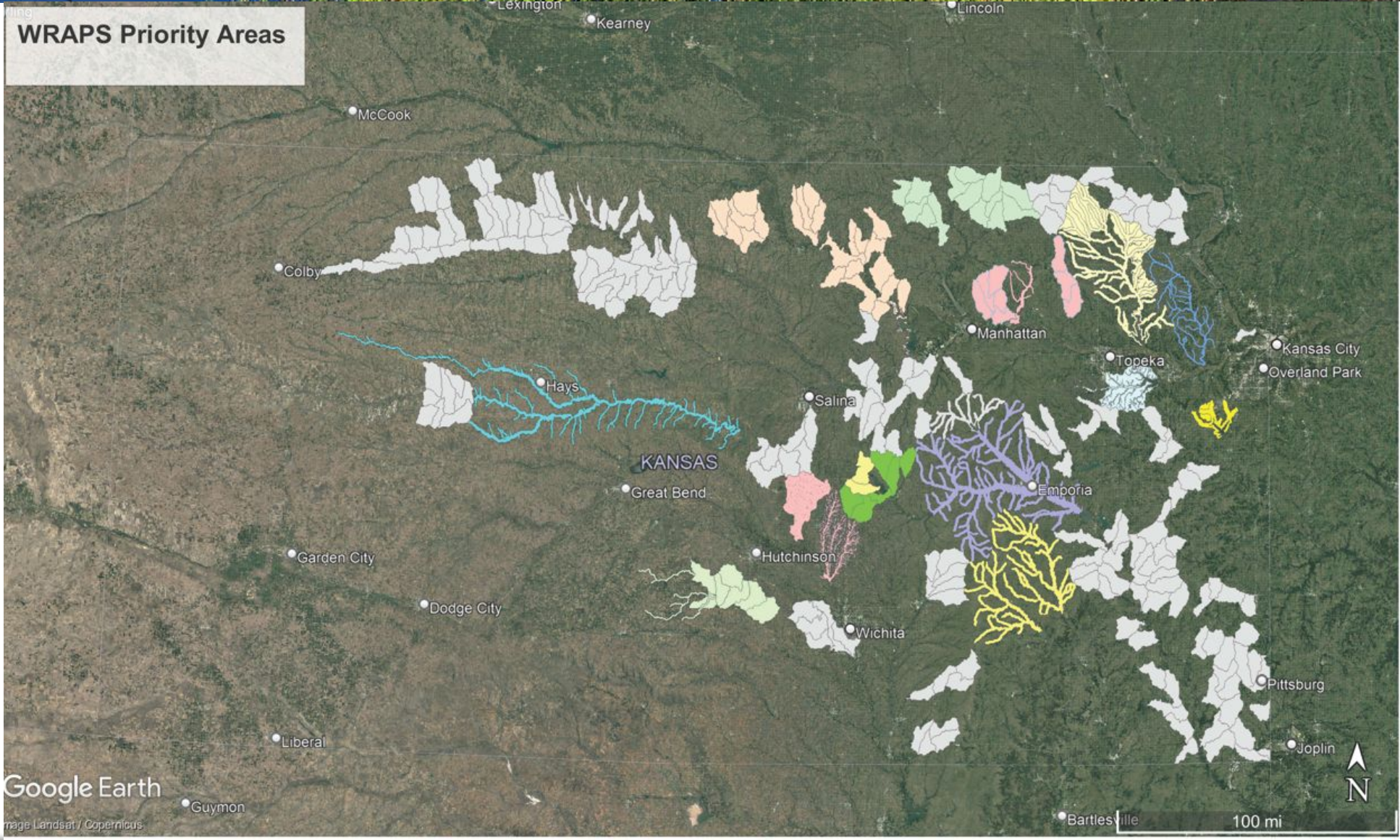
KS Assoc of Cons Districts

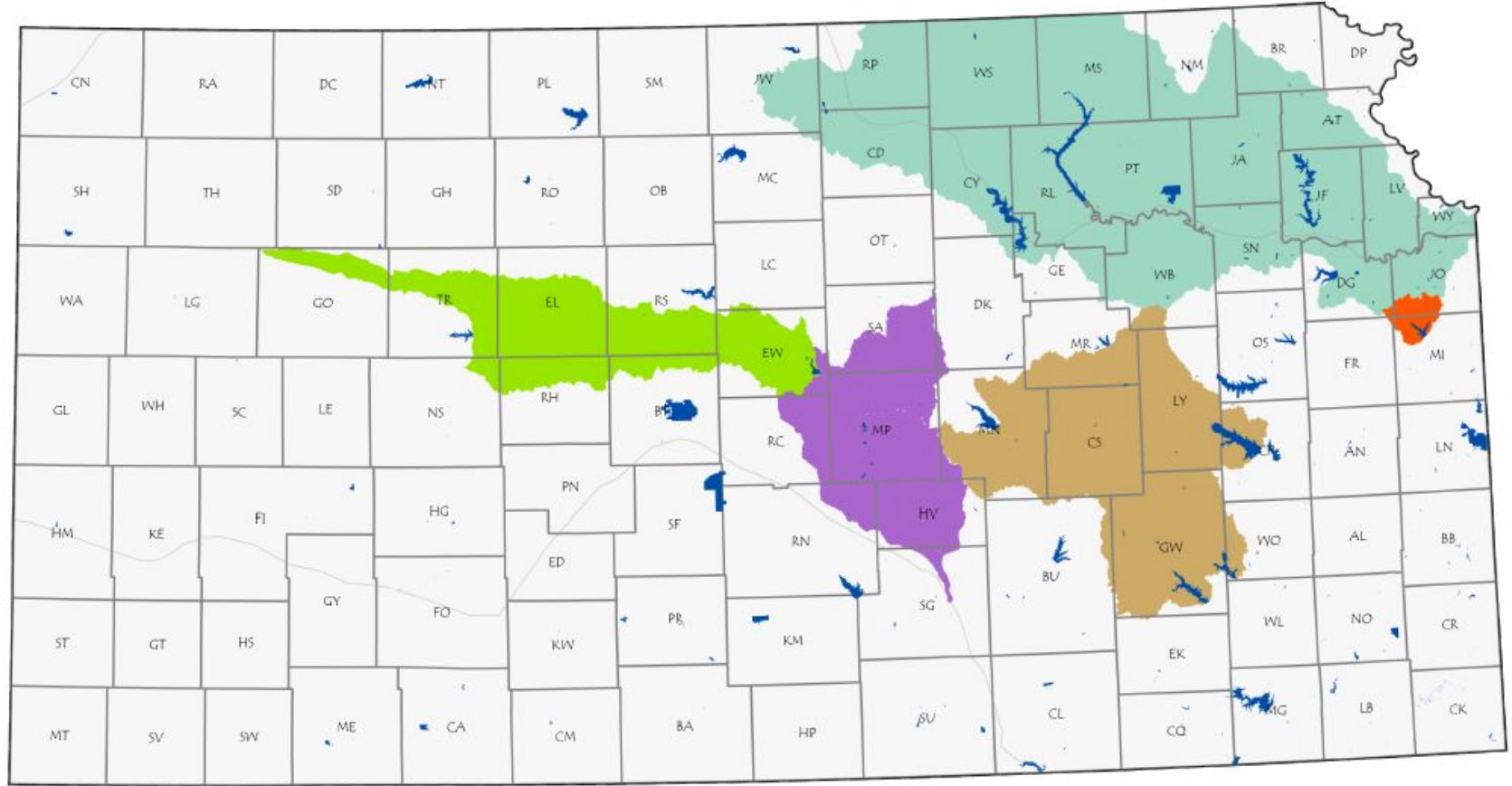
- Cost-Share based on 9-Element Plans

K-State University KCARE

- 9-Element planning assistance
- BMP implementation assistance







- 

Central Kansas Watersheds
Ron Graber
- 

Northeast Kansas Watersheds
Will Boyer
- 

Kanopolis Watershed
Stacie Minson
- 

Flint Hills Watershed
Jeff Davidson
- 

Southeast Watersheds
Herschel George

State Lead Strategies Implemented at **Local** Level

- **Soil Health Alliance**
- **Soil Health Coaching**
 - **Understanding Ag**
 - **Farmer to Farmer**
 - **Western KS Coaching**
- **Information/Education**
- **Technical Assistance**
- **Equipment Partnerships**
 - **Interseeders**
- **Industry Partnerships**
 - **Soil and Water Outcomes, ESMC, Service Providers**
- **Municipal Partnerships (El Dorado Credit Program)**
- **Hazard Mitigation/FEMA**
- **Marketing**



Farmer to Farmer Coaching



Water Quality Trading El Dorado, KS

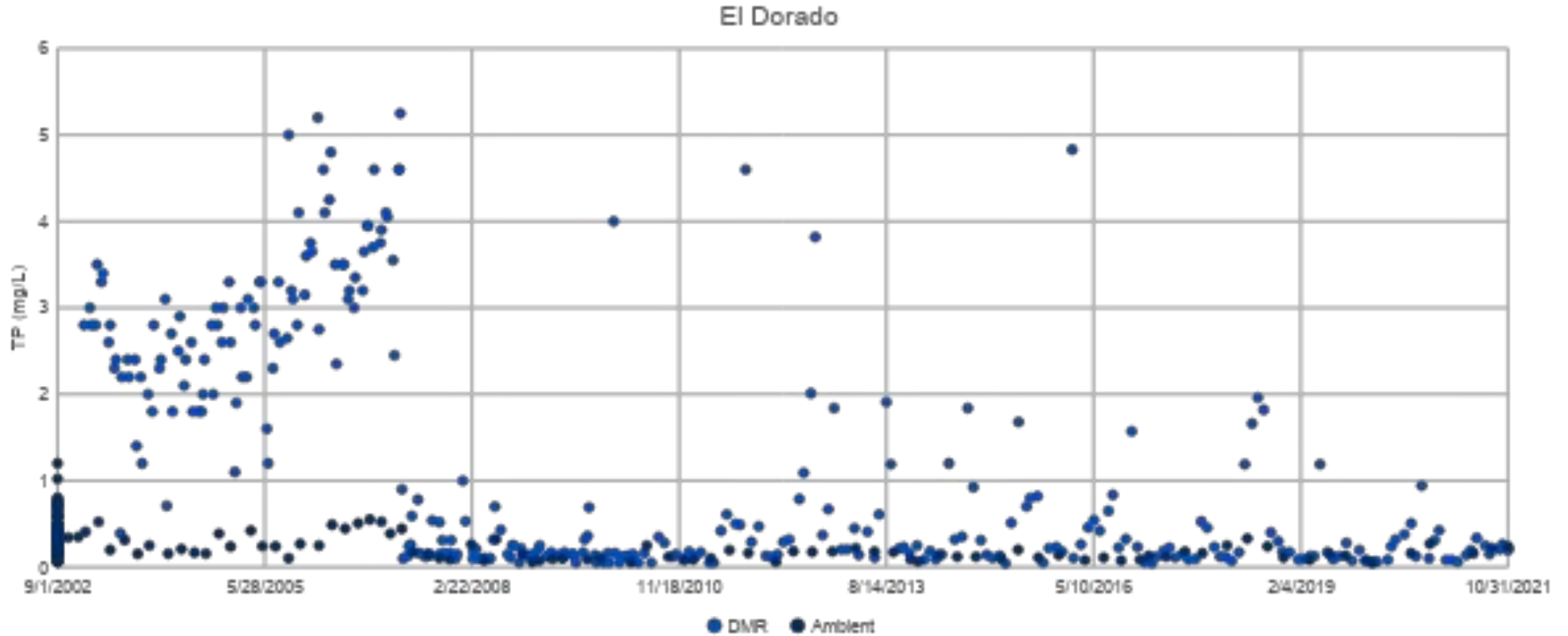


Performance and Credit

- **Many Cities Have Invested in Biological Nutrient Removal (BNR) Technology**
- **Some Cities Have Yet to Invest, But Improved Ops through Optimization**
- **Optimization Self-Generates Credits for City**
- **How to Reward Those Credits?**

Nutrient Reduction in Kansas

El Dorado and the Walnut River: Building Opportunities through Performance



El Dorado Inverted WQ Trading

City and KDHE signed MOU outlining arrangement

319 Grant agreement with city, matching up to \$50K per year for three years



have signed agreement to begin to recruit ag producers above El Dorado Lake to put in carbon and water quality practices



will provide monitoring and modeling

KDHE revised El Dorado MS4 permit to right size it to actual practices used, off site implementation and relief from monitoring

New MS4 Permit for El Dorado

- Issued on 2/1/2023 after public notice
- City and KDHE entered into an MOU
 - Established a framework of participation by the City and KDHE to invest in nutrient and sediment reduction practices above El Dorado Lake and along Walnut River in Butler Co., KS
 - Framework accomplishes the following:
 1. Credits the City for its treatment performance reducing N and P in its future WW NDPES permits
 2. Produces a revenue stream from the City (leveraged with EPA 319 and potential private-sector funds) that can be applied for the installation of BMPs to reduce NPS contributions to downstream

New MS4 Permit for El Dorado

- Reduced Permit from 67 pages to 35 pages
- Major Highlights include:
 - Revamp of permit to include “inverted WQ trading”
 - Establishment of an “Alternative Stormwater Offsite Pollution Reduction Program”
 - Monitoring and modeling of Load Reductions done by permittee
 - Tracking of points generated by offsite program tracked by permittee and reported to KDHE annually
- Established a “template” that may be utilized for others wanting to move forward with similar approach