



Big Bend Groundwater Management District #5 and the Kansas Department of Agriculture’s Division of Conservation will provide assistance through the Irrigation Technology Initiative, including:

- Crop Uniformity Evaluation Package
- Irrigation System Assessment

These performance measures will develop feedback to landowners for optimal water usage. To participate, complete the Irrigation Technology Initiative Cost-Share Financial Assistance Request Form, which can be found at your local GMD office.

**Contact GMD 5 for more information:**

Big Bend Groundwater Management District #5  
125 S. Main St.  
Stafford, KS 67578  
620-234-5352  
gmd5@gmd5.org  
www.gmd5.org



Funding for state cost-share programs is provided by the Division of Conservation, Kansas Department of Agriculture through appropriation from the State Water Plan Fund.

## ASSESSMENT PILLARS

Technical providers will evaluate irrigation systems using these four Assessment Pillars:



### PILLAR I: WELL EVALUATION

Static Water Levels (SWL), Pumping Water Levels (PWL), specific capacity (GPM/Drawdown), well depth, drillers log, SWL at drilling, pump test conducted at drilling, screen intervals, pump location



### PILLAR II: THE PUMP

Flow Rate GPM, PWL, PSI at Discharge, Energy use per hour, Overall Efficiency



### PILLAR III: IRRIGATION SYSTEM

Sprinkler Package Design (i.e. WISH), test GPM and PSI, uniformity pattern comparisons



### PILLAR IV: IRRIGATION WATER MANAGEMENT

Compare Et crop (irrigation + effective rainfall), spot check water budget, crop water budget (irrigation + effective rain), compare total irrigation (other fields and similar crops)



# Irrigation Technology Initiative

**Kansas Department of Agriculture  
Division of Conservation**

## OBJECTIVES

The five Groundwater Management Districts and the Kansas Department of Agriculture's Division of Conservation are working together to provide assessments to help producers gain a better understanding of their water systems efficiency.



This approach will utilize practices and techniques chosen in consultation with partners such as the Kansas Water Office and experienced irrigation conservation engineers. In part, these practices and techniques were chosen to compliment practices proposed to be offered through the High Plains Aquifer RCPP project. State funding for the Irrigation Technology Initiative will be used to implement these assessments and evaluations for Kansas producers with land located within boundaries of groundwater management districts.

Prior to the evaluation or assessment, producers will be asked to complete onboarding steps that are broken down into nine categories. The onboarding steps will help the technical providers gain a good understanding of the producer's systems. Additionally, this will give the producer the opportunity to be more involved in this process and gain a better understanding of their systems.

## ONBOARDING STEPS

Producers should complete all of the following onboarding steps before applying for the Irrigation Technology Initiative. Contact your GMD to learn more.

- **ELEVATIONS**  
Measure elevation at each well/pump, base of pivot, and at the end tower.
- **SPRINKLER PACKAGE DESIGN**  
Design from irrigation supply dealer (e.g. WISH, V-Chart, Z-Chart).
- **KANSAS GEOLOGICAL SURVEY INFORMATION**  
WIMAS, WWC5, WIZARD, or any other useful documents.
- **WELL AND PUMPING PLANT SPECIFICATIONS**  
Depth of well and pump intake, as well as pump assembly and design specifications.
- **PSI/POSITION GRAPH**  
Water pressure information from past and current years from the irrigation management software (e.g. AgSense, FieldNet, AP). Desired location is the end tower.
- **PRESSURE GAUGE ISOLATION VALVE ATTACHMENT**  
At pump discharge, before/after each butterfly valve, and base of pivot or on riser.
- **ANNUAL ENERGY USE REPORTING**  
Annual energy report, water use report, diesel usage, natural gas usage, KWh total, money spent on energy total.

- **YIELD MAPS**  
Cropping for previous and current year.
- **ACCESS TO WELL WATER LEVEL MEASUREMENT WITH SOUNDER CABLE**



## ACRONYMS FOR ONBOARDING

WIMAS: Water Information Management and Analysis System ([https://bit.ly/KGS\\_WIMAS](https://bit.ly/KGS_WIMAS))

WWC5: Water Well Completion Records ([https://bit.ly/KGS\\_WWC5](https://bit.ly/KGS_WWC5))

WIZARD: Water Information Storage and Retrieval Database ([https://bit.ly/KGS\\_WIZARD](https://bit.ly/KGS_WIZARD))