WHAT DO YOU GET OUT OF IT?

NORTHWEST KANSAS
GROUNDWATER MANAGEMENT
DISTRICT NO. 4



Ability to walk through an evaluation on **up to two (2) systems** and receive a report that:

- evaluates the performance of the system
- · details energy costs and projections
- identifies opportunities for improvement

After signing up, you can qualify for:

- Up to \$500 per system to be paid to you upon completing onboarding
- Evaluation of your System at no cost to you
- Access to cost-share funding after evaluation completion and review



CONTACT US

Jack Polifka Irrigation Specialist

785-462-3915 jpolifka@gmd4.org www.gmd4.org 1290 West 4th Street Colby, KS 67701

Onboarding Documents:





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



PILLAR I: THE WELL

Static Water Level, Pumping Water Level, Specific Capacity (GPM/FT Drawdown), Well Depth, Driller's Logs, SWL @ Drilling, PWL @ Drilling, Screen Intervals



PILLAR II: THE PUMP

Intake Depth, Pump Test @ Drilling, GPM Flow Rate, Head Lift, PSI At Discharge Energy Use Per Hour, NPPPC Performance Standards, Overall Efficiency



PILLAR III: THE IRRIGATION SYSTEM

Sprinkler Package Design (WISH), GPM Flow Rate, Supply PSI, Application Uniformity Patterns



PILLAR IV: IRRIGATION WATER MANAGEMENT

Crop ET vs. Irrigation + Effective Rainfall, Spot Check Water Budget, Compare total Irrigation vs. Other Crops and Other Fields

ONBOARDING

The following information is expected to be gathered before scheduling an evaluation:

Elevations

 Measure the elevation at each well/pump, at the base of each pivot, and at the field low and high points at the end tower.

• Sprinkler Package Design

 Design chart from the irrigation supply dealer (WISH, V-Chart, Z-Chart)

Kansas Geological Survey Information

 WIMAS Water Right Info, WWC5 Well Driller's Logs, WIZARD Water Level Measurement Data

Well and Pumping Plant Specifications

 Depth of Well, Depths of Pump Intake, Energy Type, Pump Assembly, and Design Specifications

PSI/Position Graph

 Water Pressure information from past and Current Years of Irrigation, sourced from pivot telemetry software (AgSense, FieldNet, AP, Etc.)

Annual Energy Use Reporting

 Annual Energy Report, Water Use Report, Diesel Usage, Natural Gas Usage, kWh Total, Total Cost of Energy

Yield Maps

 Historical Yield maps and cropping information for the current and past years

Satellite/Aerial Imagery

 Satellite imagery from current or previous crop during peak irrigation season, RGB, or NDVI

LEMA Allocations

5 YR LEMA Allocation

Location of Pressure Gauges

 Ideally with a 1/4" Isolation valve, at the pump discharge, before and after butterfly valves, at the base of the pivot or riser, and at the end tower

Location of Well Access for Water Level Measurement



COST-SHARE

After completing the system evaluation, you are eligible for cost-share funding:

- Up to <u>\$3000</u> per system
- 2 Systems Max or \$6000 per producer

Eligible items for cost share will depend on needs identified during evaluation, but could include:

- Water Meter Monitoring Software Subscriptions
- Telemetry Packages that can include soil moisture probes as a part of the system
- Sprinkler Package Renovation, Re-Nozzle, Drops
- Air Line Water Depth Measurement Systems

