



Draft Stormwater Geodata Transfer Standard

# Inlet, Outlet & Pond Inspection Schemas

As developed by the **Metro Stormwater Geodata Project**

**Released for Public Stakeholder Review: April 17, 2020**

This draft version of the **Inlet, Outlet & Pond Inspection Schemas, v. 0.2** is published for public statewide stakeholder review and comment.



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## Inlet, Outlet and Pond Inspection Schemas: Draft Version 0.2

Provided for Public Review and Comment

### Table of Contents

**Note:** Each entry in Table of Contents is linked to its corresponding page in the document, simply Control-click the entry to go to the page.

Overview, Context and FAQs.....	3
Project Contacts.....	5
Inspection Schema Components .....	6
Guide to Schema Format and Attributes .....	7
“Inclusion” Categories Explanations.....	8
<b>Inlet Inspection Schema Components .....</b>	<b>9</b>
<b>Outlet Inspection Schema Components .....</b>	<b>15</b>
<b>Pond/Basin Inspection Schema Components .....</b>	<b>23</b>



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Cover image: Courtesy of Bolton & Menk

## Overview, Context and FAQs

### **Purpose of the Inlet, Outlet and Pond Inspection Schema and this document.**

This document contains a proposed draft schema intended to be used for the consistent and detailed collection of field inspection data on stormwater inlets, outlets and ponds as they relate to reporting required for Municipal Separate Stormwater Sewer System (MS4) permits. This document is offered as a draft to the entire stakeholder community of Minnesota for their review and comment.

### **Who prepared this proposed draft schema and why was it prepared?**

As part of the development of the **Stormwater Geodata Transfer Standard** by the **Metro Stormwater Geodata Project** during 2018-2019, several participants were looking to explore and define a more standardized format for collecting and documenting field inspection information on inlets, outlets and ponds for their MS4 reporting requirements. There were a wide range of different inspection forms already in use. These were collected, edited and assembled into a single format where as many needed features as possible were provided. The availability of a consistent inspection schema format is intended to provide better data, and consistent data across collecting and reporting jurisdictions to water quality practitioners for maintaining the fixtures and to serve the larger aim of improving water quality.

### **What is the Metro Stormwater Geodata Project (MSWGP)?**

This MSWGP is a voluntary collaborative project comprised of private sector and public sector partners in the Twin Cities metropolitan region. The goal of the MSWGP effort is to create a stormwater geodata transfer standard that reflects the functional needs of the professional community and that contains the attributes, terminology and content—as well as the supporting documentation—to satisfactorily meet those needs.



The MSWGP effort began with an initial kick-off meeting in Medina, Minnesota on April 17, 2018. The primary purpose of this kick-off session was to:

- to engage a variety of interested stakeholders;
- to present the proposed project and articulate some of the needs for it;
- to document their core business needs of the participants;
- to determine if there was enough interest from the stakeholder community in the project; and,
- if so, to create an initial Steering Committee to begin developing it.

The MSWGP builds upon initial prior work undertaken between 2008-2010 by state level agencies to create an initial stormwater system data exchange standard. The current MSWGP effort is being co-ordinated by volunteer staff from metro counties and watershed districts who organize and lead the meetings, prepare needed research and contextual materials and document the input from the participants. The MSWGP Steering Committee—comprised of professionals with backgrounds in engineering, planning, landscape architecture, water resources management, water quality regulation, monitoring, geospatial work, asset management, public works and other disciplines—convened six times between June 2018 and October 2019. In addition to the project Steering Committee, several smaller



technical working groups also met to confer on specific details of the standard's development; the result of these groups' dedicated discussion, focus and work is contained within the pages of this document.

### **Version 0.2 of the Draft Inlet, Outlet and Pond Inspection Schema**

This document represents the current iteration of the standard in its development. This draft reflects the dedicated work of Perry Clark, GIS Analyst for Carver County in reviewing and assembling various municipal inspection schema forms and templates into a cohesive whole and the discussion, research, revision and review during 2018 and 2019 by the MSWGP participants of that work. As the MSWGP Steering Committee will be publishing its full draft Stormwater Geodata Transfer Standard (v. 0.5) out for public review in 2020, it felt that it would be beneficial to also publish this **Inlet, Outlet and Pond Inspection Schema** out for public review along with the main stormwater geodata draft standard.

**Is this Inlet, Outlet and Pond Inspection schema a *mandated* standard? Is this something we are going to be required to use?** Absolutely not. No data standard developed by and for the geospatial of community in Minnesota are required or mandated. Standards—such as this emerging stormwater geodata transfer standard—are intended to serve as voluntary tools that the members of our profession work to develop collaboratively as a means of working more easily and efficiently with one another. There are no laws, statutes, administrative rules or court orders in Minnesota that dictate what a city, county, watershed district or other agency must do with their data in terms of using or maintaining standards. The use of this forthcoming standard and other geodata standards, such as those already adopted for address points, road centerlines and parcels—while encouraged—are completely voluntary.

### **Is this version 0.2 the “definitive version” of the Inlet, Outlet and Pond Inspection schema?**

No. This draft standard has been prepared by the participants of the Metro Stormwater Geodata Project as a beginning point, and the MSWGP members seek to improve it based on comments and input from the stakeholder community. This ‘version 0.2’ is being submitted and offered to the entire stakeholder community in Minnesota for them to review, critique, provide suggestions and comments on it. This review period is anticipated to take place during the spring and summer of 2020, and the comments received will be documented, reviewed and considered for modifying the next iteration of the inspection schema. Data standards and schemas like this are strengthened, enhanced and evolved by both the review and input of the professional community and through their usage.

### **My agency already has an inlet, outlet and pond inspection schema in use that meets our internal needs and MS4 permit reporting requirements. Why should we care about this new schema?**

An agency or municipality already using its own format or schema can certainly maintain its data in its own format and does not need to switch to using another schema. The MSWGP effort is simply proposing and advancing this schema as something for folks to review and provide feedback on in the hopes your experience can help us improve it to be a tool that professional desire to use eventually. Our core tenet is that better data, which is standardized across jurisdictions helps us better understand our various water quality issues and helps support better decision making to improve, protect and maintain our water quality.

### **Applicability of this inspection schema.**

Agencies who produce and maintain geospatial data representing stormwater features are certain to have their own unique methods, definitions, and criteria for capture and storage of geospatial data representing stormwater features to satisfy their own business requirements and meet their internal agency needs and to meet their external reporting requirements. This standard simply seeks to establish a set of attribute specifications primarily intended for data exchange purposes. This proposed and

emerging standard may be used not only to transfer and aggregate data, but also potentially utilized to create, manage and maintain geospatial data for representing stormwater fixtures, assets and conveyance systems within a jurisdiction. This standard in no way attempts to define, change or dictate any agency's existing internal data capture or storage specifications; however, some data producers may find benefit in using the standard to manage and maintain their data.

### **What does the public stakeholder review of this schema entail?**

The MSWGP team will be publishing this schema document out for review and collecting and documenting the comments, suggestions, revisions and recommendations which are received during calendar 2020. The MSWGP Steering Team will use these comments to revise, improve and edit the version 0.5 standard, hopefully improving it and refining it to better satisfy the various needs of the stakeholder community. The creation of geodata standards, including this one for stormwater in Minnesota is best accomplished by using an inclusive and transparent process that encourages input and participation by the entire professional community. The resulting standard which results is a resource that reflects the expertise, needs and intelligence of the professionals who need it and (hopefully) will make use of it.

## **Project Contacts**

### ***Who do I contact if I have questions about these inspection schemas or if I wish to provide comments and suggestions for its improvement?***

Please contact the following individuals—who are serving as co-coordinators of the Metro Stormwater Geodata Project—they will field your questions and will gladly add your comments to those documented during the stakeholder review period during 2020.



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# Inspection Schema Components

The data schema on the following pages represents an attempt to document and categorize the various attributes needed for successful field collection of condition and status of stormwater inlets, outlets and ponds for MS4 permit reporting. For many of these attributes, a domain of values are offered for consideration. The inspection schema is broken out into three components: inlets, outlets and ponds.



The MSWGP Steering Team **welcomes and encourages input, comments, suggestions and feedback from the stakeholder community** on what kinds of things to add, improve upon or edit with this schema so it can be more a more useful and applicable tool to the professional community.

## Components appearing in the Draft Inspection Schema:

### Inlet Inspection Schema

### Outlet Inspection Schema

### Pond/Basin Inspection Schema

#### **Inlet Inspection Schema (Prefix: 'IN\_')**

An inlet is a site where stormwater enters the conveyance system. This draft inlet inspection schema contains twenty-eight (28) attributes for each inlet inspection point.

#### **Outlet Inspection Schema (Prefix: 'O\_')**

An outlet is a site where stormwater discharges out from a pipe, channel or other conveyance. Note, **outlets** are not to be confused with **outfalls**. An **outfall** is a type of **outlet**, specifically applied to where water discharges into the Waters of the United States [40 CFR 230.3(s)] or into another municipal separate storm sewer system (MS4) permittee's jurisdiction. This draft outlet inspection schema contains thirty-three (33) attributes for each outlet inspection point.

#### **Pond/Basin Inspection Schema (Prefix: 'PB\_')**

Ponds (stormwater ponds) are bodies of water in the built environment which collect and store stormwater runoff. These fixtures are intended to serve several simultaneous functions notably as temporary runoff storage for flood control and water quality improvement (facilitating absorption of water by the soil). This draft pond inspection schema contains seventy-three (73) attributes for each pond inspection site.

# Guide to Schema Format and Attributes

Each **Component** contains numerous individual attributes; this document will be organized so each attribute has its own descriptive entry which details its content with examples also provided of each sub-component:

Element ID:	Example: <b>MS4_IN.FK</b> - this is just a reference (marker) for the entry. The Element IDs will potentially change with each version of the standard as attributes and features get added or dropped during the revision process.
Attribute (Alias) Name:	<b>Foreign Key</b>
Database Name:	<b>IN_FKEY</b> (these are kept to 10 characters or less)
Inclusion Category:	Mandatory, Conditional, If Available, Optional These are the categories in use by standards adopted by the Minnesota Geospatial Advisory Council (Please see page 8 for explanation of each term)
Field Width:	This indicates the character width of the field (a.k.a. length)
Domain:	This indicates if the field has a domain of accepted or set values
Example:	Where applicable, an example is provided
Description:	An additional verbal description of fixture represented

The graphic below explains the table provided for each descriptor of each attribute presented in the draft inlet, outlet and pond schemas to follow:

<b>Element ID</b>	<b>Name of attribute</b>	<b>Inclusion Category information</b>	<b>Domain</b>
	<b>MS4_IN.FK – Foreign Key</b>		
<b>Database name</b>	Database Name	<b>IN_FKEY</b>	
	Data Type	Text	Inclusion Conditional
	Width	150	Domain (no domain)
<b>Data type</b> (Text, Float, Date, etc.)	Example	77456-01265	
<b>Width value</b>	Description	Foreign key, unique ID of the <b>asset or fixture</b> being inspected The presence of a foreign key enables the full inspection record to be effectively joined to a geospatial feature (e.g. point geometry) which represents the inlet for mapping and visual display.	
<b>Examples</b> (examples of actual values which might appear in the field)			
<b>Description</b> (descriptive characteristics, links to resources provided or other files are referenced as applicable)			



## “Inclusion” Category Explanations

“**Inclusion**” is a term used to explain the requirement for the population of a field in a dataset for it to **comply with the standard**.

Each attribute can be defined as one of **four types of Inclusion**, these are:

- **Mandatory;**
- **Conditional;**
- **If Available;**
- **Optional;**

Each category is explained in more detail below:

**Mandatory:** The field must be populated for each record to be *compliant with the standard*.

The use of the term ‘mandatory’ indicates nothing more than for the data to be *compliant with the standard* it must have, at minimum, the mandatory fields populated. In a ‘mandatory’ designation, null values would not be allowed. Further, the term ‘mandatory’ is not to be applied to the fulfillment of an agency’s request for data (e.g. “it is ‘mandatory’ that you provide this data to us” – this is not the intention of the ‘mandatory’ category in this or any other standard).

Agencies can create and maintain data that does not contain the ‘mandatory’ fields in any standards. This simply means their data is not compliant with the standard, but in no way does it mean that their data isn’t useful or cannot be used.

For example, the field **Pipe ID** is a ‘mandatory’ field to be populated in the draft MSWGP v. 0.5 data standard, which makes sense as each asset should have its own unique identifier; however, a data producer such as a city may have digitized their stormwater network and while it has usable data, it simply has not applied a unique ID to each pipe in their system. Their data would not be compliant with the standard; but could still be used to fulfill many useful and important mapping and analysis uses.

**Conditional:** Each field with a ‘Conditional’ designation is to be populated with a non-null value for each record that is applicable to the feature. For example, the field **Pipe Shape** is a Conditional field; if the shape of a given pipe asset is not known, the data producer is can reasonably be expected to enter the value ‘Unknown’ and not to leave the field ‘blank’ or ‘null’.

**If Available:** Each field with an ‘If Available’ designation is to be populated—if the data exists—in the data provider’s database or system. If a data provider does not have the data, it cannot be populated. For example, the field **Pipe Casing** is an If Available field. As not all pipes types have or require a casing, or the presence of a casing may not be known, it is acceptable to leave unknowns as null values.

**Optional:** An ‘optional’ field is one that is not required to be populated, however, inclusion of this data would enhance the value and usability of the data and data producers are encouraged to provide as much data as possible.



## Inlet Inspection Schema Components

### MS4\_IN.PK – Primary Key

Database Name	IN_PKEY		
Data Type	Text	Inclusion	Mandatory
Width	150	Domain	(no domain)
Example	202003030001		
Description	Primary key, a unique ID for the <i>inspection record</i>		

### MS4\_IN.FK – Foreign Key

Database Name	IN_FKEY		
Data Type	Text	Inclusion	Conditional
Width	150	Domain	(no domain)
Example	77456-01265		
Description	Foreign key, unique ID of the <i>asset or fixture</i> being inspected The presence of a foreign key enables the full inspection record to be effectively joined to a geospatial feature (e.g. point geometry) which represents the inlet for mapping and visual display.		

### MS4\_IN.1 – Inspection Date

Database Name	INSP_DATE		
Data Type	Date	Inclusion	Mandatory
Width	Default	Domain	(no domain)
Example	2/14/2020		
Description	Date of inspection		

### MS4\_IN.2 – Inspector

Database Name	IN_INSPEC		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	(no domain)
Example	Alex Blenkush		
Description	Name of inspector		

### MS4\_IN.3 – Agency

Database Name	IN_AGENCY		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	(no domain)
Example	Hennepin County Public Works		
Description	Name of agency		

**MS4\_IN.4 – Temperature**

Database Name	<b>IN_TEMP</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	<i>(no domain)</i>
Example	68.0		
Description	Temperature in degrees Fahrenheit		

**MS4\_IN.5 – Rainfall in last 24 hours**

Database Name	<b>IN_RAIN24</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	<i>(no domain)</i>
Example	0.8		
Description	Amount of recorded rainfall in inches in the last 24-hour period		

**MS4\_IN.6 – Rainfall in last 48 hours**

Database Name	<b>IN_RAIN48</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	<i>(no domain)</i>
Example	0.8		
Description	Amount of recorded rainfall in inches in the last 48-hour period		

**MS4\_IN.7 – Flow Present**

Database Name	<b>IN_FLOWPRE</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNo</b>
Examples	Yes, No		
Description	Yes or no flag if flow is present at time of inspection		

**MS4\_IN.8 – Flow Description**

Database Name	<b>IN_FLOWDESC</b>		
Data Type	Text	Inclusion	Conditional
Width	12	Domain	<b>ms4FlowDescription</b>
Examples	Trickle, Moderate, Substantial		
Description	General description of flow at time of inspection		

**MS4\_IN.9 – Odor**

Database Name	<b>IN_ODOR</b>		
Data Type	Text	Inclusion	Conditional
Width	16	Domain	<b>ms4Odor</b>
Examples	None, Petroleum or gas, Rancid or sour, Sewage, Sulfide, Other		
Description	General description of odor characteristics at time of inspection		

**MS4\_IN.10 – Odor Severity**

Database Name	<b>IN_ODORSV</b>		
Data Type	Text	Inclusion	Conditional
Width	24	Domain	<b>ms4OdorSeverity</b>
Examples	Faint, Easily Detected, Noticeable at a distance		
Description	General description of odor characteristics at time of inspection		

**MS4\_IN.11 – Color**

Database Name	<b>IN_COLOR</b>		
Data Type	Text	Inclusion	Conditional
Width	6	Domain	<b>ms4Color</b>
Examples	Brown, Clear, Gray, Green, Orange, Red, Yellow, Other		
Description	General description of color characteristics at time of inspection		

**MS4\_IN.12 – Color Severity**

Database Name	<b>IN_COLORSV</b>		
Data Type	Text	Inclusion	Conditional
Width	32	Domain	<b>ms4ColorSeverity</b>
Examples	Faint color in sample bottle Clearly visible in sample bottle Clearly visible in outlet flow		
Description	General description of color characteristics at time of inspection		

**MS4\_IN.13 – Turbidity Severity**

Database Name	<b>IN_TURBSV</b>		
Data Type	Text	Inclusion	Conditional
Width	18	Domain	<b>ms4TurbiditySeverity</b>
Examples	Slight cloudiness Cloudy Opaque		
Description	General description of apparent turbidity characteristics at time of inspection		

**MS4\_IN.14 – Floatables**

Database Name	<b>IN_FLOAT</b>		
Data Type	Text	Inclusion	Conditional
Width	18	Domain	<b>ms4Floatables</b>
Examples	Sewage indicators Petroleum Suds Other		
Description	General description of the floatable materials present in the water at time of inspection		

**MS4\_IN.15 – Floatables Severity**

Database Name	<b>IN_FLOATSV</b>		
Data Type	Text	Inclusion	Conditional
Width	8	Domain	<b>ms4FloatablesSeverity</b>
Examples	Low Medium Heavy		
Description	General description of severity of floatable materials in the water at time of inspection		

**MS4\_IN.16 – Inlet Damage**

Database Name	<b>IN_DAMAGE</b>		
Data Type	Text	Inclusion	Conditional
Width	30	Domain	<b>ms4Damage</b>
Examples	Corrosion Peeling Paint Spalling Cracking Chipping Combination Other		
Description	General description of visible damage to the inlet at time of inspection		

**MS4\_IN.17 – Deposit Stains**

Database Name	<b>IN_DSTAIN</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4DepositStains</b>
Examples	Oily Flow Line Paint Other		
Description	General description of visible deposit stains to the inlet at time of inspection		

**MS4\_IN.18 – Abnormal Vegetation**

Database Name	<b>IN_ABVEG</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4AbVegetation</b>
Examples	Excessive Inhibited Other		
Description	General description of abnormal vegetation growth present at time of inspection		



**MS4\_IN.19 – Debris**

Database Name	<b>IN_DEBRIS</b>		
Data Type	Text	Inclusion	Conditional
Width	8	Domain	<b>ms4Debris</b>
Examples	None Brush Garbage Other		
Description	General description of presence of debris (brush, garbage, other) present at time of inspection		

**MS4\_IN.20 – Illicit Discharge Characteristics**

Database Name	<b>IN_ILCHAR</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4Characteristic</b>
Examples	Unlikely Potential (Presence of two or more indicators) Suspect (One or more indicators with a high severity) Obvious (Obvious illicit discharge)		
Description	General description of illicit discharge characteristics		

**MS4\_IN.21 – MS4 Illicit Inspection Notes**

Database Name	<b>IN_NOTES</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Examples	<i>(insert inspector comments related to MS4 permit compliance)</i>		
Description	Notes or comments related to the inspection of the inlet for MS4 permit compliance		

**MS4\_IN.22 – Sample Collected**

Database Name	<b>INSAMPCOL</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNo</b>
Examples	Yes, No		
Description	Flag to confirm collection of sample at site		

**MS4\_IN.23 – Overall Condition**

Database Name	<b>IN_OCOND</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4Condition</b>
Examples	NA (not applicable) NI (not inspected) 0 (no problems, not a problem) 1 (monitor, potential future problems) 2 (routine maintenance required) 3 (immediate repair necessary)		
Description	Indicator of overall condition of the inlet		

**MS4\_IN.24 – Condition Notes**

Database Name	<b>IN_CNOTES</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Examples	<i>(insert condition notes relevant to inspection)</i>		
Description	Condition notes on the inlet		

**MS4\_IN.25 – Maintenance Required**

Database Name	<b>IN_MNTREQ</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNo</b>
Examples	Yes, No		
Description	Flag to indicate if maintenance is required		

**MS4\_IN.26 – Maintenance Required Notes**

Database Name	<b>IN_MNTNOTE</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Examples	<i>“Inlet should be put on CIP Maintenance project for 2021”</i>		
Description	Notes on maintenance activity needed		

## Outlet Inspection Schema Components

### MS4\_OUT.PK – Primary Key

Database Name	<b>O_PKEY</b>		
Data Type	Text	Inclusion	Mandatory
Width	150	Domain	(no domain)
Example	202003030001		
Description	Primary key, a unique ID for the <i>inspection record</i>		

### MS4\_OUT.FK – Foreign Key

Database Name	<b>O_FKEY</b>		
Data Type	Text	Inclusion	Conditional
Width	150	Domain	(no domain)
Example	77456-01265		
Description	Foreign key, unique ID of the <i>asset or fixture</i> being inspected The presence of a foreign key enables the full inspection record to be effectively joined to a geospatial feature (e.g. point geometry) which represents the inlet for mapping and visual display.		

### MS4\_OUT.1 – Inspection Date

Database Name	<b>O_INSDATE</b>		
Data Type	Date	Inclusion	Mandatory
Width	Default	Domain	(no domain)
Example	2/14/2020		
Description	Date of inspection		

### MS4\_OUT.2 – Inspector

Database Name	<b>O_INSPCR</b>		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	(no domain)
Example	Carrie Magnuson		
Description	Name of inspector		

### MS4\_OUT.3 – Agency

Database Name	<b>O_AGENCY</b>		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	(no domain)
Example	Ramsey Washington Metro Watershed District		
Description	Name of agency completing the inspection?		

**MS4\_OUT.4 – Presence of Outfall**

Database Name	<b>O_OUTFALL</b>		
Data Type	Text	Inclusion	Conditional
Width	7	Domain	ms4YesNoUnknown
Example	Yes, No, Unknown		
Description	Flag to indicate if outlet is also an outfall		

**>> What is the difference between an outlet and an outfall?**

An **outlet** is any ending or discharge point in a system, whereas an **outfall** is the terminal end of a system where it discharges into a receiving water, or, it leaves one jurisdiction and enters another.

The definition provided by the Minnesota Stormwater Manual for an outfall is as follows:

**“Outfall”** means the point source where a municipal separate storm sewer system discharges to a receiving water, or the stormwater discharge permanently leaves the permittee’s municipal separate storm sewer system (a.k.a. MS4). It does not include diffuse runoff or conveyances that connect segments of the same stream or water systems (e.g., when a conveyance temporarily leaves an MS4 at a road crossing).

**MS4\_OUT.5 – Temperature**

Database Name	<b>O_TEMP</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	(no domain)
Example	68.0		
Description	Temperature in degrees Fahrenheit		

**MS4\_OUT.6 – Rainfall in last 24 hours**

Database Name	<b>O_RAIN24</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	(no domain)
Example	0.8		
Description	Amount of recorded rainfall in inches in the last 24-hour period		

**MS4\_OUT.7 – Rainfall in last 48 hours**

Database Name	<b>O_RAIN48</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	(no domain)
Example	0.8		
Description	Amount of recorded rainfall in inches in the last 48-hour period		



**MS4\_OUT.8 – Outlet Submerged**

Database Name	<b>O_SUGMRG</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4OutStatus</b>
Examples	No Partially Fully		
Description	Flag if outlet is submerged at time of inspection		

**MS4\_OUT.9 – Outlet Sediment**

Database Name	<b>O_SEDIM</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4OutStatus</b>
Examples	No Partially Fully		
Description	Flag if outlet is impeded/impacted with sediment at time of inspection		

**MS4\_OUT.10 – Flow Present**

Database Name	<b>O_FLOWPRES</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNoUnknown</b>
Examples	Yes, No		
Description	Yes or no flag if flow is present at time of inspection		

**MS4\_OUT.11 – Flow Description**

Database Name	<b>O_FLOWDSC</b>		
Data Type	Text	Inclusion	Conditional
Width	12	Domain	<b>ms4FlowDescription</b>
Examples	Trickle, Moderate, Substantial		
Description	General description of flow at time of inspection		

**MS4\_OUT.12 – Odor**

Database Name	<b>O_ODOR</b>		
Data Type	Text	Inclusion	Conditional
Width	16	Domain	<b>ms4Odor</b>
Examples	None, Petroleum or gas, Rancid or sour, Sewage, Sulfide, Other		
Description	General description of odor characteristics at time of inspection		

**MS4\_OUT.13 – Odor Severity**

Database Name	<b>O_ODORSV</b>		
Data Type	Text	Inclusion	Conditional
Width	24	Domain	<b>ms4OdorSeverity</b>
Examples	Faint, Easily Detected, Noticeable at a distance		
Description	General description of odor severity at time of inspection		

**MS4\_OUT.14 – Color**

Database Name	<b>O_COLOR</b>		
Data Type	Text	Inclusion	Conditional
Width	6	Domain	<b>ms4Color</b>
Examples	Brown, Clear, Gray, Green, Orange, Red, Yellow, Other		
Description	General description of color characteristics at time of inspection		

**MS4\_OUT.15 – Color Severity**

Database Name	<b>O_COLORS</b>		
Data Type	Text	Inclusion	Conditional
Width	32	Domain	<b>ms4ColorSeverity</b>
Examples	Faint color in sample bottle Clearly visible in sample bottle Clearly visible in outlet flow		
Description	General description of color characteristics at time of inspection		

**MS4\_OUT.16 – Turbidity Severity**

Database Name	<b>O_TURBSV</b>		
Data Type	Text	Inclusion	Conditional
Width	18	Domain	<b>ms4TurbiditySeverity</b>
Examples	Slight cloudiness Cloudy Opaque		
Description	General description of apparent turbidity characteristics at time of inspection		

**MS4\_OUT.17 – Floatables**

Database Name	<b>O_FLOAT</b>		
Data Type	Text	Inclusion	Conditional
Width	18	Domain	<b>ms4Floatables</b>
Examples	Sewage indicators Petroleum Suds Other		
Description	Indication of type of floatable materials present in water at time of inspection		

**MS4\_OUT.18 – Floatables Severity**

Database Name	<b>O_FLOATSV</b>		
Data Type	Text	Inclusion	Conditional
Width	8	Domain	<b>ms4FloatablesSeverity</b>
Examples	Low Medium Heavy		
Description	General description of severity of floatable materials in the water at time of inspection		

**MS4\_OUT.19 – Outlet Damage**

Database Name	<b>O_DAMAGE</b>		
Data Type	Text	Inclusion	Conditional
Width	30	Domain	<b>ms4Damage</b>
Examples	Corrosion Peeling Paint Spalling Cracking Chipping Combination Other		
Description	General description of visible damage to the outlet at time of inspection		

**MS4\_OUT.20 – Deposit Stains**

Database Name	<b>O_DSTAIN</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4DepositStains</b>
Examples	Oily Flow Line Paint Other		
Description	General description of visible deposit stains to the outlet at time of inspection		

**MS4\_OUT.21 – Abnormal Vegetation**

Database Name	<b>O_ABVEG</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4AbVegetation</b>
Examples	Excessive Inhibited Other		
Description	General description of abnormal vegetation growth present at time of inspection		

**MS4\_OUT.22 – Poor Pool Quality**

Database Name	<b>O_PPQUAL</b>		
Data Type	Text	Inclusion	Conditional
Width	15	Domain	<b>ms4PPQuality</b>
Examples	Colors Excessive algae Floatables Odors Oil sheen Suds Other		
Description	General description of the impacts resulting in poor pool quality at outlet		

**MS4\_OUT.23 – Debris**

Database Name	<b>O_DEBRIS</b>		
Data Type	Text	Inclusion	Conditional
Width	8	Domain	<b>ms4Debris</b>
Examples	None Brush Garbage Other		
Description	General description of presence of debris (brush, garbage, other) present at time of inspection		

**MS4\_OUT.24 – Illicit Discharge Characteristics**

Database Name	<b>O_ILCHAR</b>		
Data Type	Text	Inclusion	Conditional
Width	9	Domain	<b>ms4Characteristic</b>
Examples	Unlikely Potential (Presence of two or more indicators) Suspect (One or more indicators with a high severity) Obvious (Obvious illicit discharge)		
Description	General description of illicit discharge characteristics		

**MS4\_OUT.25 – MS4 Illicit Inspection Notes**

Database Name	<b>O_NOTES</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Examples	<i>(insert inspector comments related to MS4 permit compliance)</i>		
Description	Notes or comments related to the inspection of the outlet for MS4 permit compliance		



**MS4\_OUT.26 – Sample Collected**

Database Name	<b>O_SAMPCOL</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNo</b>
Examples	Yes, No		
Description	Flag to confirm collection of a sample at site		

**MS4\_OUT.27 – Sample Collected From (Site Location)**

Database Name	<b>O_SAMPCFR</b>		
Data Type	Text	Inclusion	Conditional
Width	7	Domain	<b>Ms4SampleCollectedFrom</b>
Examples	Flow, Pool, Other, Unknown		
Description	Indicator of where the sample was taken from		

**MS4\_OUT.28 – Overall Condition**

Database Name	<b>O_OVERCN</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4Condition</b>
Examples	NA (not applicable), NI (not inspected) 0 (no problems, not a problem), 1 (monitor, potential future problems) 2 (routine maintenance required), 3 (immediate repair necessary)		
Description	Indicator of overall outlet condition		

**MS4\_OUT.29– Condition Notes**

Database Name	<b>O_CNOTES</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	(none)
Examples	<i>(insert condition notes relevant to inspection)</i>		
Description	Condition notes on the inlet		

**MS4\_OUT.30 – Maintenance Required**

Database Name	<b>O_MNTREQ</b>		
Data Type	Text	Inclusion	Conditional
Width	3	Domain	<b>ms4YesNo</b>
Examples	Yes, No		
Description	Flag to indicate if maintenance is required		

**MS4\_OUT.31 – Maintenance Required Notes**

Database Name	<b>O_MNTNOTE</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	(none)
Examples	Yes, No		
Description	Notes on maintenance activity relevant to inspection		

## Pond/Basin Inspection Schema Components

### MS4\_PB.PK – Pond Inspection Primary Key

Database Name	<b>PB_PKEY</b>		
Data Type	Text	Inclusion	Mandatory
Width	150	Domain	<i>(no domain)</i>
Example	2020-02-14-0001		
Description	Unique ID for the inspection report		

### MS4\_PB.FK – Pond Inspection Foreign Key

Database Name	<b>PB_FKEY</b>		
Data Type	Text	Inclusion	Mandatory
Width	150	Domain	<i>(no domain)</i>
Example	CEB-100020003-009		
Description	Unique ID for the fixture being inspected (to facilitate linkage)		

### MS4\_PB.01 – Inspection Date

Database Name	<b>PB_INSDATE</b>		
Data Type	Date	Inclusion	Mandatory
Width	Default	Domain	<i>(no domain)</i>
Example	02/14/2020		
Description	Date of inspection		

### MS4\_PB.02 – Inspector

Database Name	<b>PB_INSPECT</b>		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	<i>(no domain)</i>
Example	John Q. Public		
Description	Name of inspector		

### MS4\_PB.03 – Agency

Database Name	<b>PB_AGENCY</b>		
Data Type	Text	Inclusion	Mandatory
Width	254	Domain	<i>(no domain)</i>
Example	Ramsey County		
Description	Agency conducting the inspection		

### MS4\_PB.04 – Temperature

Database Name	<b>PB_TEMP</b>		
Data Type	Double	Inclusion	Conditional
Width	Default	Domain	<i>(no domain)</i>
Example	68		
Description	Temperature in degrees Fahrenheit		

**MS4\_PB.05 – Weather**

Database Name	<b>PB_WEATHER</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(no domain)</i>
Example	Overcast, misty rain, wind 8 mph from NW		
Description	Description of weather conditions		

**MS4\_PB.06 – Outlet Woody Growth**

Database Name	<b>PBO_WOODG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of wood growth conditions at outlet		

**MS4\_PB.07 – Outlet Structures**

Database Name	<b>PBO_STRUCT</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of outlet structure(s) at pond/basin		

**MS4\_PB.08 – Outlet Undercutting**

Database Name	<b>PBO_UNDERCT</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of conditions from released water undercutting the outlet		

**MS4\_PB.09 – Outlet Erosion**

Database Name	<b>PBO_EROSN</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of general erosion conditions		

**MS4\_PB.10 – Outlet Rip Rap**

Database Name	<b>PBO_RIPRAP</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of general rip rap conditions		

**MS4\_PB.11 – Outlet Sediment**

Database Name	<b>PBO_SEDIMT</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of general sediment conditions		

**MS4\_PB.12 – Outlet Vegetation**

Database Name	<b>PBO_VEG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Description of general vegetation conditions		

**MS4\_PB.13 – Outlet Overall Condition**

Database Name	<b>PBO_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of overall condition of outlet(s) at pond/basin		

**MS4\_PB.14 – Outlet Comments**

Database Name	<b>PBO_COMNT</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	(none)
Example	<i>(Text description of overall description of pond/basin outlet)</i>		
Description	Written description of overall condition or characteristics of pond/basin		

**MS4\_PB.15 – Bank Spillway Geometry**

Database Name	<b>PBBS_GEOM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of conditions of cracking, bulging or sloughing in the spillway		

**MS4\_PB.16 – Bank Spillway Erosion**

Database Name	<b>PBBS_EROSN</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of presence and impact of erosion of the spillway		

**MS4\_PB.17 – Bank Spillway Animal Damage**

Database Name	<b>PBBS_ANDAM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of presence of animal damage activity (burrows, etc.)		

**MS4\_PB.18 – Bank Spillway Soft Spots**

Database Name	<b>PBBS_SOFTS</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of presence of soft spots		

**MS4\_PB.19 – Bank Spillway Vegetation**

Database Name	<b>PBBS_VEG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of status of vegetation impacts		

**MS4\_PB.20 – Bank Spillway Debris**

Database Name	<b>PBBS_DEBR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of status of debris obstructions		



**MS4\_PB.21 – Bank Spillway Woody Growth**

Database Name	<b>PBBS_WOODG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of status of woody growth or unauthorized plantings		

**MS4\_PB.22 – Bank Spillway Condition**

Database Name	<b>PBBS_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of overall condition/status of the bank spillway		

**MS4\_PB.23 – Bank Spillway Condition Comments**

Database Name	<b>PBBS_CMNT</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general comments/observations from field)</i>		
Description	Indicator of overall condition/status of the bank spillway		

**MS4\_PB.24 – Trash Rack Structure**

Database Name	<b>PBTR_STR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Indicator of overall condition/status of the weir and trash rack		

**MS4\_PB.25 – Trash Rack Debris Removal**

Database Name	<b>PBTR_DBRM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Weir and trash rack debris removal		

**MS4\_PB.26 – Trash Rack Corrosion**

Database Name	<b>PBTR_CORR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Weir and trash rack corrosion		

**MS4\_PB.27 – Trash Rack Condition**

Database Name	<b>PBTR_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Weir and trash rack condition		

**MS4\_PB.28 – Trash Rack Comments**

Database Name	<b>PBTR_CMNT</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general comments/observations from field)</i>		
Description	Indicator of overall condition/status of the weir and trash rack		

**MS4\_PB.29 – Spillway Spalling**

Database Name	<b>PBS_SPALL</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, indicator of concrete spalling		

**MS4\_PB.30 – Spillway Joint Failure**

Database Name	<b>PBS_JFAIL</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, indicator of joint failure		

**MS4\_PB.31 – Spillway Leaking**

Database Name	<b>PBS_LEAK</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, indicator of leaking		

**MS4\_PB.32 – Spillway Corrosion**

Database Name	<b>PBS_CORR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, presence of corrosion		

**MS4\_PB.33 – Spillway Misalignment**

Database Name	<b>PBS_MISAL</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, misalignment or split seams or joints		

**MS4\_PB.34 – Spillway Manhole**

Database Name	<b>PBS_MH</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, condition of manhole access and steps available		

**MS4\_PB.35 – Spillway Sediment**

Database Name	<b>PBS_SEDIM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, sediment accumulation within riser		

**MS4\_PB.36 – Spillway Condition**

Database Name	<b>PBS_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Spillway, general/overall condition		

**MS4\_PB.37 – Spillway Comments**

Database Name	<b>PBS_CMNT</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	(none)
Example	<i>(insert general comments/observations from field)</i>		
Description	Comments related to the condition/status of spillway		

**MS4\_PB.38 – Pool Pollution**

Database Name	<b>PBP_PLTN</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Visible pollution in pool		

**MS4\_PB.39 – Pool Erosion**

Database Name	<b>PBP_EROSN</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Visible erosion of pool		

**MS4\_PB.40 – Pool Vegetative Growth**

Database Name	<b>PBP_VEG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Visible (unwanted?) vegetation in pool		

**MS4\_PB.41 – Pool Debris**

Database Name	<b>PBP_DBRS</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Visible debris in pool		

**MS4\_PB.42 – Pool Sediment**

Database Name	<b>PBP_SEDIM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Visible sediment in pool		

**MS4\_PB.43 – Pool Condition**

Database Name	<b>PBP_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall condition of pool		

**MS4\_PB.44 – Pool Comments**

Database Name	<b>PBP_CMNT</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general comments/observations from field)</i>		
Description	Comments related to the condition/status of pool		

**MS4\_PB.45 – Dry Pond Vegetation Adequate**

Database Name	<b>PBDP_VEGA</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of desired vegetation of dry pond feature		

**MS4\_PB.46 – Dry Pond Vegetation Undesirable**

Database Name	<b>PBDP_VEGU</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of the undesirable/woody vegetative growth of dry pond feature		

**MS4\_PB.47 – Dry Pond Obstructions**

Database Name	<b>PBDP_OBST</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of low flow channel obstructions		

**MS4\_PB.48 – Dry Pond Standing Water**

Database Name	<b>PBDP_STW</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<a href="#">ms4Condition</a>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of standing water and/or wet spots		



**MS4\_PB.49 – Dry Pond Debris**

Database Name	<b>PBDP_DBR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of debris in dry pond		

**MS4\_PB.50 – Dry Pond Sediment**

Database Name	<b>PBDP_SDM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status of sediment in dry pond		

**MS4\_PB.51 – Dry Pond Condition**

Database Name	<b>PBDP_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall condition/status description of dry pond		

**MS4\_PB.52 – Dry Pond Comments**

Database Name	<b>PBDP_CMNT</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general comments/observations from field)</i>		
Description	Comments related to the condition/status of dry pond		

**MS4\_PB.53 – Inflow Rip Rap**

Database Name	<b>PBI_RIPRAP</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Condition status of rip rap at pond/basin inflow		

**MS4\_PB.54 – Inflow Erosion**

Database Name	<b>PBI_EROSN</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Condition status of erosion at pond/basin inflow		

**MS4\_PB.55 – Inflow Debris**

Database Name	<b>PBI_DBRS</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Condition status of debris at pond/basin inflow		

**MS4\_PB.56 – Inflow Sediment**

Database Name	<b>PBI_SEDM</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Condition status of sediment at pond/basin inflow		

**MS4\_PB.57 – Inflow Forebay Sediment Debris**

Database Name	<b>PBI_FBSD</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Condition status of sediment at inflow forebay		

**MS4\_PB.58 – Inflow Condition**

Database Name	<b>PBI_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall condition/status description of inflow		

**MS4\_PB.59 – Inflow Comments**

Database Name	<b>PBI_CMNT</b>		
Data Type	Text	Inclusion	Conditional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general comments/observations from field)</i>		
Description	Comments related to the condition/status of inflow		

**MS4\_PB.60 – Buffer**

Database Name	<b>PBB_BUFF</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall condition/status description of buffer		

**MS4\_PB.61 – Encroachments**

Database Name	<b>PBB_ENCR</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Presence of physical encroachments (structures in buffer)		

**MS4\_PB.62 – Buffer Clearing Vegetation**

Database Name	<b>PBB_CLVG</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status/need for clearing vegetation in buffer		

**MS4\_PB.63 – Buffer Planting Needed**

Database Name	<b>PBB_PLND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status/need for planting vegetation in buffer		

**MS4\_PB.64 – Buffer Access Routes**

Database Name	<b>PBB_ACRT</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status or condition of access route to/through buffer		

**MS4\_PB.65 – Buffer Public Hazards**

Database Name	<b>PBB_PHAZ</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status/presence of public hazard (Details of public hazard can be added in <b>PB_INSUM</b> [General Comments])		

**MS4\_PB.66 – Buffer Fence**

Database Name	<b>PBB_FENCE</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Status or condition of fence in buffer		

**MS4\_PB.67 – Buffer Condition**

Database Name	<b>PBB_COND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall rating of status or condition of buffer		

**MS4\_PB.68 – Buffer Comments**

Database Name	<b>PBB_COND</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	<i>(none)</i>
Example	<i>(insert general status notes about buffer)</i>		
Description	General status or condition description of buffer		

**MS4\_PB.69 – Buffer Complaints**

Database Name	<b>PBB_COMP</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	(none)
Example	<i>(insert comments noted or received)</i>		
Description	Notation of any complaints filed or received about the buffer		

**MS4\_PB.70 – Overall Condition of Pond/Basin**

Database Name	<b>PB_OVERCND</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4Condition</b>
Example	NA = Not Applicable NI = Not Inspected 0 = Not a problem 1 = Monitor 2 = Routine Maintenance Required 3 = Immediate Repair, Work or Activity Necessary		
Description	Overall condition of the pond/basin feature		

**MS4\_PB.71 – Illicit Discharge Evidence Connections**

Database Name	<b>PBIL_CT</b>		
Data Type	Text	Inclusion	Conditional
Width	2	Domain	<b>ms4YesNoUnknown</b>
Example	Yes, No, Unknown		
Description	Evidence of illicit discharge or illicit connections		

**MS4\_PB.72 – Illicit Discharge Evidence of Connection Comments**

Database Name	<b>PBIL_CMNT</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	(none)
Example	<i>(Inspector summary of evidence of illicit discharge or illicit connections)</i>		
Description	Evidence of illicit discharge or illicit connections		

**MS4\_PB.73 – Inspectors Summary**

Database Name	<b>PB_INSUM</b>		
Data Type	Text	Inclusion	Optional
Width	254	Domain	(none)
Example	<i>(insert text of inspector's comments/summary on the feature)</i>		
Description	Inspector summary notes		