

FAST MONITORING

WYEAST RCD - REMOTE MONITORING PROJECT



On-Farm Monitoring

- 1 - PUMPS
- 2 - SOIL MOISTURE

Collaboration between
Farmers and Fish

ON-FARM MONITORING

FIFTEENMILE WATERSHED - FAST PROGRAM

The Fifteenmile Watershed encompasses 238,720 acres in Northern Wasco County. The City of Dufur is roughly center of the Watershed. Several of the larger Irrigators are located West of Dufur in the Dufur Valley area.

FAST Program was first implemented in 2013 and was designed to create a collaborated approach between the Farmers/Irrigators and Fifteenmile Stream water conditions. This is a voluntary program that alerts the Irrigators when the stream is at critical conditions with low flow and/or high water temperatures, ultimately to maintain safe aquatic conditions for the fish.

WyEast RCD, in partnership with the Wasco County Soil & Water Conservation District, FAST Program Coordinator, and Fifteenmile Watershed Council installed remote monitoring sensors to better monitor the irrigation system operation and increased irrigation water management practices using the latest on-farm technology.



ON-FARM MONITORING

PUMP OPERATION AND IWM TECHNOLOGY

Remote Pump Monitoring

As the FAST alerts are sent out during critical stream conditions the Farmers will voluntarily shut off their irrigation systems to reduce the water removed from the stream. By monitoring the operation of these pumps we can document the time and days these pumps were shut down. This data is time stamped and logged to help prove the pumps were not in operation in the event of a fish kill or other devastating event in the stream.

The remote monitoring also allows the FAST Program Coordinator to remotely monitor the operation of each pump and then communicate with the Irrigator if needed.

At a quick glance, a visual table can be viewed to see who is running and who is off.

Irrigation Water Management

Soil Moisture Probes connected to telemetry systems allows the Irrigator to easily monitor the soil moisture content for each field. The information can be viewed from any device that is connected to the internet. Industry Standards indicated using this technology can save an average field up to 10-20% water while maintaining yields.

The Irrigators involved with the FAST Program have been able to use this information in other beneficial ways. If warm temperatures are building, the Irrigator can make sure the fields are topped off with water prior to any critical event. This can allow the irrigation system to either be turned off or reduce the amount of water needed, leaving more water in stream during a critical event.

Using the moisture in the crops root zone as a "bank" can provide great short term benefits.



Irrigators are using Soil Moisture data to adjust their irrigation schedules and leave more water in the stream during critical times.

More Details [+]

Daily WB Report Probe Report Flow Meters Flow Gauges Water Feeds Report WS Reports Map Report TWS

What's New

Water Supply Feed Report

Status	Installation	Name	Last Reading	Unit	Data Age	%
	DuFur FAST Network		2.250	psi	25m	100
	DuFur FAST Network		-0.722	psi	25m	100
	DuFur FAST Network		-0.724	psi	25m	100
	DuFur FAST Network		-0.180	psi	25m	100
	DuFur FAST Network		9.164	psi	25m	100
	DuFur FAST Network		0.225	psi	25m	100

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Pump Operation Remote Display

2019 FAST MONITORING PARTICIPATION

SUMMARY

WyEast is working with Irrigators in the Fifteenmile Watershed to provide remote monitoring service for FAST Program Participants. A wireless network has been setup to allow the remote field sensor data to be collected. The program focus area is from the City of Dufur to the Ramsey Grange, this area can be expanded if there is desire to expand the program.

Participation - As of July 1st, 2019

(4) Irrigators/Land Owners

(7) Pump Systems

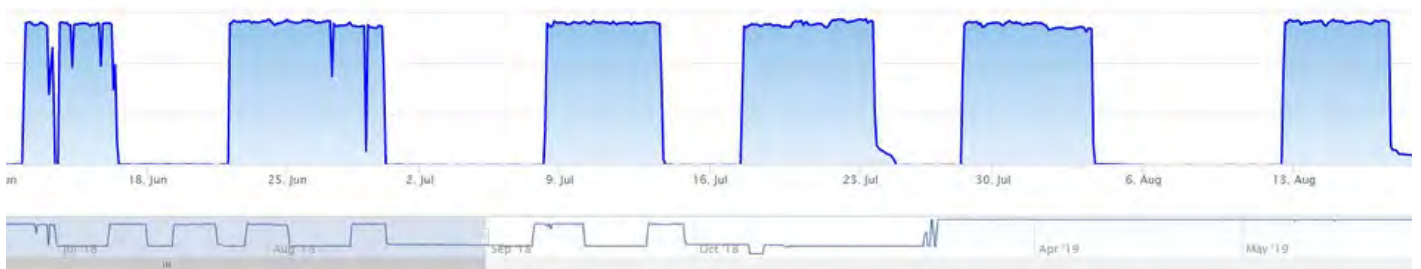
(3) Soil Moisture - IWM Sites *(FAST 2- Have the option to shut off)*

Monitoring is setup to include both FAST 1 and FAST 2 Participants

This project was started as a pilot in 2018 to measure the value of the technology & remote monitoring. We are also leveraging funds from an NRCS - Conservation Innovation Grant that WyEast is currently working under, Advanced Precision Irrigation 2.0. WyEast will complete the CIG grant in September of 2019.

Feed Data

Pump Operation Time Graph



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