

IRRIGATION MANAGEMENT (CSP Enhancements)

Enhancement Activity Task Sheet

March 2005

UT-CSP-EWM



Enhancement Activities

Enhancement activities refer to actions that provide resource benefits beyond the level prescribed by NRCS Conservation Practice Standards. Once implemented Enhancement Activities should result in an observable or measurable improvement to the condition of one or more of the soil, water, air, plant or animal resources, or provide for more efficient resource utilization and/or energy conservation.

Enhancement Activity Benefits

Enhancement activities associated with Irrigation Water Management such as minimizing irrigation induced soil erosion or using soil moisture monitoring devices can result in the following benefits to the producer and the environment:

- Reduced risks to ground and surface water quality
- Reduced costs
- Improved yields

CSP Payments

You can earn payments by using your irrigation water more efficiently. Some of the factors used to determine your water use efficiency include the following:

- Irrigation system type
- Water measurement technique used

- Soil moisture monitoring
- Irrigation scheduling technique
- Water distribution method
- Irrigation water conveyance system

Some of the activities that may help you improve your water use efficiency include:

- Converting from flood to sprinkler irrigation
- Using water flow meters
- Using instruments to monitor soil moisture
- Scheduling irrigation based on a regional weather network
- Collecting and reusing tailwater

Water Rights

Under Utah law, all water is publicly owned and anyone planning to store or divert surface or groundwater for the purpose of irrigation must obtain a permit or water right from the Utah State Engineer. These permits or water rights must be obtained prior to the use of the water. It is the responsibility of the landowner to obtain the necessary permits or water rights.

CSP Enhancements earnings are subject to payment caps. Your actual payment will depend on your CSP Tier level and the number of acres enrolled.



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Client's Acknowledgement Statement:

I have elected to use the following Irrigation Resource Management activities and understand the requirements of the selected activities (Check all that apply):

- Converting from flood to sprinkler irrigation
- Using water flow meters
- Using instruments to monitor soil moisture
- Scheduling irrigation based on a regional weather network
- Collecting and reusing tailwater

I agree that the following information will be provided to NRCS before this enhancement activity can be certified as applied:

- Irrigation water application records which include the dates and amounts of water applied.
- Documentation showing the irrigation scheduling technique used.
- Evaluation of the irrigation system used.
- Copies of dated receipts for equipment or services purchased.

I understand that CSP Enhancements earnings are subject to payment caps and that my actual payments will depend on my CSP Tier level and the number of acres enrolled.

I understand that it is my responsibility to obtain all necessary permits and to comply with all ordinances and laws pertaining to the application of these activities.

Accepted by: /s/ _____ Date: _____

USDA Nondiscrimination Statement

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Irrigation Enhancement Certification

I certify that:

- I have made no substantial changes to my irrigation system or scheduling over the past 12 months.
- I have made improvements to my irrigation system and/or management in an effort to increase my irrigation efficiency. Improvements and/or management activities are documented on the attached worksheets.

NOTE: To calculate a new Irrigation Index NRCS will need to recalculate the Soil Condition Index if you have made changes in planned crop rotation or tillage.

Attach:

- **Records of the crops and fields irrigated.**
- **Irrigation water application records, including the dates and amounts of water applied.**
- **Documentation showing the irrigation scheduling technique(s) used.**

Name: _____ Date: _____

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Use this table to document the Water Measurement technique used on each field.

List Tract & Field #s or Names with Similar Water Management Techniques	Acres	Check Water Measurement Technique
		<input type="checkbox"/> No flow measuring devices
		<input type="checkbox"/> Flow measurement -whole farm-manually recorded
		<input type="checkbox"/> Flow measurement -whole farm-automatic recorded
		<input type="checkbox"/> Flow measurement - whole farm plus individual field manual
		<input type="checkbox"/> Flow measurement -whole farm plus individual field automatic recorded

Use this table to document the Soil Moisture Monitoring technique used to schedule irrigation sets on each field.

List Tract & Field #s or Names with Similar Soil Moisture Monitoring Techniques	Acres	Check Soil Moisture Monitoring Technique
		<input type="checkbox"/> Visual crop stress
		<input type="checkbox"/> Soil moisture by NRCS feel method
		<input type="checkbox"/> Check book scheduling, irrigation scheduler, etc.
		<input type="checkbox"/> Irrigation scheduling via pan evaporation or anemometer for field
		<input type="checkbox"/> Irrigation scheduling via regional weather network
		<input type="checkbox"/> Soil moisture using Gypsum blocks, moisture probe, etc
		<input type="checkbox"/> Continuous measurement of soil moisture, water applied and ET



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Use this table to document the Water Distribution System used on each field.

List Tract & Field #s or Names with a Similar Water Distribution System	Acres	Check Water Distribution System
		<input type="checkbox"/> Very poor diversion facilities. Little control of flow rate to farm.
		<input type="checkbox"/> Can control flow rates to farm, but the on farm delivery system is such that it is very hard to deliver the desired flow to any given field.
		<input type="checkbox"/> Flow rates to each field are adequately controlled. Flow rates to each set are difficult to control.
		<input type="checkbox"/> All flow rates to each set are adequately controlled.

Use this table to document the Conveyance System used to bring water to each field.

List Tract & Field #s or Names with Similar Conveyance System	Acres	Check Water Conveyance System Used
		<input type="checkbox"/> Open ditch or canal - sand/gravel
		<input type="checkbox"/> Open ditch or canal - sandy loam
		<input type="checkbox"/> Open ditch or canal - clay soil
		<input type="checkbox"/> Open canal - lined
		<input type="checkbox"/> Closed conduit pipeline



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Use this table to document the Land Leveling technique used on each field.

List Tract & Field #s or Names with Similar Land Leveling Techniques	Acres	Check Land Leveling Techniques Used
		<input type="checkbox"/> Land smoothed
		<input type="checkbox"/> Land leveled
		<input type="checkbox"/> Land precision leveled
		<input type="checkbox"/> Land precision leveled - slope <= .005
		<input type="checkbox"/> A sprinkler system is utilized

Use this table to document the amount of Tailwater Captured and Reused on each field. Note "none" for sprinkler-irrigated fields.

List Tract & Field #s or Names with Similar Tailwater Capture and Reuse Systems	Acres	Check Amount of Tailwater Captured and Reused
		<input type="checkbox"/> none
		<input type="checkbox"/> 25% irrigation runoff captured and reused
		<input type="checkbox"/> 50% irrigation runoff captured and reused
		<input type="checkbox"/> 75% irrigation runoff capture and reused
		<input type="checkbox"/> 100% irrigation runoff capture and reused



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NOTE: This worksheet is available as an Excel spreadsheet with auto calculation and graphing.

Irrigation Water Use Record - Farmer Self Certification

Cooperator: _____ Crop: _____ Year: _____

Location: _____ Station: _____ Field Acreage: _____

Tract/Field #: _____ Annual Irrigation Requirement: _____ inches

Irrigation Type (Flood, Pivot, Wheeline, etc): _____ Desired Efficiency: _____ %

Start date of irrigation	End date of irrigation	Total Cycle Hours	Flow (cfs) OR number of nozzles multiplied by nozzle flow (gpm)	Inches Applied Cycle	Inches Applied Season	CU Season (Table)	Efficiency CU/Irr	SMD= Eff*Irr -CU

Total inches of water applied during the season (total of all lines above):

Acre Feet Applied, Season

Seasonal Irrigation Efficiency (Net irrigation requirement/inches of water applied per acre):

Notes: PLEASE FILL OUT THE BLUE AREAS.

***Formula to calculate the total acre inches of water used during an irrigation:**

cfs * hrs = total acre inches used

Note: To convert gpm to cfs divide cfs by 448

I certify that all information provided above is correct to best of my knowledge.

Cooperator: _____ Date: _____

NRCS-UT
March 2005