

SECTION 5

Land Treatment Component

(Fields and Yields, Practices, RUSLE2)

This report was prepared on RUSLE2 soil loss calculations which are based on soil type, slope and slope length, crop rotation, crop yield, tillage, and planned conservation practices. These calculations are included at the end of this section.

Fields and Yields:

This section of the plan addresses all fields where manure is to be applied and the attainment of resource management goals for soil and water quality. Several on-site investigations of the fields were made to gather data on cropping systems, slopes, slope lengths, etc. Fields where manure nutrients are applied will be managed to meet the soil loss tolerance in accordance with the Conservation Plan for each field.

Fields 80A and 80B is the combination of strip crop fields 30, 32, 33, 34, 35, 40, 110 that have a corn (80A) and Hay (80B) rotation.

Fields 81A and 81B is the combination of 38, 39, 41, 42, 43, 44, 68, 78, and 109 that have a corn (81A) and hay (81B) rotation.

Field 82 is the combination of 6, 47, 48, 49, 50, 51, 53, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 111 that have a corn (82A) and hay (82) rotation.

See section 7 for crop field number, acres and yield

Existing Land Treatment Practices Summary

Grass Waterway (412) (See Section 6 for Quantities)

Constructed channel that is graded to required dimensions and established with suitable vegetation.

Filter Strip (393) (See Section 6 for Quantities)

A strip or area of permanent herbaceous vegetation situated between cropland, grazing land or disturbed land and environmentally sensitive areas.

Contour Stripcropping (585)

Growing row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across the field.

Residue Management, Seasonal (344) (See Section 6 for Quantities)

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during a specific period of the year. Cultivating and minimal tilling fields will decrease sheet and rill erosion in all the fields.

All existing conservation practices need to be maintained and repairs made when needed.

Resource Concerns (Water Quality, Soil Erosion, etc)

The following water quality issues have been address by this section of the Comprehensive Nutrient Management Plan.

Sheet/Rill Erosion From Fields

Detachment and transport of soil particles caused by rainfall splash and runoff degrading soil quality. Sheet and rill erosion will be at or below the soil Loss Tolerance "T".

Ephemeral Gully Erosion

Small channels caused by surface water runoff degrading soil quality and tend to increase in size. On cropland they can be obscured by heavy tillage. Surface water is controlled sufficiently to stabilize the small channels and prevent reoccurrence of new channels.

Proposed Land Treatment Practices Summary

The following pages list proposed practices, and operation and maintenance procedures that should be adhered to for this facility.

Nutrient Management (590) (See Section 6 for Quantities)

Manage the amount, form, placement, and timing of plant nutrient application. See the enclosed "Nutrient Management Plan" (Section 7) for the proper application rates, timing, and methods of application to provide needed crop nutrients and to minimize the transport of nutrients to ground and surface water.

Operation and maintenance: The owner/client is responsible for safe operation and maintenance of this practice including all equipment. See job sheet 590 for more. See the enclosed "Nutrient Management Plan" (Section 7) for crop rotation schedules.

Waste Utilization (633) (See Section 6 for Quantities)

Using agriculture waste, such as manure and wastewater or other organic residues, on land in an environmentally acceptable manner while maintaining or improving soil, air, water, and plant resources.

Water and Sediment Control Basin (638) (See Section 6 for Quantities)

An earthen embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin.

Diversion (362)

A channel constructed across the slope generally with a supporting ridge on the lower side.

Subsurface Drain (606)

A conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water.

Proposed Practices

Practice	Location Fields	Units	Size	\$/Unit	Total cost
Subsurface Drain(606)	96	1250'	6"	\$2.00	\$2500.00
Subsurface Drain(606)	60,62-67&50-67	3250'	6"	\$2.00	\$6500.00
Diversion(362)	69(around compost)	600'	2'	\$2.25	\$1350.00
WSCB(638)	103	400'	<5'		\$3500.00
Subsurface Drain (606)	103,77,23	1250'	10"	\$4.00	\$5000.00

See attached maps for location of practices.

Any changes in application fields, average yields, or planned crop rotations will require this plan to be updated.

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