



**CONSERVATION ENHANCEMENT ACTIVITY**

**E449114Z1**

**CONSERVATION  
STEWARDSHIP  
PROGRAM**

Advanced IWM--Soil moisture is monitored, recorded, and used in decision making

**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 soil moisture monitoring (one sensor per 40 acres or more) with data loggers. Record keeping is such that a daily water balance is calculated, and future irrigations forecast.

**Criteria**

- Irrigation water management (IWM) 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.
  - Documentation of the scientific method used for scheduling the timing and amount of irrigation applications.
  - Seasonal or annual planned water application volumes by crop.
  - Management allowable depletion (MAD) and depth of the managed crop root zone for each crop.



## CONSERVATION STEWARDSHIP PROGRAM

- An estimate of the irrigation system distribution uniformity, based on testing, evaluation, or observation.
  - Information on how to recognize irrigation induced erosion and how to mitigate it.
  - Soil moisture sensors locations and depths. Sensor placement shall be based on soil characteristics, topography, or crops.
  - Recordkeeping documents for the irrigator to use during operation and management.
- Daily data readings must be acquired and logged for the installed soil moisture sensors.
  - Record each irrigation water application, each rainfall event, and daily soil moisture throughout growing season.
  - Apply irrigation water based on collected data in order to meet the crop's needs, while maximizing irrigation water efficiency.
  - Measure and record the amount of water used to irrigate as it comes onto the farm and goes to each field.
  - Evaluate irrigation system distribution uniformity and make necessary changes to improve uniformity.

### **Documentation Requirements**

- Completed IWM plan, documenting guidance and landowner decisions using State specific protocol.
- Map delineating where enhancement was implemented.
- Location and installation of remote soil moisture probes.
- Copy of irrigation, rainfall, and soil moisture data.