R5 Load Estimation Model Field Data Entry Sheet – Gully Stabilization

(For more details, refer to R5 User's Manual, which was prepared based on the original report "Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual by Michigan Department of Environmental Quality, 1999)

BMP (check one):

- ☐ Grade Stabilization Structure
- ☐ Critical Area Planting in areas with gullies
- ☐ Other Similar Practice (specify name) : _____
- ☐ Grassed Waterway
- ☐ Water and Sediment Control Basins

Soil Textural Class Information (check one)

- ☐ Sands, loamy sands
- ☐ Sandy loam
- ☐ Fine sandy loam
- ☐ Loams, sandy clay loams, sandy clay
- ☐ Silt loam
- ☐ Silty clay loam, silty clay
- ☐ Clay loam
- ☐ Clay
- ☐ Organic

Gully Characteristics

Parameter	Value
Top Width (ft)	
Bottom Width (ft)	
Depth (ft)	
Length (ft)	
Number of Years for Gully Formation	
Soil Weight (tons/ft3) *(optional)*	
Soil P Concentration (lb/lb soil) *(optional)*	
Soil N Concentration (lb/lb soil) *(optional)*	

BMP Efficiency for sediment load reduction : ___ %

R5 Load Estimation Model Field Data Entry Sheet – Bank Stabilization

(For more details, refer to R5 User's Manual, which was prepared based on the original report "Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual by Michigan Department of Environmental Quality, 1999)

BMP (check one):

- ☐ Animal Trails and Walkways
- ☐ Stream Channel Stabilization
- ☐ Other Similar Practice (specify name) : _____

Soil Textural Class Information (check one)

- ☐ Sands, loamy sands
- ☐ Sandy loam
- ☐ Fine sandy loam
- ☐ Loams, sandy clay loams, sandy clay
- ☐ Silt loam
- ☐ Silty clay loam, silty clay
- ☐ Clay loam
- ☐ Clay
- ☐ Organic

BMP Efficiency Information

BMP Efficiency for sediment load reduction for Bank #1: ___ %
BMP Efficiency for sediment load reduction for Bank #2: ___ %

Bank Characteristics

If estimating for just one bank, put "0" in areas for bank #2

Parameter	Bank #1	Bank #2
Length (ft)		
Height (ft)		
Lateral Recession Rate (ft/yr) *		
Soil Weight (tons/ft3) *(optional)*		
Soil P Concentration (lb/lb soil) *(optional)*		
Soil N Concentration (lb/lb soil) *(optional)*		

*Lateral Recession Rate (LRR) is the rate at which bank deterioration has taken place and is measured in feet per year. This rate may not be easily determined by direct measurement. Therefore best professional judgment may be required to estimate the LRR. Please refer to the table below for typical values.

LRR (ft/yr)	Category	Description
0.01 - 0.05	Slight	Some bare bank but active erosion not readily apparent. Some rills but no vegetative overhang. No exposed tree roots.
0.06 - 0.2	Moderate	Bank is predominantly bare with some rills and vegetative overhang.
0.3 - 0.5	Severe	Bank is bare with rills and severe vegetative overhang. Many exposed tree roots and
0.5+	Very Severe	Bank is bare with gullies and severe vegetative overhang. Many fallen trees, drains and culverts eroding out and changes in cultural features as above. Massive slips or washouts common. Channel cross-section is U-shaped and streamcourse or gully may be meandering.

Source : Steffen, L.J. 1982. Channel Erosion (personal communication), as printed in "Pollutants Controlled Calculation and Documentation for Section 319 Watersheds Training Manual," June 1999 Revision; Michigan Department of Environmental Quality - Surface Water Quality Division - Nonpoint Source Unit. EQP 5841 (6/99).

R5 Load Estimation Model Field Data Entry Sheet – Agricultural Fields and Filter Strips

(For more details, refer to R5 User's Manual, which was prepared based on the original report "Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual by Michigan Department of Environmental Quality, 1999)

BMP – Specific Agricultural Field Practices (check one):

- ☐ Prescribed Grazing
- ☐ Residue Management, Mulch Till
- ☐ Conservation Crop Rotation
- ☐ Conservation Cover
- ☐ Other Similar Practice (specify name) : _____
- ☐ Cover and Green Manure
- ☐ Critical Area Planting
- ☐ Stripcropping, Contour
- ☐ Stripcropping, Field

Check if Field Strips are also used in combination of the above practice : ☐

Study Area Information

State: _____ County: _____

Contributing/Treatment area: _____ acres

Soil Textural Class Information

- ☐ Clay (clay, clay loam, and silt clay)
- ☐ Silt (silt, silty clay loam, loam, and silt loam)
- ☐ Sand (sand, sandy clay, sandy clay loam, sandy loam, and loamy sand)
- ☐ Peat

USLE or RUSLE Factors Information

USLE or RUSLE Factors	Before Treatment	After Treatment
Rainfall-Runoff Erosivity Factor (R)		
Soil Erodibility Factor (K)		
Length-Slope Factor (LS)		
Cover Management Factor (C<=1.0)*		
Support Practice Factor (P<=1.0)*		

* Provide local C and P values

R5 Load Estimation Model Field Data Entry Sheet – Feedlots

(For more details, refer to R5 User's Manual, which was prepared based on the original report "Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual by Michigan Department of Environmental Quality, 1999)

BMP (check one):

- ☐ No BMP
- ☐ Diversion
- ☐ Filter Strip
- ☐ Runoff Management System
- ☐ Solids Separation Basin with Infiltration Bed
- ☐ Other Similar Practice (specify name) : _____
- ☐ Terrace
- ☐ Waste Management System
- ☐ Waste Storage Facility
- ☐ Solids Separation Basin

Please provide the following information

1) Contributing area : _____ acres

2) Percentage of total feedlots area that is paved (check one) :

☐ 0-24% ☐ 25-49% ☐ 50-74% ☐ 75-100%

3) State :_____ County : _____

Nearest Weather Station : _____

4) Enter the animal population in the watershed

Animal Type	Population (Number)
Slaughter Steer	
Young Beef	
Dairy Cow	
Young Dairy Stock	
Swine	
Feeder Pig	
Sheep	
Turkey	
Chicken	
Duck	
Horse	

R5 Load Estimation Model Field Data Entry Sheet – Urban Runoff

(For more details, refer to R5 User's Manual, which was prepared based on the original report "Pollutants Controlled Calculation and Documentation for Section 319 Watershed Training Manual by Michigan Department of Environmental Quality, 1999)

BMP (check one):

- ☐ Vegetated Filter Strips
- ☐ Grass Swales
- ☐ Infiltration Devises
- ☐ Extended Wet Detention
- ☐ WQ Inlets
- ☐ Weekly Street Sweeping
- ☐ Infiltration Basin
- ☐ Infiltration Trench
- ☐ Porous Pavement
- ☐ Wetland Detention
- ☐ Dry Detention
- ☐ Settling Basin
- ☐ Sand Filters
- ☐ Concrete Grid Pavement
- ☐ Sand Filter/Infiltration Basin
- ☐ WQ Inlet w/ Sand Filter
- ☐ Oil/Grit Separator
- ☐ Wet Pond

Contributing/Drainage area by land use

Land use	Sewered area (acres)	Unsewered area (acres)
Commercial		
Industrial		
Institutional		
Transportation		
Multi-Family		
Residential		
Agriculture		
Vacant		
Open Space		

* Sewered and Unsewered refer to storm sewers

Note: *The spreadsheet model uses default unit area pollutant loading rates for each urban land use subtype. The default values were obtained from the report "Unit Area Pollutant Load Estimates for Lake County, Illinois Lake Michigan Watersheds." NIPC. August 1993.*