



## CONSERVATION ENHANCEMENT ACTIVITY

**E449114Z2**

## CONSERVATION STEWARDSHIP PROGRAM

Advanced IWM--Weather is monitored, recorded and used in decision making. Actual evapotranspiration is calculated and used in forecasting future irrigation

**Conservation Practice 449: Irrigation Water Management**

**APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial); Pasture**

**RESOURCE CONCERN ADDRESSED: Insufficient Water**

**PRACTICE LIFE SPAN: 5 years**

### Enhancement Description

Advanced irrigation water management using on-site weather measurements to calculate real-time evapotranspiration and forecast future water use by plants. Record keeping is such that a daily water balance is calculated and future irrigations forecast.

### Criteria

- Weather station is installed on the farm and within 1 mile of fields where practice is implemented. The weather station will record each of the following (at a minimum of four times per hour),
  - High and low temperature
  - Precipitation
  - Humidity
  - Wind speed and duration
  - Solar radiation



## CONSERVATION STEWARDSHIP PROGRAM

- Irrigation water management plan is followed and includes, at a minimum (as per CSP 449):
  - An irrigation system layout map showing the main pipeline(s), irrigated area, soil moisture sensor locations and depths (if used), and soils.
  - Methods used to measure or determine the flow rate or volume of the irrigation applications.
  - Measurement records showing the amount of water used to irrigate as it comes onto the farm and goes to each field.
  - Documentation of the scientific method used for scheduling the timing and amount of irrigation applications. Plan meets crop needs, while maximizing irrigation water efficiency.
  - Seasonal or annual planned water application volumes by crop.
  - Management allowable depletion (MAD) and depth of the managed crop root zone for each crop.
  - Evaluation of irrigation system distribution uniformity and necessary changes were made.
  - Information on how to recognize irrigation induced erosion and how to mitigate it.
  - Location and installation of remote soil moisture probes. Indicate how data from the soil moisture sensor locations and depths will be considered to make field-wide irrigation decisions.
  - Water application scheduling based on soil moisture monitoring and evapotranspiration monitoring from the weather station
  - Recordkeeping documents for the irrigator to use during operation and management.



## CONSERVATION STEWARDSHIP PROGRAM

### Documentation Requirements

- Completed IWM plan, documenting guidance and landowner decisions using State specific protocol.
- Map delineating the location where the enhancement was implemented.
- Measurement records showing the amount of water used to irrigate as it comes onto the farm and goes to each field.
- Evaluation of irrigation system distribution uniformity and necessary changes were made.
- Copy of weather data, irrigation, rainfall, evapotranspiration and soil moisture data.