



From Mail to Digital: Modernizing Structural BMP Maintenance Verifications with GIS-Based Electronic Submissions

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State MS4 Permit Requirements

ORDER NO. R9-2013-0001, NPDES NO. CAS0109266

BMP Editor App Stormwater/Lucity help doc

Select a BMP/PDP template from the panel below to create a new one

OR

Select an existing BMP/PDP. To change the selected item do one of the following

1. Hit the clear button on the form which puts you back into selection mode. (this is the preferred method)
2. If you aren't in selection mode then the attribute popups show and you can then choose the Smart Editor Option to update its attributes

Find address or place

SW BMP

SW PDP Site

New selection

- Develop, maintain, and update a watershed-based database to track and inventory all Priority Development Projects and associated structural BMPs.

- An automated database system, such as GIS, is highly recommended



ASSET MANAGEMENT

home Home PDP Site Master Inventory cancel add

	Site Number	Priority	Status	Public or	Last Inspected	Site Name	Location/Address	PDP	Category
+	PDP00101	High	Operational	Public	5/18/2023	Palomar Street Improvements - Trenton	Trenton Av	<input checked="" type="checkbox"/>	Municipal
+	PDP00102	High	Operational	Public	2/7/2023	Safe Route School Project - Albany		<input checked="" type="checkbox"/>	Municipal
+	PDP00103	High	Operational	Public	3/27/2023	Tobias & Dixon Drive CIP		<input checked="" type="checkbox"/>	Municipal
+	PDP00104	High	Operational	Public	6/1/2023	Third Avenue Streetscape Improvement Phase I & II		<input checked="" type="checkbox"/>	Municipal
+	PDP00106	High	Operational	Public	6/2/2023	Second Avenue Improvements Naples/Palomar		<input checked="" type="checkbox"/>	Municipal
+	PDP00107	High	Operational	Public	5/9/2023	Telegraph Canyon CIP		<input checked="" type="checkbox"/>	Municipal
+	PDP00108	High	Operational	Public	2/2/2023	805 / Orange Interchange		<input checked="" type="checkbox"/>	Municipal
+	PDP00147	High	Operational	Public	5/24/2023	Mountain Hawk Park	1475 LAKE CREST	<input checked="" type="checkbox"/>	Municipal
+	PDP00148	High	Operational	Public	5/10/2023	Chula Vista Elite Athlete Training Center	2800 OLYMPIC	<input checked="" type="checkbox"/>	Municipal
+	PDP00149	High	Operational	Public	6/20/2023	Harvest Park	1550 PALOMAR	<input checked="" type="checkbox"/>	Municipal

Maintenance Verification from Responsible Party


Verify that structural BMPs on PDPs are adequately maintained

- Inspect all High priority
- Maintenance Verifications for Low priority

Maintenance Verification Form 5502 sent out via standard mail

- No specific site information
- More effort and less clarity



 CITY OF CHULA VISTA	PUBLIC WORKS DEPARTMENT, OPERATIONS 1800 Maxwell Road, Chula Vista, CA 91911 Phone: (619) 397-6111 Fax: (619) 397-6259	STORM WATER TREATMENT BMPs INSPECTION AND MAINTENANCE CERTIFICATION FORM
	FORM 5502	

Section 1

The following is a list of storm water Treatment Control Best Management Practices (BMPs) that may exist within your development. Please indicate the number of each type of BMP existing in your development and list the dates of inspections and maintenance activities during the past 12 months.

Type of BMP	Filter Insert	Hydrodynamic Separator	Wet Vault	Vegetated Swale	Bio Retention	Other _____
Number of Units						
<input type="checkbox"/> Inspection						
<input type="checkbox"/> Maintenance						
<input type="checkbox"/> Inspection						
<input type="checkbox"/> Maintenance						
<input type="checkbox"/> Inspection						
<input type="checkbox"/> Maintenance						
<input type="checkbox"/> Inspection						
<input type="checkbox"/> Maintenance						
<input type="checkbox"/> Inspection						
<input type="checkbox"/> Maintenance						

Section 2

The following certification must be signed and returned to the City of Chula Vista as explained in the cover letter.

I understand that the development entitlement agreement for the development that I represent includes inspection and maintenance requirements for storm water treatment facilities. Further, I understand that Chula Vista Municipal Code Chapter 14.20, and the Chula Vista Development Storm Water Manual include requirements for the minimization of polluted discharges through the use of Best Management Practices. I certify that the information provided in Section 1 above is, to the best of my knowledge, true and accurate.

I also understand that non-compliance with the City's storm water management regulations may result in enforcement action by the City.

Name and Title: _____

Development Name: _____

Address: _____

Signature: _____ Date: _____

BMP Survey Demo


1) Verify your property and update Contact Information

PDP00100 : 1945 Discovery Falls
High Tech High

Scroll down to submit updated Contact Information

Contact Name*


Responsible Party*
The person, company, or HOA that owns or has primary long-term maintenance responsibilities for the BMP structure.



BMP00410 Filterra

The statuses and lists below update every 30 seconds

Contact Info Updated



Last update: 10 seconds ago

2) Select BMP to create new maintenance survey:

FeatureID	BMP Type	Inspection Date	Is Resubmittal	Complete
BMP00412	Filtrra		No	
BMP01222	Swale		No	
BMP01223	Swale		No	
BMP00410	Filtrra	2024-06-20	No	
BMP00411	Filtrra	2024-07-02	No	✓
BMP01221	Bionetention	2024-06-20	No	✓

3) Fill out the survey for the selected BMP structure:

BMP ID

BMP00410

BMP Inspection Date*


7/2/2024

Was maintenance of the BMP required?*

Yes No

Inspections Needed

3



Last update: 10 seconds ago

ESRI Dashboard/Survey123 Interface

1) Verify your property and update Contact Information

PDP00100 : 1945 Discovery Falls

High Tech High

Scroll down to submit updated Contact Information

Contact Name*

Responsible Party*

The person, company, or HOA that owns or has primary long-term maintenance responsibilities for the BMP structure.



The statuses and lists below update every 30 seconds

Contact Info Updated



Last update: now

Inspections Needed

2 >

Last update: now

2) Select BMP to create new maintenance survey:

FeatureID	BMP Type	Inspection Date	Is Resubmittal	Complete
BMP00412	Filtrera		No	
BMP01222	Swale		No	
BMP00410	Filtrera	2024-06-20	No	✓
BMP00411	Filtrera	2024-07-02	No	✓
BMP01221	Bioretention	2024-06-20	No	✓
BMP01223	Swale	2024-07-05	No	✓

Last update: now

3) Fill out the survey for the selected BMP structure:

BMP ID

BMP01222

BMP Inspection Date*

7/9/2024

Was maintenance of the BMP required?*

Yes

No

Survey123 Design Phase

BMP Survey Overview **Design** Collaborate Analyze Data Settings

1 **BMP ID**

2 **BMP Inspection Date***

3 **Was maintenance of the BMP required?***

4 **Description of Maintenance or Repairs Conducted**

5 **Upload Photos**
(Maximum size per file is 10.0 MB)

6 **Upload Maintenance Documentation**
(Maximum size per file is 20.0 MB)

7 **This is a maintenance record resubmittal for this BMP**
If a mistake was made on your original maintenance record submittal and you submit a new record, please check this box.

Add Edit Appearance Options

Text, number, date, and time

Singleline text Multiline text
Number Slider
Date Time
Date and time Email
Website Barcode

Choice

Single select Multiple select

Modify Schema

All survey data is stored in a feature layer associated with your survey. Use the settings below to control the field names of your feature layer as well as the values stored for choices in your survey. Once published, changes to name and field length are not allowed for existing questions.

Label	Name	Field type	Field length
BMP ID	bmpid	esriFieldTypeString	20
BMP Inspection Date	inspectiondate	esriFieldTypeDate	20
Was maintenance of the BMP required?	was_maintenance_of_the_bmp_requ	esriFieldTypeString	5
- Yes	1		
- No	0		
Description of Maintenance or Repairs Conducted	bmpmaintenancedesc	esriFieldTypeString	400
Upload Photos	uploadphotos	esriAttachment	
Upload Maintenance Documentation	uploaddocumentation	esriAttachment	
This is a maintenance record resubmittal for this BMP	resubmittal	esriFieldTypeString	10
- Yes	Yes		
X	x	esriFieldTypeDouble	
Y	y	esriFieldTypeDouble	
BMP GBA ID	bmpgbaid	esriFieldTypeDouble	
PDP Site ID	pdpSITEID	esriFieldTypeString	20
PDP GBA ID	pdpgbaid	esriFieldTypeDouble	
InspectorCode	inspectorcode	esriFieldTypeDouble	
InspectionTypeCode	inspectiontypecode	esriFieldTypeDouble	
CommentText	commenttext	esriFieldTypeString	255

ESRI Dashboard Design Phase

1) Verify your property and update Contact Information

PDP00100 : 1945 Discovery Falls
High Tech High

Scroll down to submit updated Contact Information

Contact Name*

Responsible Party*
The person, company, or HOA that owns or has primary long-term responsibilities for the BMP structure.

The statuses and lists below update every 30 seconds

Embedded content

Data

Data options

General

Type

Accessibility

Layer: SW PDP Site

Filter

Content Type

URL

(1) <https://survey123.arcgis.com/share/96bedb61a8274a7...>

Maximum features displayed: 1

Sort by

Data table

1) Verify your property and update Contact Information

PDP00100 : 1945 Discovery Falls
High Tech High

Scroll down to submit updated Contact Information

Contact Name*

Responsible Party*
The person, company, or HOA that owns or has primary long-term maintenance responsibilities for the BMP structure.

Contact Phone*
Include area code

ESRI Dashboard Design Phase



CV BMP Inspection Map

Map

Settings	Layer actions
General	<input type="checkbox"/> BMP Inspections Active targets: 0
Map actions	<input type="checkbox"/> BMPs with Surveys Active targets: 0
Layer actions	<input type="checkbox"/> BMP Survey Needed Active targets: 0
Accessibility	<input type="checkbox"/> SW PDP Site Active targets: 0
	<input type="checkbox"/> PDP Inspection Survey_results Active targets: 0

When map is clicked

Show pop-up

Select feature

Additional selection tools
Requires one or more layer actions to be configured.

<input type="checkbox"/> Rectangle	<input type="checkbox"/>
<input type="checkbox"/> Lasso	<input type="checkbox"/>
<input type="checkbox"/> Circle	<input type="checkbox"/>
<input type="checkbox"/> Line	<input type="checkbox"/>

Cancel Done

ESRI Dashboard Design Phase

2) Select BMP to create new maintenance survey:

FeatureID	BMP Type	Inspection Date	Is Resubmittal	Complete
● BMP00412	Filtterra		No	
● BMP01222	Swale		No	
● BMP01223	Swale		No	
● BMP00410	Filtterra	2024-06-20	No	✓
● BMP00411	Filtterra	2024-07-02	No	✓
● BMP01221	Bioretention	2024-06-20	No	✓

Last update: 10 seconds ago

Table

Data

Table

Header

Values

General

Filter

Active targets: 1

Actions

Flash

Active targets: 1

Accessibility

CV BMP Inspection Map

Show pop-up

Active targets: 1

CV BMP Inspection Map

Pin

Active targets: 1

CV BMP Inspection Map

Follow feature

Active targets: 0

Zoom

Active targets: 0

Data table

2) Select BMP to create new maintenance survey:

FeatureID	BMP Type	Inspection Date	Is Resubmittal	Complete
● BMP0100	Vertical		No	
● BMP0101	Media Filter		No	
● BMP0102	Bioretention		No	
● BMP0103	Bioretention		No	
● BMP0104	Filter Inlet		No	
● BMP0105	Filter Inlet		No	
● BMP0106	Swale		No	
● BMP0107	Swale		No	

One column 28 months ago

Cancel Done

ESRI Dashboard Design Phase



BMP ID

BMP Inspection Date*

Was maintenance of the BMP required?*

 Yes No

Upload Photos

(Maximum size per file is 10.0 MB)

 Drop image here or select image (number of files allowed: 1 - 5)

Upload Maintenance Documentation

(Maximum size per file is 20.0 MB)

 Drop file here or select file (pdf, doc, docx, xls,xlsx, pptx, ppt, txt)

This is a maintenance record resubmittal for this BMP


If a mistake was made on your original maintenance record submittal and you submit a new record, please check this box.

 Yes

I understand that the development entitlement agreements for the development that I represent includes inspection and maintenance requirements for storm water treatment facilities. Further, I understand that Chula Vista Municipal Code Chapter 14.20, and the Chula Vista Development Storm Water Manual include requirements for the minimization of polluted discharges through the use of Best Management Practices. I certify that the information provided in above is, to the best of my knowledge, true and accurate.


I also understand that non-compliance with the City's storm water management regulations may result in enforcement action by the City, including but not limited to notices of violation, citations, fines, cease and desist orders, and/or other enforcement actions.

ESRI Dashboard Design Phase



Welcome

Storm Water Structural BMP Inspection & Maintenance Certification



Stormwater structural BMPs require maintenance to effectively remove pollutants from stormwater runoff. Property Owners/Managers must annually verify that the proper maintenance of the structural BMPs on their property have been conducted prior to the start of the rain season (October 1st).

To verify that your structural BMPs are properly maintained, please have documentation (e.g., photos or service reports) ready and proceed with the following steps:

1. Verify your site boundary and enter Contact Information
2. Select BMP from the list to create new maintenance record
3. Fill out survey and submit to certify

If you have any questions about the submittal process, please see Annual Maintenance Certification Guidance or email stormwater@chulavistaca.gov.

Don't show this message again OK

Contact Info Updated



Last update: 10 seconds ago

Inspections Needed

3



Last update: now

Decision Tree

- No code – Low Code Survey123 Web
- URL Parameters
 - Dashboard
 - Survey123

&field:pdp_site_name={field/Site Name}&field:pdp_site_loc={field /SiteLocation}&hide=navbar

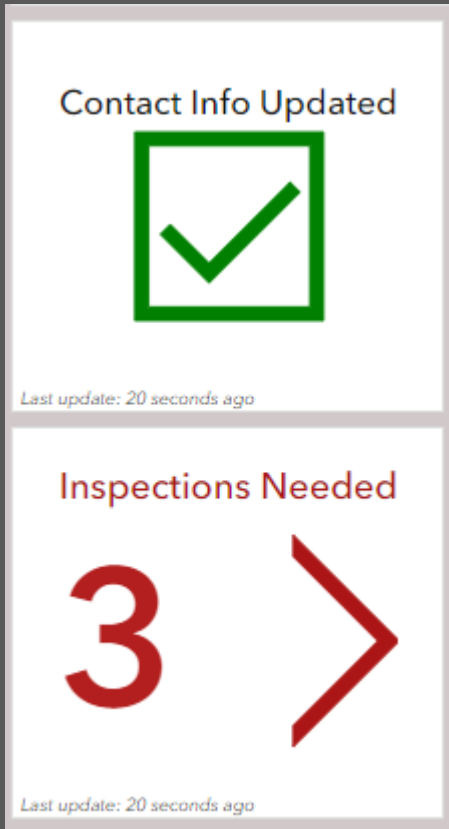
The screenshot displays the ArcGIS Survey123 Design interface. At the top, the navigation bar includes 'ArcGIS Survey123', 'My surveys', and 'Organization'. The main header shows 'BMP Survey' with an edit icon, and a secondary navigation bar with 'Overview', 'Design' (highlighted), 'Collaborate', 'Analyze', 'Data', and 'Settings'. The main workspace shows a form layout with the following fields:

- BMP ID**: A text input field.
- BMP Inspection Date***: A date input field showing '7/8/24'.
- Was maintenance of the BMP required?***: A radio button group with 'Yes' and 'No' options.
- Description of Maintenance or Repairs Conducted**: A large text area.
- Upload Photos**: A section with a note '(Maximum size per file is 10.0 MB)' and a dashed box containing '1' and the text 'Drop image here or select image (number of files allowed: 1 - 5)'. A camera icon is also present.

On the right side, a widget palette is visible with the following categories and options:

- Text, number, date, and time**: Singleline text, Multiline text, Number, Slider, Date, Time, Date and time, Email, Website, Barcode.
- Choice**: Single select, Multiple select, Single select grid, Dropdown, Likert scale, Rating, Ranking.
- Location**: Map, Address, Location list.
- Media and files**: Image, File upload.

Arcade



```
return {  
  //textColor:'',  
  //backgroundColor:'',  
  topText: 'Contact Info Updated',  
  topTextColor: '',  
  topTextOutlineColor: '',  
  topTextMaxSize: 'medium',  
  middleText: IIF(  
    $datapoint.count_objectid >0, '', 'None  
submitted'),  
  middleTextColor: IIF(  
    $datapoint.count_objectid  
>0, 'Green', 'Red'),  
  middleTextOutlineColor: '',  
  middleTextMaxSize: 'large',  
}
```

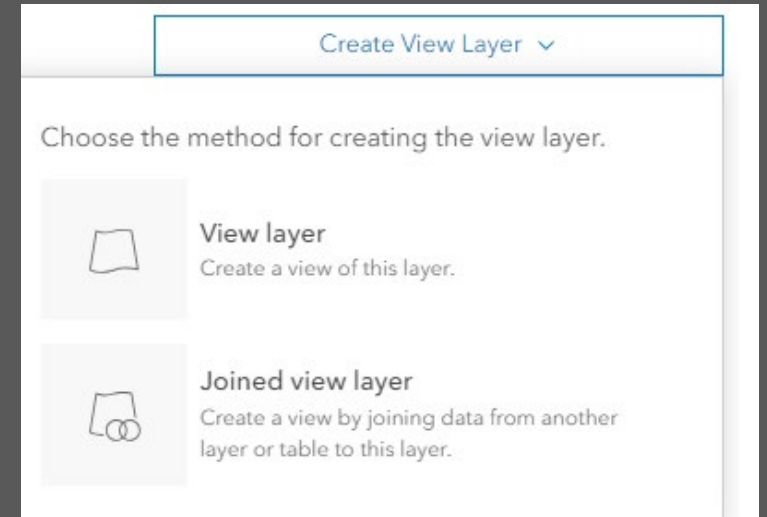
Item Refresh Intervals

What is the longest time you want your users to wait before seeing updates?

Last update: 19 seconds ago

FS Joined Views

- Survey schema locks



Integration

BMP GBA ID

PDP Site ID

PDP GBA ID

InspectorCode

InspectionTypeCode

CommentText

Contact Name*

Responsible Party*

The person, company, or HOA that owns or has primary long-term maintenance responsibilities for the BMP structure.

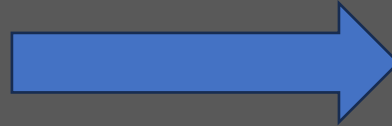
Contact Phone*

include area code

Contact Email*

Contact Street Address*

ie: 10 Main St



Edit GIS Scheduled Task

General | Schedule | Latest Process | Record History

Linked Layer:
Inspection Survey BMP

Task Type:
Import (GIS to Lucity)

Disabled

Filter (leave blank to process all source records):
CreationDate > CURRENT_TIMESTAMP - INTERVAL '01' DAY

Only process records modified since last run

Insert record if it does not already exist

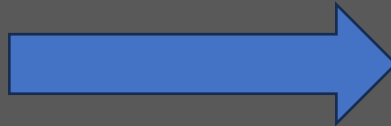
Update existing record

Enable number generator for imports

Enable spatial relates for imports

Attachment Option:
Upload

Cancel Save



Pop-up

SW PDP Site (1)
San Miguel Ranch

SW PDP Site - San Miguel Ranch

HydromodSubject	N
ContactRP	
ContactName	
ContactType	
ContactAddress	

116.9918520°W 32.6710402°N

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