

**Water Quantity Enhancement Activity – WQT05 – Remote monitoring and notification of irrigation pumping plant operation**



**Enhancement Description**

A system for monitoring the status of an irrigation pumping plant and notifying the operator by a wireless connection of a change in the operating status of the irrigation system.

**Land Use Applicability**

Cropland, Pastureland

**Benefits**

Irrigation water usage and energy costs associated with pumping irrigation water are a critical resource concerns. Even the most careful managers cannot manage the water on all of their fields on a continuous basis without increasing the potential for some runoff. Real time information on the status of their irrigation systems helps to prioritize field visits to observe the system and make necessary adjustments for proper functioning. New technology monitors the status of the watering system and notifies the operator when there is a change, such as, the pump turning on or off.

**Conditions Where Enhancement Applies**

This enhancement applies to all the irrigation pumping plants in the crop or pasture land use.

**Criteria**

The pumping plant monitoring system must include:

1. Installation of necessary sensors to monitor the operation of the pumping plant and irrigation system.
2. A communication system at the pump with an automated recording and wireless communication system to automatically notify the operator of a status in the watering system.
3. The irrigation water management plan must reflect usage of the data from the system and include necessary operation and maintenance to keep the system functional.

**Adoption Requirements**

This enhancement is considered adopted when a monitoring system has been installed at the remote well location(s) and the subject well has a functioning automated remote notification system.

**Documentation Requirements**

A map delineating the locations where the monitoring systems are installed.



United States Department of Agriculture  
Natural Resources Conservation Service

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### **References**

Kranz, W. 2011. Monitoring irrigation water application with computerized controllers. Proceedings of the 23rd Annual Central Plains Irrigation Conference. Burlington, CO. February 22-23, 2011.

<http://www.ksre.ksu.edu/irrigate/OOW/P11/Kranz11b.pdf>

Piao, X. and L. Burt. 2001. Remote monitoring and control – system set-up.

<http://www.itrc.org/reports/remote/remote.pdf>