

EXAMPLE 2 CONSERVATION MANAGEMENT SYSTEM GUIDANCE DOCUMENT

LOCATION (MLRA AND NRD): Papio-Missouri River NRD, MLRAs 102, 106, 107

RESOURCE SETTING: Dryland Cropland Crops: Corn, Soybeans, Alfalfa. Soils: LCC IIIe including silt loam and silty clay loam soils. Annual Precipitation 28-32 inches, moisture is usually lacking in the summer during peak ET, and rainfall often comes in short intense spring and early storms. Wildlife: Potential for pheasant, quail, deer, turkey, and other wildlife; Domestic Livestock: Fall gleaning of crop stubble by cattle.

BENCHMARK RESOURCE PROBLEMS (EXISTING CONDITIONS)

Soil:	Sheet & Rill erosion 3-4 times tolerable level, ephemeral gullies in drainage courses, low organic matter, compaction, and sediment deposition on & off site.
Water:	Excess runoff, excessive moisture loss, surface water contamination from sediment, nutrients & herbicides.
Air:	Chemical drift – on-site and off-site.
Plants:	Excessive annual broadleaf & grassy weeds, low crop yields.
Animals:	Lack of food, cover & shelter for upland wildlife.
Human:	Resistance to complete no-till systems is interested in crop yield improvements and increased economic returns.

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

Planned Practices	Practice Description
328 Crop Rotation	Corn soybean
329A Residue Management no-till	No-till Corn and Soybean, Drill soybeans
386 Field Border	Established on steep end rows where concentrated flow erosion occurs
393 Filter Strips	Filter strips are established next to seasonal and perennial streams
412 Grassed Waterways	Established where concentrated flow erosion occurs.
590 Nutrient Management	Soil test every other year based on soil types and other management considerations. Apply N, P and possible lime as needed.
595 Pesticide Management	Rotate herbicides; apply herbicides based on IPM/pest scouting program for weed control. Follow atrazine and other label restrictions especially near water bodies
600 Terraces	Install terraces on steepest slopes

RESULTS OF MANAGEMENT ACTIONS

MANAGEMENT ACTIONS	RESULTS OF MANAGEMENT ACTIONS
Complete no-till system	Reduce sheet & rill erosion, improve yields, increase tilth & OM and reduce compaction. Reduce soil moisture loss, decrease crop loss due to sediment deposition and erosion. Improve wildlife cover.
Soil test every other year and apply N, P and lime as needed	Increased yields, apply only nutrients needed, improved water quality.
Rotate herbicides, use IPM/pest scouting for weeds/insects	Reduce chance of herbicide resistance; improve weed control, increase yield, high level of mngt. required.

Establish terraces, filter strips, field borders and grassed waterways	Eliminate concentrated flow erosion and off-site damage from sedimentation
Rotate herbicides, use IPM/pest scouting for weeds/insects	Reduce chance of herbicide resistance; improve weed control, increase yield, high level of mnngt. required.

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	15-20 tons/acre	5 tons or less	Y
Ephemeral Gully Erosion (concentrated flow)	S & R x 30% x acres	Eliminated	Y
Tilth, Crusting, Infiltration & Organic Matter	Low OM, poor tilth/infiltration, Negative value Soil Conditioning Index value	Improved OM, tilth and intake rates positive Soil Conditioning Index value	Y
Soil Compaction	Compaction due to high tillage	Reduced compaction Verified by Bulk density and/or probing	Y
Soil on-site Deposition	Silt deposition due to ephemeral erosion	Reduced on-site deposition	Y
Wildlife Habitat	Less than a 0.5 Index rating	0.5 or greater Index rating	Y
Cropland Productivity	Poor Yields	Average Yields	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
Surface Water Contamination Nutrients	Medium potential surface loss using P-Index	Low potential surface loss using P-Index	Y