Appendix A
Stormwater BMP Database Reporting Requirements

Revised: October 26, 2009

Content: This Appendix provides a condensed list of data elements requested for the International Stormwater BMP Database. For descriptions of these data elements, see the User's Guide for the BMP Database. Data entry should be completed in the Excel spreadsheet package downloaded from the project website. Requested fields are identical, but the format is horizontal instead of vertical.

Prioritization of Data: The Database requests a large number of data elements, but not all data elements are required for acceptance of a study. Color coding in the data entry spreadsheet package is provided to help users prioritize the data that they will be able to provide. Color coding is not provided in this appendix, which is intended to serve as a simple summary of the data elements.

R	Required data
I	Important, but not required for inclusion in the database
N	Nice to Have (supplemental)

Units of Measurement: Units of measurement are required for many fields in the database, but fields for units are not identified in this Appendix for simplicity.

Water Quality Data: the current version of the data entry spreadsheets generally follows EPA's "WQX" format (replacing Legacy STORET). Under this format, particle size distribution data would be entered directly into the water quality data spreadsheet.

Low Impact Development Reporting Protocols: The LID related data elements in this appendix are a first release, developed based on input from an expert advisory panel including Richard Horner, Bill Hunt, Rob Roseen, Rob Traver, Bob Pitt, and Ben Urbonas, as well as the experiences of the Database Project Team.

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GENERAL INFORMATION		
Test Site Name		
City		
County		
State		
Zip Code		
Country		
Site Elevation		
Unit		
Unit System (SI or English)		
Number of Watersheds		
Number of BMPs		
Type of Study Code		
Comments/General Description of Study Site		
Test Site/Study Documentation Information		
Year Submitted to Database		
Data Provider		
Report Title or Data Source		
Report Authors		
Year of Publication		
Report Attached?		
Photos Attached?		
BMP Layout Attached?		
QAPP/ SAP Attached?		
Abstract		
SPONSORING AND MONITORING AGENCIES		
(add other agencies, if needed)	**Agency 1**	**Agency 2**
Agency Name		
Agency Responsibility		
Agency Type Code		
Address 1		
Address 2		
Address 3		
City		
State		
Zip Code		
Country		
Phone		
Fax		
Email		
Location Information		
Climate Station State Code		
Climate Station ID (see picklist)		
Latitude (Decimal)		
Longitude (Decimal)		
Reference Datum		
Hydrologic Unit Code		
EPA Reach Code		
Township		
Range		
Principal Meridian		
Section		
Quarter		
Quarter Quarter		
Quarter Quarter Quarter		
Quad Map Name		
Time Zone		

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Note: the priority level of the requested data varies depending on BMP type. In general, LID-oriented practices must provide a larger amount of watershed data than other practices. See www.bmpdatabase.org for more information.

Watershed	
Watershed Name	
Watershed Type Code	
Watershed Description	
Total Watershed Area	
Total Length of Watershed	
Total Length of Grass-Lined Channels	
Total Disturbed Area	
% Irrigated Lawn and/or Agriculture	
% Total Impervious Area in Watershed	
% of Total Impervious Area that is Hydraulically Connected	
% of Watershed Served by Storm Sewers	
Storm Sewer Design Return Period (yrs)	
Average Watershed Slope	
Average Runoff Coefficient	
Hydrologic Soil Group	
Soil Type	
Type of Vegetation	
Watersheds Roads and Parking Lot Information	
Watershed Name	
Total Paved Roadway Area	
Total Length of Curb and Gutter on Paved Roads	
Total Unpaved Roadway Area	
Total Length of Curb/Gutter on Unpaved Roads	
% Paved Roads Draining to Grass Swales/Ditches	
% Unpaved Roads Draining to Grass Swales/Ditches	
Type of Pavement on Roadways	
Total Paved Parking Lot Area	
Total Length of Curb/Gutter on Paved Parking Lots	
Total Unpaved Parking Lot Area	
Total Length of Curb/Gutter on Unpaved Parking Lots	
% Paved Parking Lot Draining to Grass Swales/Ditches	
% Unpaved Parking Lot Draining to Grass Swales/Ditches	
Type of Pavement in Parking Lots	
% Porous Concrete	
% Porous Asphalt	
% Porous Modular	
Characterize Highway Conditions (see User's Guide)	
Average Annual Daily Traffic (cars/day)	
Number of Lanes	
Deicing Method	
Land Use (provide each type and associated %)	**(from pick list)**

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General BMP Information (Complete for Each BMP at Site)	
	Complete for Each BMP at Study Site
Watershed Name	
BMP Name	
Type of BMP Being Tested (*from Pick-List)*	
Basis of Design (e.g., 2-yr, 24 hr storm or design treatment flow rate	
Purpose of BMP (treatment objectives)	
Source of Design Guidance for BMP	
Date Facility Placed in Service	
Number of Inflow Points	
BMP Designed to Bypass or Overflow	
Upstream Treatment Provided?	
Describe Upstream Treatment (if any)	
Name of Upstream BMP(s) (comma separated list upstream to downstream)	
General Configuration of BMP in Tributary Watershed (i.e, end of pipe, source control, off-line, on-line)	
Was qualified engineering oversight provided at construction? (Y/N)	
Was structure installed as designed? (Y/N)	
General Description of Site Activities/Conditions Influencing Pollutant Loading to BMP	
Maintenance and Conditions of BMP	
Maintenance Type and Frequency	
Last Rehabilitation Date	
Type of Rehabilitation	
Description, Types, and Designs of Outlets	
Qualitative Evaluation of BMP Condition (vegetation, soils, odors, etc.)	
For BMPs without permanent pool, does surface ponding exist beyond design drain time?	
If clogging present, estimate % of total surface area of structure affected	
Describe BMP/Comments	

BMP Cost Data (if available)		
Cost Basis	Year of Cost Estimate	
Total Facility Costs (Base Cost of Original Design, Construction and Installation of BMP,	Total Facility Costs	
	Description of Items Included in Total Facility Cost	
Routine Maintenance Costs	Average Annual Routine Maintenance Costs ($/year)	
Periodic Rehabilitation Costs	Average Corrective and Infrequent Maintenance Costs ($/event)	
Supplemental Facility Cost Information:	Excavation/ Clearing Costs	
	Structural Materials Costs	
	Facility Installation/ Construction Costs	
	Structural Control Devices Costs	
	Vegetation and Landscaping Costs	
	Engineering and Overhead Costs	
	Land Costs or Value	

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Detention (Dry) Basin Design Information	
BMP Name	
Water Quality Detention Volume	
Water Quality Detention Surface Area When Full	
Water Quality Detention Basin Length	
Detention Basin Bottom Area	
Brim-full Volume Emptying Time (hrs)	
Half Brim-full Volume Emptying Time (hrs)	
Bottom Stage Volume, If Any	
Bottom Stage Surface Area, If Any	
Is there a micro pool? (Yes/No)	
Forebay Volume	
Forebay Surface Area	
Vegetation Cover Within Basin	
Flood Control Volume, If Any	
Design Flood Return Periods (yrs)	
Depth to Water Table	
Retention (Wet) Pond Design Information	
BMP Name	
Volume of Permanent Pool	
Permanent Pool Surface Area	
Permanent Pool Length	
Littoral Zone Surface Area	
Littoral Zone Plant Species	
Water Quality Surcharge Detention Volume When Full	
Water Quality Surcharge Surface Area When Full	
Water Quality Surcharge Basin Length	
Brim-full Emptying Time (hrs) for Surcharge	
Half Brim-full Emptying Time (hrs) for Surcharge	
Forebay Volume	
Forebay Surface Area	
Vegetation Cover Within Basin Above Permanent Pool	
Flood Control Volume	
Design Flood Return Periods (yrs)	
Grass Filter Design Information	
BMP Name	
Grass Strip's Length	
Grass Strip's Width	
Longitudinal Slope	
Flow Depth during 2-Year Storm	
2-Year Peak Flow Velocity	
Grass Species and Densities	
Is Strip Irrigated?	
Manning's n During 2-year Flow	
Depth to Groundwater or Impermeable Layer	
Saturated Infiltration Rate	
Hydrologic Soil Group	

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Media Filter Design Information	
BMP Name	
Permanent Pool Volume Upstream of Filter Media, If Any	
Permanent Pool's Surface Area Preceding Filter	
Permanent Pool's Length Preceding Filter	
Surcharge Detention Volume, Including Volume Above Filter Bed	
Surcharge Detention Volume's Surface Area, Including Area Above Filter Bed	
Surcharge Detention Volume's Length	
Surcharge Detention Volume's Design Depth	
Surcharge Detention Volume's Drain Time in Hours	
Media Filter's Surface Area	
Angle of Sloping or Vertical Filter Media in Degrees (0 to 90)	
Number of Media Layers in Filter	
Type and Depth (or Thickness) of Each Filter Media Layer	
Porous Pavement Design Information	
BMP Name	
Pavement Type (from drop-down list)	
Ratio of Tributary Area to Pavement Surface Area (hydraulic loading)	
Purpose of Porous Pavement	
Description and Dimensions of Surface Layer	
Type of Binder (e.g., PG64-28)	
Admixtures Used in Mix (i.e., poly fibers, SBS, SBR, etc)	
Surface Infiltration Rate (at time of study)	
Design Infiltration Rate (including safety factor for clogging)	
Porous Pavement Surface Area	
Slope	
Is grass growing in modular pores?	
If yes, is grass healthy?	
Total Storage Volume Above Pavement, If Any	
Estimated Drain Time (hrs) of Storage Volume Above Pavement, If Any	
Description and Dimensions of Aggregate Base	
Type of Granular or Soil Materials Used in or Below Pavement	
% Porosity of Granular or Soil Materials (void space)	
Total Storage Volume in the Granular Media Below Pavement	
Estimated Drain Time (hrs) of Porous Media Volume	
Description and Dimensions of Separation Layer	
Description and Dimensions of Water Quality Treatment Layer, if present	
Degree of Compaction of Pavement Subbase	
Does Porous Pavement Have Underdrains?	
Underdrain Description	
Depth of Underdrain Below Surface, if present	
Depth to Groundwater	
Depth to Impermeable Layer	
NRCS Hydrologic Soil Group	
Infiltration Rate	
Groundwater Hydraulic Conductivity	
Groundwater Flow Gradient	
Depth of Each Soil Layer Below Pavement	

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Infiltration Basin Design Information	
BMP Name	
Capture Volume of Basin	
Surface Area of Capture Volume When Full	
Infiltrating Surface Area	
Basin Length	
Depth to Groundwater	
Depth to Impermeable Layer	
Hydrologic Soil Group	
Depth and Type of Each Soil Layer Below Basin	
Infiltration Rate	
Plant Species on Infiltrating Surface	
Granular Material on Infiltrating Surface	
Hydraulic Conductivity of Underlying Soils	
Groundwater Flow Gradient	
Flood Control Volume above Water Quality Detention Volume	
Design Flood Control Return Periods	
Purpose of Basin	
Percolation Trench and Dry Well Design Information	
BMP Name	
Percolation Trench/ Well Surface Area	
Percolation Trench/Well Length	
Percolation Trench/Well Depth	
Depth to Groundwater	
Depth to Impermeable Layer	
Depth and Type of Each Soil Layer	
Type and Gradation of Granular Materials Used	
Was geotextile fabric used above granular trench fill?	
Was geotextile used on the sides of granular fill?	
Was Geotextile Used On the Bottom of Granular Fill?	
Porosity of Granular Material	
Total Storage Volume	
Type of Geotextile Used	
Hydraulic Conductivity of Soils	
Groundwater Flow Gradient	
Purpose of Trench or Well	
Wetland Channel and Swale Design Information	
BMP Name	
Length of Channel/Swale	
Longitudinal Slope of Channel/Swale	
Bottom Width of Channel/Swale	
Side Slope of Channel/Swale	
Average Longitudinal Inflow Spacing	
2-Year Flow Design Depth in Channel/Swale	
2-Year Peak Design Flow Velocity	
2-Year Manning's n	
Depth to High Groundwater	
Groundwater Hydraulic Conductivity	
Plant Species in Wetland Zone/Swale	
Maximum Design Flow Capacity Return Periods	

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Wetland Basin Design Information	
BMP Name	
Volume of Permanent Pool	
Permanent Pool Surface Area	
Permanent Pool Length	
Water Quality Surcharge Detention Volume When Full	
Water Quality Surcharge Surface Area, When Full	
Water Quality Surcharge Basin Length, When Full	
Brim-full Emptying Time (hrs)	
Half Brim-full Emptying Time (hrs)	
Forebay Volume	
Forebay Surface Area	
Flood Control Volume	
Design Flood Return Periods (yrs)	
Wetland Surface Area	
% of Pond with 6" (0.15 m) Depth	
% of Pond with 12" (0.3 m) Depth	
% of Pond with 12" - 24" (0.3-0.6 m) Depth	
% of Pond with 24" to 48" (0.6-1.3 m) Depth	
% of Pond with >48" (1.3 m) Depth	
% of Wetland Basin Area Without Standing Water (Meadow)	
Plant Species in the Wetland	
Manufactured Device Design Information	
BMP Name	
Device Type (from pick list)	
Device Name, Model and Purchase Date (according to Manufacturer)	
Primary Unit Treatment Process (from pick-list)	
Secondary Unit Treatment Process (from pick list)	
Tertiary Unit Treatment Process (from pick list)	
Narrative Description of Additional Treatment Processes	
Description of Sizing Methodology	
Targeted Pollutants (for solids, indicate targeted particle size)	
Describe Design Inflow Rate(s) for Treatment (include maximum rate, if different)	
Describe Design Loading Capacity (Flow/Unit Surface Area)	
Describe Design Outflow Rate	
Manufacturer-recommended Maintenance Requirements/Frequency	
Primary Flow Control (if applicable)	
Outfall Type (gravity or pumped)	
Outlet Description	
Design Water Quality Surcharge/Detention Volume	
Surcharge Surface Area	
Surcharge Length	
Surcharge Depth	
Brim-full Emptying Time (hrs) for Surcharge	
If Wet Vault: Volume of Permanent Pool	
If Wet Vault: Permanent Pool Surface Area	
If Wet Vault: Permanent Pool Depth	
If Wet Vault: Permanent Pool Length	
If Media Filter or Insert: Filter or Insert Surface Area	
If Media Filter or Insert: Filter or Insert Thickness	
If Media Filter or Insert: Describe Filter or Insert Media Type/Material	
If Multi-chambered: Overflow Baffle/Weir Description	
If Multichambered: Underflow Baffle/Weir Description	
Comments	

Device Type Pick-list	Unit Treatment Process Pick List
Oil & Water Separator	Hydrologic: Volume Reduction
Flow through – single-chamber	Hydrologic: Peak Flow Attenuation
Flow through – multi-chamber	Physical: Density/Gravity/Inertial Separation Including Sedimentation
Volume capture – extended detention w/ pool	Physical: Screening/Filtration
Volume capture – extended detention w/o pool	Physical: UV Disinfection
Media filter – single-chamber	Physical: Sorption
Media filter – multi-chamber	Biological: Microbially Mediated Transformation
Inlet insert	Biological: Vegetative Uptake and Storage
Multi-chambered treatment train	Chemical: Ion Exchange
Underground infiltration chamber	Chemical: Coagulant/Flocculent Injection
High-rate biofiltration unit	Chemical: Sorption
Other	Chemical: Disinfection
	Other (describe in comments)

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Bioretention Design Information	
BMP Name	
Type of Bioretention (pick from drop-down list)	
Ratio of Tributary Area to Bioretention Surface Area (hydraulic loading)	
Is Pretreatment Provided? (Y/N)	
Description of Pretreatment, if present	
Description of Flow Entrance	
Bioretention Surface Area	
Ponding Volume above Bioretention Media Surface	
Average Ponding Depth above Bioretention Media Surface	
General Shape of Bioretention Feature (triangle, oval, rectangle, etc.)	
Is "Internal Water Storage Zone" Created? (Y/N) (via underdrain placement above bottom of media layer)	
Subsurface Storage Volume	
If subsurface storage provided, then height of outlet above bottom of bioretention media	
Bioretention Media: Natural or Amended	
Bioretention Media Depth	
Bioretention Media Design Specifications	
Bioretention Media "P" Index (Phosphorus)	
Description of Supplemental Bioretention Media Characteristics: (clay content, pH, cation exchange capacity, carbon:nitrogen ratio, moisture content, metals contents, inerts content)	
Description of Vegetation Community (canopy layers and their approximate cover [stems/acre], species)	
Description of Mulch (if present)	
Surface Infiltration Rate	
Design Infiltration Rate (including safety factor for clogging)	
Is an Underdrain Provided? (Y/N)	
Description and Dimensions of Underdrain, if present	
Underdrain Gravel Layer Thickness, if present	
Description and Dimensions of Surface Overflow, if present	
Is a Hydraulic Restriction Layer (Liner) Provided? (Y/N)	
Description of Hydraulic Restriction Layer, if present	
Seasonal High Water Table Position Relative to Invert	
Comments	
Green Roof Design Information	
BMP Name	
Roof Type (Intensive or Extensive)	
Purpose of Roof	
Describe Green Roof	
Describe Vegetation	
Supplemental Irrigation Provided?	
Roof Media's Surface Area	
Roof Slope	
Angle of sloping or vertical filter media in degrees (0 to 90)	
Number of Media Layers	
Type and Depth (or Thickness) of Each Media Layer	
% Compost or Organic Material of Media at Installation	
Roofing Material	
Detention Volume	
Detention Volume's Drain Time in Hours	

Drop-down list of Bioretention Types
Bioretention cell—Non-linear, not associated with conveyance
Off-line bioretention area—Placed next to swale at lower elevation to increase storage
In-line bioretention area—Linear, incorporating cell and swale characteristics for conveyance as well as retention and treatment, but low velocity
Sloped (weep garden) bioretention area—Behind retaining wall on relatively steep gradient
Sloped biodetention vegetative barrier—Placed along slope contour to retard runoff
Tree box filter—Enlarged planting pit, usually with drain inlet and underdrain

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Stormwater Harvesting (Cisterns/Rain Barrels)	
BMP Name	
Basic System Description (e.g., tank, cistern, or rain barrel; water source, water use, distribution system)	
Number of Units in Watershed	
Contributing Rooftop Size	
Roofing and Gutter Material Description	
Storage Volume	
Drain Time at Capacity (minutes)	
Expected Long-term Capture Volume (based on computer simulation)	
Model Used for Capture Volume Simulation	
% Bypass Associated with System	
Describe Emergency Spillage (Overflow) Provision	
Describe Mosquito Prevention (if any)	
Intended Use of Captured Water (e.g., irrigation, toilet flushing, etc.)	
Can Potable Water Supplement Tank? (Y or N)	
Type of Irrigation System (e.g., spray, drip, hand) (if applicable)	
Reason System Selected (stormwater capture, supplement water supply, etc.)	
Comments	
Nonstructural General Information	
BMP Name	
Type of Nonstructural BMP Being Tested	
Date Test Began	
Description of Quantity or Measure of BMP	
Other BMP Type	
BMP Name	
Describe Key Structural Features	
Describe Key Landscaping/Vegetation Features	

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Low Impact Development at Site Level Design Information (Primary Source: Richard Horner, 2009)		
Data Element	**Brief Description**	
BMP Name (Overall LID Site Name)	User-defined site name relates back to "General BMP" data entry spreadsheet.	
Describe Site Design (include key elements of design)	Provide "big picture" of site design objectives and key design elements.	
Describe Monitoring Design (to ensure proper use of data)	Describe monitoring design relationship to design elements.	
Method for Flood Control	Used to assess extent to which LID is used for water quality and flood control, or water quality only. Some LID sites have "hybrid" characteristics incorporating LID practices with traditional flood control approaches (e.g., are centralized detention and LID techniques).	
Instructions: Quantitative data should be provided to the extent it is available. If the practice is not implemented, this should be stated instead of leaving the field blank. For discrete practices (e.g., permeable pavement, bioretention, design data should also be provided in their respective BMP tables).		
Conservation Features	Conserving natural areas includes preservation of existing trees, other vegetation, and soils.	
Minimizing Disturbance	Minimizing disturbance included minimizing soil excavation and compaction and vegetation disturbance.	
Minimizing Building Coverage	Minimizing building coverage includes minimizing impervious rooftops and building footprints.	
Minimizing Travelway Coverage	Minimizing travelway coverage includes constructing streets, driveways, sidewalks, and parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.	
Maintaining Natural Drainage Patterns and Designing Drainage Paths to Increase Time of Concentration	Maintaining natural drainage patterns and designing drainage paths to increase time of concentration includes measures such as: maintaining depressions and natural swales; emphasizing sheet flow instead of concentrated flow; increasing the number and lengths of flow paths; maximizing non-hardened drainage conveyances; and maximizing vegetation in areas that generate and convey runoff.	
Source Controls	Source controls include minimizing pollutants; isolating pollutants from contact with rainfall or runoff by segregating, covering, containing, and/or enclosing pollutant-generating materials, wastes, and activities; conserving water to reduce non-stormwater discharges.	
Permeable Pavements*	Permeable pavements include constructing low-traffic areas with permeable surfaces such as porous asphalt, open-graded Portland cement concrete, coarse granular materials, concrete or plastic unit pavers, and plastic grid systems. Representative applications may include driveways, patio slabs, walkways and sidewalks, trails, alleys, and overflow or otherwise lightly-used parking lots.	
Natural Drainage System Elements	Natural drainage system elements include bioretention areas (rain gardens), vegetated swales, vegetated filter strips and other similar features.	
Stormwater Harvesting*	Rainwater harvesting includes use of cisterns, rain barrels or rain storage units.	
Green Roof (vegetated)*	Green roofs include vegetated roofs with stormwater-related design components.	
Other Site Features (including traditional BMPs)	Enables user to define other key site features or traditional BMPs.	
List BMPs Monitored Within LID Site (as entered into BMP Database)	Relates overall LID site design to individual practices monitored and/or implemented at the site (e.g., bioretention, permeable pavement).	
Estimate of Hydrologically Available Temporary Storage at Site	See Monitoring Guidance Manual for a detailed discussion. This information helps to normalize the relationship between source areas and storage areas, both in terms of routing and relative volume for purposes of comparing LID sites. Tabular estimates of detained, retained and excess volume for a range of storm events are beneficial in developing these estimates. A PDF providing this information can be attached separately, or this information can be summarized narratively. Also provide units of measurement (e.g., acre-feet, watershed inches).	
Estimated Storage Recovery Rate in Watershed (days)	Describes the time for the LID site to recover hydrologically available temporary storage. Estimates of minimum, maximum and average recovery rates for retained and detained volumes should be provided. See Monitoring Guidance Manual for additional information.	
Describe Key Weather Parameters During Study Period (e.g., ET, temperature,etc.)	Weather conditions can significantly affect the water balance of LID sites. Frozen soils can reduce infiltration rates; conversely, high ET can increase evapotranspiration rates. Characterization of ET, temperature and other similar factors are important in normalizing comparisons among LID sites.	
Comments/Other Description	Allows user to describe other unique aspects of the site design or other general comments.	

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Monitoring Related Data Are Summarized Below (with priority identified) and Should be Accessed in Tabular Form from the Data Entry Spreadsheet Package Available for Download at www.bmpdatabase.org

Monitoring Stations	
Monitoring Station Information (for each monitoring station)	**Priority**
Station Name	R
Comments	R
Monitoring Station Relationship to BMP	
BMP Name	R
Station Name	R
Relationship to BMP (inflow, outflow, etc.)	R
Instrument Types at Each Monitoring Station (from drop-down pick lists)	
Station Name	R
Date Instrument Installed	I
Instrument Type Code (e.g., gage, meter)	I
Data Type Code (e.g., water quality, flow)	I
Type of Control Structure	I
Comments	

Monitoring Costs	
Fixed Stations:	
Monitoring Year	N
Comments	N
Year of Cost Basis	N
Equipment Costs	N
Maintenance Costs	N
Sampling Costs	N
Laboratory Costs	N
Temporary Stations:	N
Year of Cost Basis	N
Equipment Costs	N
Sampling Costs	N
Laboratory Costs	N

Monitoring Data	
Monitoring Event Description (general information for each event)	**Priority**
Event Number	R
Event Start Date	R
Event Start Time	R
Event Type	R
Antecedent Dry Period (hrs)	I
Description of Antecedent Watershed/Facility Conditions (e.g., key field notes, frozen ground, facility storage available, etc.)	I
QA/QC Description	I
Comments	N
Precipitation Data	
Enter Previously Defined Event #	R
Monitoring Station Name	R
Start Date	I
Start Time	I
End Date	I
End Time	I
Total Depth	R
Peak One Hour Precip. Rate	I
Flow Data	
Previously Defined Event #	R
Monitoring Station Name	R
Flow Start Date	R
Flow Start Time	I
Flow End Date	I
Flow End Time	I
Total Flow Volume	R
Peak Flow Rate	I
Total Bypass Volume	R
Peak Bypass Flow Rate	I
Baseflow Rate	I
% Hydrograph Captured	N
Estimate of De Minimus Flow Contributions (not measured)	N

Monitoring Data	
Water Quality Data	**Priority**
Event # (previously defined)	R
Monitoring Station (previously defined)	R
Water Quality Sampling Start Date	R
Water Quality Sampling Start Time	I
Sample Medium (e.g., water, soil)	R
Sample Type	R
# of Samples, if Composite	I
WQX Characteristic (Water Quality Constituent from Pick List)	R
Sample Fraction (e.g., dissolved, total)	R
Result Value	R
Units	R
Qualifier	R
Detection Limit	I
Detection Limit Type	I
Analysis Method	I
Appropriate for Performance Analysis? (Yes or No)	I
Result Comment	N
Settling Velocity Distribution Data	
Previously Defined Event #	N
Monitoring Station	N
10%	N
20%	N
30%	N
40%	N
50%	N
60%	N
70%	N
80%	N
90%	N
100%	N

Priority Codes	
R	Required data
I	Important, but not required for inclusion in the database
N	Nice to Have (supplemental)