

STEPL Field Data Entry Sheet

(Note: The STEPL spreadsheet model is a data-driven model and its accuracy is significantly enhanced with the use of site-specific data. When site-specific data is not available, the STEPL model uses default data that were mainly taken from literature but may not be appropriate for your specific area; or the STEPL user may rely on the generalized data available in the STEPL on-line data server that were taken from national data sources such as USDA-NRCS, Agriculture Census, and Bureau of Census).

User Information

Name of Data Entry Person : _____ Date : _____

Watershed Information

Name of watershed or study area : _____
(Use a separate set of sheets for every watershed or study area)

State : _____ County : _____
Nearest Weather Station : _____ *(see page 5 for list of stations)*

Land Use Distribution

Enter the area of each major land use type in the watershed

Land Use Type	Area (acres)
Urban	
Cropland	
Pastureland	
Forest	
Feedlot	
Others	

Animal Distribution

Enter the animal population in the watershed

Animal Type	Population (Number)
Beef cattle	
Dairy cattle	
Swine (hog)	
Sheep	
Horse	
Chicken	
Turkey	
Duck	

Average number of months in a year that manure is applied : _____ months/year

Septic Systems Information

Number of septic systems in watershed : _____
 Average number of persons served per septic system : _____
 Septic systems failure rate : _____ %

Existing Land Use Practices Information

For each major land use type in the watershed, enter values for soil hydrologic group, and USLE factors R, K, LS, C, and P. The values entered may correspond to the "average" of several specific land covers or practices (e.g., the area-weighted average of corn and wheat fields for croplands); or they may correspond to typical values of a specific land cover or practice which could be the most predominant in the watershed (e.g., no-till corn as the predominant cropping practice for croplands).

Land Use Type	R	K	LS	C	P	Soil Hydrologic Group*
Cropland						
Pastureland						
Forest						
User-Defined						

*Soil Hydrologic Group

A: Low runoff potential and high infiltration rates even when thoroughly wetted. Chiefly deep, well to excessively drained sands or gravels. High rate of water transmission (< 75 cm/hr).

B: Moderate infiltration rates when thoroughly wetted. Chiefly moderately deep to deep, moderately well to well-drained soils with moderately fine to moderately coarse textures. Moderate rate of water transmission (0.4 to 0.75 cm/hr).

C: Low infiltration rates when thoroughly wetted. Chiefly soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture. Low rate of water transmission (0.15 to 0.40 cm/hr).

D: High runoff potential. Very low infiltration rates when thoroughly wetted. Chiefly clay soils with a high swelling potential, soils with a permanent high water table, soils with a clay pan or clay layer at or near the surface, or shallow soils over nearly impervious material. Very low rate of water transmission (0 to 0.15 cm/hr).

Nutrient Concentration Information

Enter N, P and BOD concentrations in runoff for each land use type in the watershed

Landuse Type	Concentration in Runoff (mg/l)		
	N	P	BOD
Cropland			
Pastureland			
Forest			
User-defined			

Enter average N, P and BOD concentrations in the soil in the watershed

Concentration in Soil (%)		
N	P	BOD

Urban Land Use Distribution

Enter the percent distribution of the various subcategories that make up the urban land use in the watershed (total should be 100 %)

Commercial : ___ %
Industrial : ___ %
Institutional : ___ %
Transportation : ___ %
Multi-Family : ___ %
Single-Family : ___ %
Agriculture : ___ %
Vacant : ___ %
Open space : ___ %

Percentage of total urban area installed with stormwater sewers : ___ %

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

0-24% 25-49% 50-74% 75-100%

BMP Information by Land use Type (use separate copies of this page to enter information for additional BMPs).

BMP Code Lookup Table

BMP	Code	BMP	Code
Cropland		Feedlots	
No BMP	0	Runoff Management System	17
Contour Farming	1	Solids Separation Basin	18
Diversion	2	Solids Separation Basin w/	19
Filter Strip	3	Waste Management System	20
Reduced Tillage Systems	4	Waste Storage Facility	21
Streambank Stabilization	5	Urban	
Terrace	6	Concrete Grid Pavement	22
Forest		Dry Detention	23
Road dry seeding	7	Extended Wet Detention	24
Road grass and legume seeding	8	Field strips – Agricultural	25
Road hydro mulch	9	Grass swales	26
Road straw mulch	10	Infiltration Basin	27
Road tree planting	11	Infiltration Devices	28
Site preparation/hydro mulch	12	Infiltration Trench	29
Site preparation/steep slope	13	Weekly Street Sweeping	30
Site preparation/straw/crimp	14	Wet Pond	31
Site preparation/straw/net	15	Wetland Detention	32
Site preparation/straw/polymer	16	WQ Inlet w/Sand Filter	33
		WQ Inlets	34

Please use the BMP code from the BMP code lookup table above or type a new BMP type name if it is not listed in the lookup table.

1) BMP Code / Name : _____

2) Drainage or treatment area by land use type :
Enter the land use distribution of the BMP's drainage or treatment area

Land Use Type	Drainage area (acres)	Drainage area (% of total area)
Cropland		
Pastureland		
Forest		
Urban		
Others		
Total Drainage/Treatment Area		

3) BMP pollutant removal efficiencies:

Pollutant	Efficiency (in %)
N	
P	
BOD	
Sediment	

4) Comments (optional) : _____

5) Sketch (optional): Use the other side of this sheet to sketch the BMPs in the watershed.

The following table shows the weather stations included in the STEPL model for which correction factors for annual precipitation and number of precipitation days have been derived. The user is requested (in page 1) to identify the weather station that best represents the precipitation characteristics in the watershed (i.e., normally assumed to be the nearest station). The annual precipitation and average number of precipitation days for each station is provided to assist users in identifying the most appropriate station.

Station Name	Annual Precipitation (inches)	Average Number of Precipitation Days	Station Name	Annual Precipitation (inches)	Average Number of Precipitation Days
Northeast States			Northwest States		
NY ALBANY COUNTY AP	37.26	134	OR ALLEGANY	73.13	125
NY BINGHAMTON LINK FLD	38.77	160	OR ASTORIA WSO AIRPORT	61.14	178
NY BUFFALO GR BUFFLO AP	40.88	166	OR BEULAH	10.84	54
NY CANTON 4 SE	31.32	105	OR EUGENE WSO AIRPORT	47.18	127
NY NEW YORK CNTRL PARK	48.10	120	OR LA GRANDE	17.03	81
NY OLD FORGE	44.10	130	OR MEDFORD WSO AP	16.77	97
NY ROCHESTER INTL AP	32.19	166	OR OCHOCO DAM	11.21	61
NY SYRACUSE HANCOCK AP	33.70	151	OR PENDLETON WSO AIRPOR	11.89	88
NY WELLSVILLE	33.50	104	OR PORTLAND INTL AIRPORT	35.51	143
NY WHITEHALL	28.77	79	OR SALEM WSO AIRPORT	38.42	137
Central States			Southeast States		
NE AMELIA 2 W	21.4	56	GA ATHENS MUNI AP	48.15	111
NE EDISON	20.19	60	GA ATLANTA HARTSFIELD	53.01	115
NE GRAND ISLAND WSO AP	22.55	77	GA AUGUSTA BUSH FIELD	42.17	99
NE HEBRON	25.99	66	GA CALHOUN EXP STATION	51.37	92
NE MALMO 3 E	27.20	65	GA COLUMBUS METRO AP	47.78	107
NE NORFOLK AIRPORT	25.78	87	GA DAHLONEGA 3 NNW	50.61	90
NE NORTH PLATTE WSO ARP	18.30	80	GA EDISON	47.58	83
NE OSHKOSH 10 NE	16.58	57	GA JESUP	41.86	82
NE SCOTTSBLUFF AP	16.93	89	GA MACON LEWIS B WILSON	46.24	82
NE VALENTINE WSO AP	17.99	76	GA SAVANNAH INTL AP	53.53	109
Southwest States			Great Lakes States		
NM ALBUQUERQUE WSFO AIR	9.82	65	IN EVANSVILLE WSO AP	42.16	111
NM ANIMAS	11.88	41	IN FORT WAYNE WSO AP	39.54	136
NM AUGUSTINE 2 E	10.76	44	IN INDIANAPOLIS WSFO AP	41.90	127
NM CARLSBAD	13.26	39	IN PERU WASTE WATER PLA	34.02	89
NM CARRIZOZO 1 SW	13.42	48	IN RICHMOND WTR WKS	39.84	97
NM CUBA	14.29	60	IN SHOALS HIWAY 50 BRID	42.97	101
NM DURAN	14.68	56	IN SOUTH BEND WSO AP	40.33	146
NM JORNADA EXP RANGE	10.75	41	IN VALPARAISO WATERWORK	34.23	88
NM OCATE 2 NW	19.16	63	IN VERSAILLES WATERWORK	41.04	95
NM TUCUMCARI 4 NE	14.34	40	IN WEST LAFAYETTE 6 NW	32.46	78