Conservation Plan

Westridge Dairy
2114 Ames Rd.
Red Bud, Il 62278

FSA Farm #3699

Field #3

Conservation Crop Rotation – Corn Silage/ Corn Grain -- is the planned rotation.

Tillage Practice – In preparation for the corn crop, manure will be applied, then the field will be worked twice with a field cultivator. The corn will planted in 30 inch rows, following corn silage removal the field will lay idle until the following spring. The surface residue prediction following silage removal is 29%. In preparation for the next years corn crop,then the field will be worked twice with a field cultivator. The corn will planted in 30 inch rows, following corn harvest will lay idle until the following spring. The surface residue prediction following harvest is 65%. The field will then lay idle until the next spring. In years of no manure application, anhydrous ammonia will be applied.

Manure Applications – will be planned for this field in accordance with the Waste Utilization Plan – applications will occur via drag line system that directly injects the manure into the soil at application.

Manure Application Limitations – There is a residence within ¼ mile of this application field which under LMFA regulations requires soil incorporation within 24 hours of application. A waterway is located within this field and should not have manure applied in it. Also there is a drainage ditch near the field which requires a 150 foot setback in these areas. Additionally this field sits within a 10 year flood plain so that livestock waste may not be applied unless the injection or incorporation method of application is used. Additionally areas of this field contain slopes of more than 5% which may not have manure applied on them when the ground is snow covered or frozen.

Soil Loss Calculation
Net C Factor RUSLE 2 – 0.18
Soil Conditioning Index – 0.1
STIR Value – 66.16

Soil Type 8787A Calculated T Loss – 2.1	Acceptable T Loss – 5.00
Soil Type 3333A Calculated T Loss – 2.1	Acceptable T Loss – 5.00

Targeted crop nutrient needs will be achieved by means of manure applications in years designated in the Waste Utilization Plan and by means of commercial fertilizer in years of no manure applications. Refer to Nutrient Budget located behind each years Waste Application Tab.

USDA NRCS

RUSLE2 Profile Erosion Calculation Record

Info: Field #3

File: Plan: Profile (Temp. scenario[1]) of Westridge Dairy*
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Monroe County
Soil: 8787A Banlic silt loam, 0 to 2 percent slopes, occasionally flooded\Banlic silt loam 85%
Slope length (horiz): 150 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Westridge cs-cg	Corn, silage	tons	25.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-cg	Corn, grain	bushels	123.00

Contouring: c. perfect contouring no row grade
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 2.1 t/ac/yr
Detachment on slope: 2.1 t/ac/yr
Soil loss for cons. plan: 2.1 t/ac/yr
Sediment delivery: 2.1 t/ac/yr
Net C factor: 0.18
Net K factor: 0.42

Crit. slope length: 150 ft
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/4/0	Manure injector, liquid low disturb.30 inch		73
4/5/0	Cultivator, field w/ spike points		50
4/5/0	Cultivator, field w/ spike points		50
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	50
9/28/0	Harvest, silage		29
4/14/1	Cultivator, field w/ spike points		18
4/15/1	Cultivator, field w/ spike points		14
4/16/1	Planter, double disk opnr w/fluted coulter	Corn, grain	14
10/1/1	Harvest, killing crop 60pct standing stubble		65

Soil conditioning index (SCI): 0.1

STIR value: 66.16
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS

RUSLE2 Profile Erosion Calculation Record

Info: Field #3

File: Plan: Profile (Temp. scenario[1]) of Westridge Dairy*
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Monroe County
Soil: 3333A Wakeland silt loam, 0 to 2 percent slopes, frequently flooded\Wakeland silt loam 90%
Slope length (horiz): 150 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Westridge cs-cg	Corn, silage	tons	25.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-cg	Corn, grain	bushels	123.00

Contouring: c. perfect contouring no row grade
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 2.1 t/ac/yr
Detachment on slope: 2.1 t/ac/yr
Soil loss for cons. plan: 2.1 t/ac/yr
Sediment delivery: 2.1 t/ac/yr
Net C factor: 0.18
Net K factor: 0.42

Crit. slope length: 150 ft
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/4/0	Manure injector, liquid low disturb.30 inch		73
4/5/0	Cultivator, field w/ spike points		50
4/5/0	Cultivator, field w/ spike points		50
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	50
9/28/0	Harvest, silage		29
4/14/1	Cultivator, field w/ spike points		18
4/15/1	Cultivator, field w/ spike points		14
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Application Field Detail Sheet

Westridge Dairy

Field #	3
Field Name	Road Bottom
Land Owner	Ralph & Janet Henry
FSA Farm #	3699
FSA Tract #	10212
Tillable Acres	19.58
Application Acres	19.58
County	Monroe
Township	Precinct 9
Section	25

Proximity Location

- ☑ Residence
- ☐ Non-Farm Business
- ☐ Common Place of Assembly
- ☐ Streams
- ☐ Wells
- ☐ Lake
- ☐ Ponds
- ☐ Rivers
- ☐ Other Water Sources
- ☑ 10 yr Flood Plain
- ☐ Waterways
- ☑ Drainage Ditches

Provisions

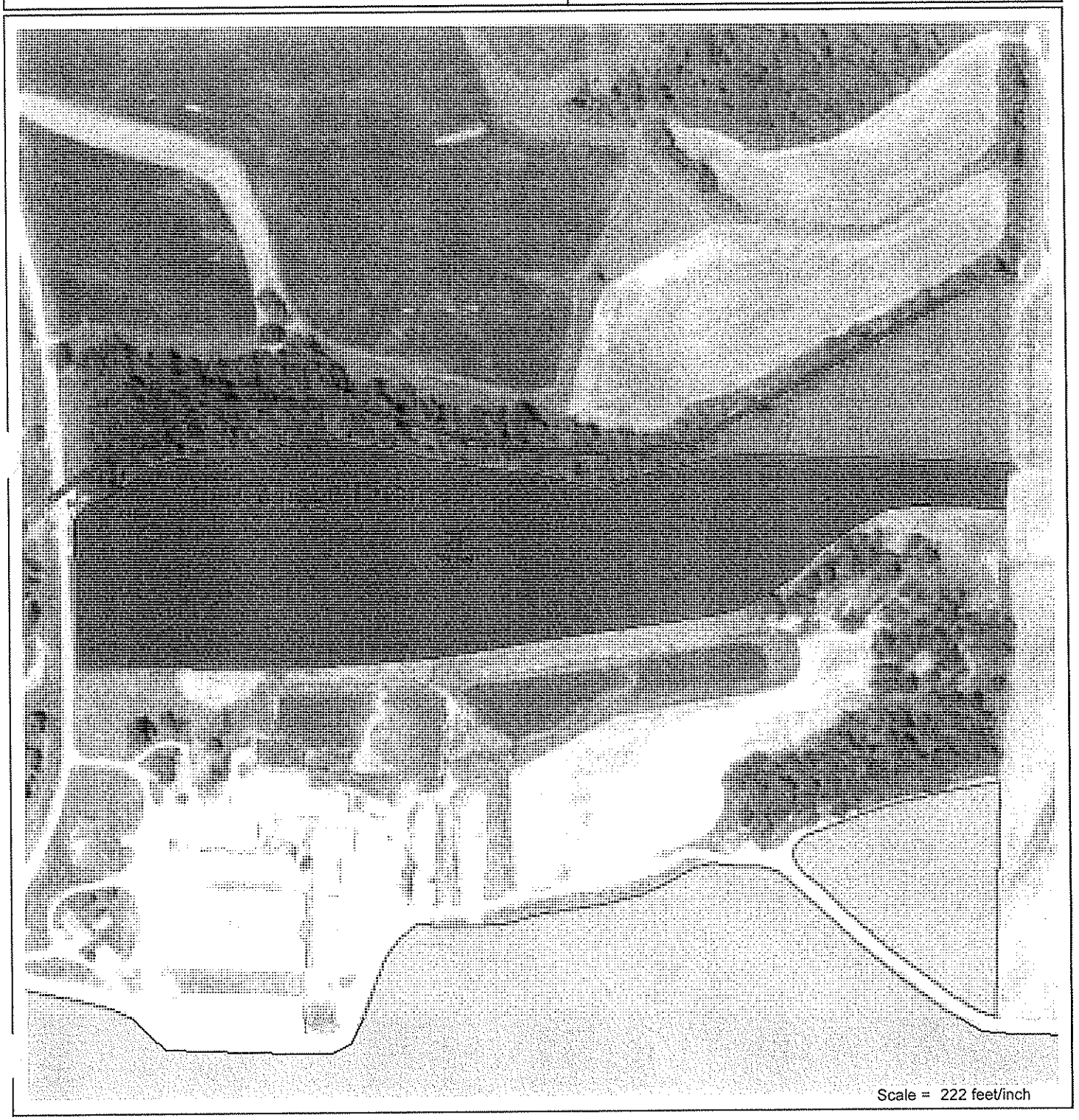
☑ A - Residence within 1/4 mile - incorporation required	*LMFA Section 900.803.o*
☐ B - Application site within 200' of surface water or 150' of a potable well	*LMFA Section 900.803.p*
☑ C - Located in a 10 year Flood Plain	*LMFA Section 900.803.q*
☑ D - Livestock waste may not be applied in waterways or drainage ditches in the field	*LMFA Section 900.803.r*
☑ E - Frozen or snow covered ground may not be applied to with a Slope Over 5%	*LMFA Section 900.803.s*
☑ F - No application during rainfall or to saturated soils	*LMFA Section 900.803.u*

Planting Intentions

Crop Year	Acres	Crop	Crop 2
2008	19.58	Corn Grain	
2009	19.58	Corn Silage	
2010	19.58	Corn Grain	
2011	19.58	Corn Silage	

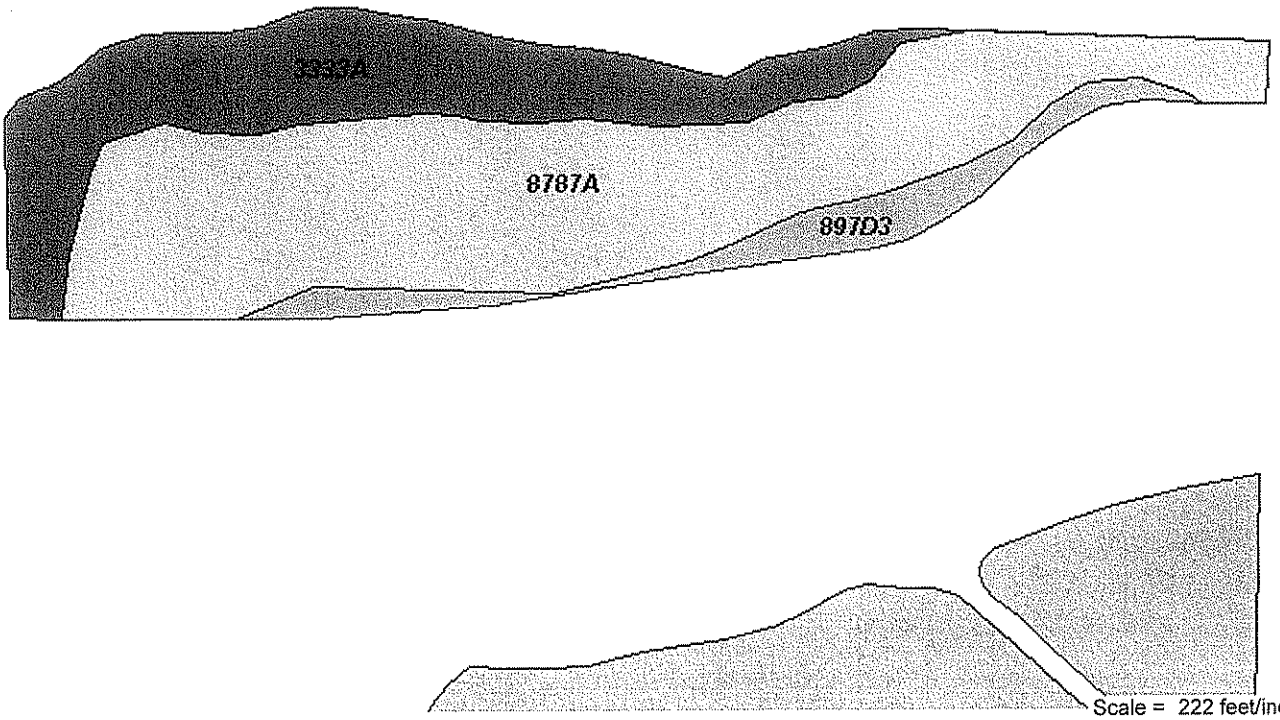
Effingham Equity
Field Map

Prepared For: Westridge Dairy	**County:** Monroe, IL
Farm:	**Twp Rng Sec:** Precinct 9 25
Field: 03	**Directions:** Road Bottom
Crop Zone:	
Crop Year:	**Acres:** 19.58



EFFINGHAM EQUITY AG SERVICES
MUSYM

Prepared For: Westridge Dairy	**County:** Monroe, IL
Farm:	**Twp Rng Sec:** Precinct 9 25
Field: 03	**Directions:** Road Bottom
Crop Zone:	
Crop Year:	**Acres:** 19.58



Layer Summary

Layer: Soil Type
Attribute: MUSYM

Acres: 19.59
Average:
Weighted Average:
Minimum:
Maximum:

MUSYM	Acres
8787A	11.71
3333A	6.06
897D3	1.82

Field # 3

Solution Runoff Class Matrix

Hydrologic Soil Group			
A	B	C	D
Low	Medium	High	High

P Input Matrix

	Application Rate		
Application Method	**<= UI Recommendations**	**>UI - 150% UI**	**>150% UI**
Incorporation or injection > 3" below surface	Low	Low	Low
Shallowly incorporated surface applications <3 inches	Low	Medium	High
Non-incorporated surface applications	Medium	High	High

The table below identifies specific risk factors that may be present in a given field. No attempt should be made to "average" the factors and assign a composite rating for the field. It is recognized that the risk factors do not act independently to influence phosphorus loss from agricultural fields and P loading into water resources. Simple averaging however, assumes that all risk factors have the same amount of influence. Attempts to objectively weigh some factors more or less than others would be desirable but difficult without supporting data. The phosphorus assessment procedure is not a process based or empirical model. The procedure was developed as a conservation planning tool. The tool is designed to provide guidance to select and plan conservation measures that will lower the potential for phosphorus loss from agricultural fields and P loading into water resources.

Phosphorus Risk Potential	
Risk Factor	**Site Value**
Soil Erosion	<T
Proximity to water	Medium
Solution Runoff Potential	High
Soil Test Phosphorus	NA
Phosphorus Inputs	Low

References:

* Sharpely, A.N., Determining An Environmentally Sound Soil Phosphorus Value Journal of Soil and Water Conservation, 1996.

* Sharpely, A.N., T. Daniel, T. Sims, J. Lemunyon, R. Stevens, And R. Parry, 1999 Agricultural Phosphorus and Eutrophication. U.S. Department of Agriculture, Agricultural Research Service, ARS-149, 42 pp.

Table 1. Nitrogen Risk Assessment

Nitrate loss potentials based on soil texture, timing, and nitrification inhibitors			
Application Timing[1]	**Soil Texture[2]**		
	Coarse	**Medium**	**Fine**
Fall with an inhibitor > 60°F	High	High	High
Fall with an inhibitor < 60°F	High	Medium	Medium
Fall without an inhibitor > 50°F	High	High	High
Fall without an inhibitor < 50°F	High	Medium	Medium
Spring without an inhibitor	Medium	Medium	Medium-Low
Spring with an inhibitor	Medium-Low	Low	Low
Spring split applied or sidedress	Medium-Low	Low	Low

Foot Notes:

1. Temperatures refer to soil temperature measured at a depth of 4 inches. For this assessment, inhibitors refer to nitrification inhibitors.

2. Soil Texture: Coarse - sand, loamy sand, sandy loam
   Medium - silt, silt loam, loam
   Fine - silty clay loam, silty clay, clay, clay loam, sandy clay, loam, sandy clay

When developing recommendations to be included in a nutrient management plan, the planner needs to use the results of the assessment above with knowledge of locally significant transport processes.

For example, in large areas of northern and central Illinois, nitrates are detected in surface water resources at concentrations above 10 parts per million. Soils in much of the region only have a moderate nitrogen loss potential. The presence of extensive tile drainage, however, increases the risk of nitrate transport to surface water resources.

By contrast, in southern Illinois, there are large areas of level, poorly drained soil. The climate is warmer and there is more rainfall than in northern and central Illinois. The conditions favor the formation of nitrate. The loss of nitrate, however, is primary to the atmosphere due to denitrification.