

EXAMPLE 6 CONSERVATION MANAGEMENT SYSTEM GUIDANCE DOCUMENT

LOCATION (MLRA AND NRD): Upper Big Blue NRD, MLRA 75

RESOURCE SETTING: Irrigated Crops: Corn-Soybeans; Soils: Silt loam class I soils that have been leveled in the past; Wildlife: Potential for pheasant, quail, deer, and other wildlife; Domestic Livestock: No livestock use; Irrigation Water: Source well 700-1000 gpm, rainfall not adequate to meet crop needs; Adequate supply of groundwater at 100 feet or deeper for irrigation, typically high in nitrates in either groundwater or in vadose zone, drawdown occurs during peak use which causes fluctuation in irrigation water (GPM) output.

BENCHMARK RESOURCE PROBLEMS (EXISTING CONDITIONS)

Soil:	Soil Condition deteriorating
Water:	Excess runoff; Nitrates leaching into groundwater/vadose zone.
Air:	Chemical drift.
Animals:	Fence row to fence row farming
Plants:	Lack of food, cover and shelter for upland wildlife.
Human:	Concerned with restrictions on amount of water applied, does not want to change set times, concerned about providing adequate nitrogen and irrigation water throughout the growing season to ensure maximum yields, and maintain or improve worth of land and economic return.

CONSERVATION MANAGEMENT SYSTEM (list practices to be applied and maintained and where they are applicable)

Planned Practices	Practice Description
328 Crop Rotation	Corn after Corn with Soybeans rotated when possible
329C Residue Management Ridge-till	Planting on top of ridges, cultivated to build ridges and for gravity irrigation
430 Irrigation Pipeline	Provide Water head of field from well
443 Irrigation System Surface	Furrow irrigated every other row. May convert to surge valves
447 Reuse System	Capture and reuse irrigation water runoff (typically not needed when surge valves are utilized)
449 Irrigation Water Management	Install water meter, adjust number of furrows/set as needed, use irrigation scheduling, check soil moisture using the feel method and soil moisture blocks, replace leaky gaskets.
464 Land Leveling	Continue to maintain existing system.
590 Nutrient Management	Nutrients applied in accordance with soil test, realistic yields, reduction of approximately
595 Pest Management	Under ICM by crop scout

RESULTS OF MANAGEMENT ACTIONS

MANAGEMENT ACTIONS	RESULTS OF MANAGEMENT ACTIONS
Water meter applied.	Landuser is aware of the amount of water applied and able to better manage water applications.
Irrigation Scheduling	Better understanding of soil-water-plant relationship and management or irrigation water, control of deep percolation and use of effective rainfall. 5 lbs of Nitrogen per each inch of irrigation water that is not leached.

Use 5 year average plus 5% for yield goals.	Adequate N even in slightly above average years, less nitrate leaching, improved returns
Less corn on corn, use of crop scout.	Less need for pesticides apply only when needed.
Land leveling maintenance performed	Better water use less leaching

QUALITY CRITERIA DOCUMENTATION

RESOURCE CONCERN (refer to Section III quality Criteria and Exhibit 1 of NPPH for a list of concerns)	BEFORE CONDITIONS	AFTER CONDITIONS (refer to Section III quality criteria for more guidance)	QUALITY CRITERIA MET (Y or N)
Water management, irrigated	Irrigation water is not applied according to Irrigation Water Management Standard (449). On-farm efficiency is less than 70% of the maximum potential efficiency using FIRS.	Irrigation water is applied according to Irrigation Water Management Standard (449). Minimum on-farm will be at least 70% of the maximum potential efficiency using FIRS.	Y
Ground Water Quality Nitrate leaching	Medium risk rating using Nitrogen leaching index in 590 Nutrient Management Standard and does not meet the criteria in 449 Irrigation Water Management Standard	Low risk rating using Nitrogen leaching index in 590 standard and meets criteria in 449 Irrigation Water Management Standard	Y
Soil Condition (Tilth, Crusting, Infiltration and Organic Matter)	Low organic matter, poor tilth/intake Negative value for Soil Conditioning Index	Improved organic levels, tilth and intake rates Positive or neutral value for Soil Conditioning Index	Y
Surface Water Contamination Pesticides	Medium to High risk of Pesticide loss using Win-PST	Low Risk with Win-PST evaluation or Medium Risk with mitigation applied per 595 standard	Y
Wildlife Habitat	Less than a 0.5 Index rating	0.5 or greater Index rating	Y