

EXAMPLE 3 CONSERVATION MANAGEMENT SYSTEM GUIDANCE DOCUMENT

LOCATION (MLRA AND NRD): Lower Platte South/Lower Big Blue NRD's, MLRA 106

RESOURCE SETTING: Dryland cropland crops: Milo, Soybeans; Soils: Wymore soils, 5-8% slopes, LCC IIIe; Annual precipitation 28-32 inches; moisture generally lacking in the summer during peak ET, rainfall often comes in short intense spring/early summer storms; Wildlife: Potential for pheasant, quail, deer, and other wildlife.

BENCHMARK RESOURCE PROBLEMS (EXISTING CONDITIONS)

Soil:	Sheet & rill erosion at 2-3 times "T", ephemeral gullies and classic gully erosion in drainage courses, poor soil conditions including low Organic matter, compaction, sediment deposition on and off site.
Water:	Excessive runoff, excessive moisture loss, surface water contamination of sediment and pesticides.
Air:	None.
Plants:	Low crop yields, excessive annual and grass weeds, nutrients and pesticide management is poor resulting in poor availability of nutrients and poor herbicide response.
Animals:	Lack of food, cover, and shelter for upland wildlife.
Human:	Traditional operator that is resistant to complete no-till operation is interested in nutrient and pest management, crop yield improvements, and soil loss reduction. Family farm would like to 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	1 year milo followed by 1 year soybeans
329A Residue Management No-till	Milo no-till planted into soybean stubble leaving 30% residue
329B Residue Management Mulch till	Soybeans mulch till into milo stubble leaving 20% residue cover
330 Contour Farming	Perform all tillage and anhydrous application on the contour.
412 Grassed Waterways	Establish in concentrated flow area and to provide proper outlet for terraces.
590 Nutrient Management	Soil test at least every other year. Apply N, P, etc based on soil test, soil type, pest management and other considerations.
595 Pest Management	Rotate herbicides, reduce rates of atrazine on milo, use IPM/pest scouting program for weed control.
600 Terraces	Construct broadbase terraces.

RESULTS OF MANAGEMENT ACTIONS

MANAGEMENT ACTIONS	RESULTS OF MANAGEMENT ACTIONS
Soil test every other year and apply N, P, Lime, etc. as needed.	Increased yields, apply only nutrients when needed, and improved water quality.
Rotate herbicides, split spray, use scouting for weeds and insects.	Reduce chance of herbicide resistance, improve weed control, and increase yield. High level of management required.

Contour farming for tillage, planting and anhydrous application	Reduce sheet and rill erosion, reduce crop damage from sedimentation and stand loss, reduce loss of fertility and pesticides in furrow.
Milo into soybeans No-till; Soybeans into milo Mulch-till	Reduce soil moisture loss, reduce sheet & rill and ephemeral erosion, enhance soil tilth and organic matter, improve yields, reduce crop loss, reduce compaction, and provide wildlife cover, possible increase in winter annual weeds and perennials. Higher level of management required.
Establish grassed field borders	Eliminate up and down hill endrows, reduce ephemeral gullies, and provide wildlife habitat and cover.
Establish grassed waterways	Eliminate classic gully erosion, provide wildlife habitat, surface water quality improved, and reduce sediment deposition on and off site.
Construct broad base terraces	Reduce sheet and rill erosion, reduce ephemeral erosion, reduce off site sediment damage, and improve crop yields and surface water quality. High initial cost of construction and on going maintenance costs.

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)
Sheet and Rill Erosion	10-15 tons/acre/year	5 tons	Y
Ephemeral Gully Erosion	Will vary by site	Will vary by site	Y
Classic Gully Erosion	Will vary by site	Will vary by site	Y
Tilth, Crusting, Infiltration, and Organic Matter	Low organic matter, poor tilth/intake	Improve organic matter levels, tilth and intake rates	Y
Water Quantity-Other	Excessive soil moisture loss	Acceptable soil moisture loss	Y
Pesticides in Surface Water	High potential surface loss (atrazine)	Medium potential surface loss (atrazine)	Y
Annual Nitrogen Applied	100 lbs/ac/yr (milo)	Varies by site	Y
Plants Productivity	Poor yields (15% below average)	Above average yield (10%)	Y
Soil Deposition	On & Off site sediment damage	Varies by site	Y
Wildlife Habitat	Less than a 0.5 Index rating	0.5 or greater Index rating	Y