



LOWER ALLEN TOWNSHIP

2233 GETTYSBURG ROAD • CAMP HILL, PENNSYLVANIA 17011

June 26, 2015

Pennsylvania Department of Environmental Protection
Watershed Program Manager
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110

RE: MS4 Annual Report Form
NPDES Permit Number PAI 133511

Good Morning:

Enclosed please find the MS4 Annual Report Form from Lower Allen Township, Cumberland County for the above referenced Permit. This report is for the report period April 1, 2014 to March 31, 2015.

Please contact our office with any questions.

Sincerely,

Daniel J. Flint, P.E. NSPE
Community Development Director/Township Engineer

cc: Thomas G. Vernau, Jr., Township Manager
Erin Trone, Assistant Manager



MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) ANNUAL/PROGRESS REPORT

For the Reporting Period: April 1, 2014 to March 31, 2015

☒ Annual Report ☐ Progress Report
☐ New Permittee ☐ Renewal Permittee

Due Date: 6/29/15

GENERAL INFORMATION					
Permittee Name: <u>Lower Allen Township</u>			NPDES Permit No.: PA <u>133511</u>		
Mailing Address: <u>2233 Gettysburg Road</u>			Effective Date:		
City, State, Zip: <u>Camp Hill, PA 17011</u>			Expiration Date:		
MS4 Contact Person: <u>Daniel J. Flint, P.E.</u>			Renewal Due Date:		
Title: <u>Township Engineer</u>			Admin. Extended? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Phone: <u>717-975-7575</u>			Municipality: <u>Lower Allen Township</u>		
Email: <u>dflint@latwp.org</u>			County: <u>Cumberland</u>		
Co-Permittees (if applicable):					
WATER QUALITY INFORMATION					
Are there any discharges to waters within the Chesapeake Bay Watershed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Identify all surface waters that receive stormwater discharges from storm sewers within the MS4 urbanized area and provide the requested information (see instructions).					
Receiving Water Name	Ch. 93 Class.	Impaired?	Cause(s)	TMDL?	WLA?
<u>Cedar Run</u>	<u>CWF</u>	<u>No</u>			
<u>Yellow Breeches</u>	<u>CWF</u>	<u>No</u>			
Identify any Wasteload Allocations (WLAs) identified in TMDLs for the MS4, if applicable. Identify the pollutant(s) and mass load(s):					
N/A					

GENERAL MINIMUM CONTROL MEASURE (MCM) INFORMATION

Have you completed all MCM activities required by the permit for this reporting period? ☒ Yes ☐ No

Provide current contact name and phone number information for the required MCMs (if same as page 1, leave blank):

MCM	Contact Name	Phone
#1 Public Education and Outreach on Storm Water Impacts		
#2 Public Involvement/Participation		
#3 Illicit Discharge Detection and Elimination (IDD&E)		
#4 Construction Site Storm Water Runoff Control		
#5 Post-Construction Storm Water Management in New Development and Redevelopment		
#6 Pollution Prevention / Good Housekeeping		

MCM #1 – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

BMP #1: Develop, implement and maintain a written Public Education and Outreach Program

Measurable Goal: For new permittees a Public Education and Outreach Program (PEOP) shall be developed and implemented during the first year of permit coverage and shall be re-evaluated each permit year thereafter and revised as needed. For renewal permittees, the existing PEOP shall be reviewed and revised as necessary. The permittee's PEOP shall be designed to achieve measurable improvements in the target audience's understanding of the causes and impacts of stormwater pollution and the steps they can take to prevent it.

- For new permittees only, attach the written PEOP or a summary thereof to the first report submitted to DEP.
- If you are not a new permittee, did you complete and submit your written PEOP to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
- Date of last evaluation of or revision to the PEOP: 3/31/15
- What were the plans and goals for public education and outreach for the reporting period?

See attached

- Did the MS4 achieve its goal(s) for the PEOP during the reporting period? ☒ Yes ☐ No

Explain the rationale for your answer:

Successfully completed what was in our plan

- Identify specific plans and goals for public education and outreach for the upcoming year:

Mailings to businesses in industrial areas regarding
illicit discharges. Public meeting to address individual
concerns, facebook

BMP #2: Develop and maintain lists of target audience groups present within the areas served by your MS4

Measurable Goal: For new permittees, the lists shall be developed within the first year of coverage under the permit and reviewed and updated as necessary every year thereafter. For renewal permittees, the lists shall continue to be reviewed and updated annually.

- For new permittees only, attach your target audience list(s) to the first report submitted to DEP.

LOWER ALLEN TOWNSHIP, PA – A Township of the First Class

(<http://www.latwp.org>)

MS 4 - Storm Water

Stormwater Program Meeting

Lower Allen Township is issued a permit from the PaDEP to operate the Municipal Separate Storm Sewer System (MS4). As part of that permit, a presentation on the Township's Stormwater Program is made annually at an advertised public meeting. That presentation for 2015 will be held in conjunction with the regular Board of Commissioners meeting on Monday, March 9, 2015, beginning at 7:00 PM at the Township Office, 2233 Gettysburg Road, Camp Hill, Pa. The public is invited to attend an

The federal Clean Water Act (CWA) prohibits the discharge of pollutants into waterways without the appropriate permits. Pennsylvania's Stormwater Management Act (better known as Act 167), MS4 Program, Chapter 102 (Erosion and Sediment Control Requirements), and NPDES Permit Program for Stormwater Discharges Associated with Construction Activities are amongst the Commonwealth's methods for meeting the runoff-related requirements of the Clean Water Act.

For all practical purposes, though, implementation of stormwater management efforts in Pennsylvania occurs at the community level because individual municipalities are ultimately responsible for adopting zoning ordinances, subdivision and land development regulations, and other programs that keep their locality's runoff under control.

Contrary to the common perception, properly planning for stormwater can accomplish this goal while speeding the permitting process, saving on construction costs, and resulting in profitable projects that enhance a community in multiple ways.

- Pennsylvania's Storm Water Management Act (Act 167) – Pennsylvania Department of Environmental Protection Fact Sheet on storm water runoff (<http://www.stormwaterpa.org/assets/media/regulatory/3930-FS-DEP4101.pdf>)
- StormwaterPA MS4 Website – StormwaterPA Website (<http://www.stormwaterpa.org/ms4-program>) – Resource Page for Cumberland County (<http://stormwaterpa.org/cumberland-county.html>)
- United States Environmental Protection Agency – EPA – Water: Permitting (NPDES) – Pollution Prevention & Control – EPA Website (<http://water.epa.gov/polwaste/npdes/>)

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(<http://www.stormwaterpa.org/assets/media/regulatory/3930-FS-DEP4101.pdf>)

– Pennsylvania Department of Environmental Protections MS4 Program – StormwaterPA Website (<http://www.stormwaterpa.org/ms4-program>)

– United States Environmental Protection Agency – EPA – Water: Permitting (NPDES)
– Pollution Prevention & Control - EPA Website (<http://water.epa.gov/polwaste/npdes/>)

– Cumberland County MS4 – Website (<http://stormwaterpa.org/cumberland-county.html>)

– Lower Allen Township – 2013-2014 Annual Report (<http://www.latwp.org/wp-content/uploads/2013-2014-Annual-Report.pdf>)

– Lower Allen Township – 2013-2014 Annual Municipal Activity Report
(<http://www.latwp.org/wp-content/uploads/2013-2014-Annual-Report-Attachment.pdf>)

- ▶ MS 4 – Storm Water
(http://www.latwp.org/?page_id=2654)
- ▶ Planning Commission
(http://www.latwp.org/?page_id=2635)
- ▶ Planning Reports
(http://www.latwp.org/?page_id=3982)
- ▶ Zoning Hearing Board
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Non-emergency 717-238-9676
Records Office 717-975-7575
Fax 717-761-4835
Monday - Friday - 8:00 am - 4:00 pm

▪ LOWER ALLEN POLICE DEPARTMENT (http://www.latwp.org/?page_id=2524)

f
(<http://www.facebook.com/LowerAllenTownship>)
PA/148273381

Lower Allen Township Facebooksk=timeline)

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(<http://www.latwp.org>)

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- ELECTED GOVERNMENT
- AGENDAS & MINUTES
- ADMINISTRATION ([HTTP://WWW.LATWP.ORG/?PAGE_ID=2358](http://www.latwp.org/?page_id=2358))
- COMMUNITY DEVELOPMENT ([HTTP://WWW.LATWP.ORG/?PAGE_ID=2458](http://www.latwp.org/?page_id=2458))
- PARKS ([HTTP://WWW.LATWP.ORG/?PAGE_ID=2507](http://www.latwp.org/?page_id=2507))
- PUBLIC WORKS ([HTTP://WWW.LATWP.ORG/?PAGE_ID=2534](http://www.latwp.org/?page_id=2534))
- POLICE & PUBLIC SAFETY ([HTTP://WWW.LATWP.ORG/?PAGE_ID=2509](http://www.latwp.org/?page_id=2509))



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Township News



AUDIENCE PARTICIPATION: ANY ITEM ON THE AGENDA

President Black inquired if anyone in the audience wished to address any item appearing on the agenda. There was no response.

PRESENTATION: STORMWATER MANAGEMENT PROGRAM

Mr. Dan Flint stated this presentation was part of the Township's Stormwater Management Program, as part of the National Pollutant Discharge Elimination System (NPDES) Phase 2 Municipal Separate Stormwater System (MS4) Permit. He stated this presentation has been advertised and provided copies of the presentation to the Board and audience. Mr. Flint stated there were six minimum control measures (MCM) and outlined the following changes from 2014-2015:

1. Public Education and Outreach

- Information on Township Facebook page to be added this year; information to be sent to concrete suppliers re: truck washout requirements; concrete washout note to be added as condition of applicable permits and update complaints database with Municipality reporting.

2. Public Involvement/Participation

- Add Annual Report to Township website and develop target mailing lists. Use Illicit Discharge Detection and Elimination Plan (IDDE) program to identify target area.

3. Illicit Discharge Detection and Elimination Plan

- Edit and update the storm sewer system map and obtain and post waste program information, from County Solid Waste Authority

4. Construction Site Stormwater Runoff Control Plan

- Add concrete washout information to information provided to permit holders and contractors and improve reporting of construction site observations by inspection staff.



5. Post-Construction Stormwater Management in New and Re-Development Activities Plan

- Implement BMP tracking system in GIS; contact property owners with current Stormwater Facilities and BMP Maintenance and Monitoring Agreements, requesting annual inspection reports and develop and provide an inspection report form to affected property owners.

6. Pollution Prevention/Good Housekeeping for Municipal Operations Plan

- Include neighboring municipalities and PA Department of Corrections in annual training; Develop database of all Township facilities and expand Operation and Maintenance Plans to include all facilities.

The Board asked questions during the presentation and Mr. Flint provided answers. President Black asked how much work these updates would be for the Township staff. Mr. Flint stated he isn't sure but there were no new funds to cover the additional staff time. Discussion ensued.

PRESIDENT BLACK

Approval of Check Registers

Vice President YOUNG made a motion to approve the Check Register of March 1, 2015 in the amount of \$294,415.01. Commissioner SCHIN seconded the motion. Motion carried 5-0.

Vice President YOUNG made a motion to approve the Manual Check Register of February 2015 in the amount of \$44,993.99. Commissioner TITZEL seconded the motion. Motion carried 5-0.

ORDINANCE 2015-01: PENSION PLANS

Commissioner SCHIN made a motion to enact Ordinance 2015-01, and ordinance of the Board of Commissioners of Lower Allen Township, Cumberland County, Pennsylvania, Restating the Police and Non-uniformed pension plans to incorporate change required by the Pension Protection Act and the Heroes Earnings Assistance and Relief Act.

Roll Call Vote:

Commissioner Titzel – Aye

Commissioner Schin – Aye

President Black – Aye

Vice President Young – Aye

Commissioner Bucher – Aye

2. If you are not a new permittee, did you complete and submit your target audience list to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
3. Date of last review or revision to target audience list(s): 3/31/15

BMP #3: Annually publish at least one educational item on your Stormwater Management Program

***Measurable Goal:** For new permittees, stormwater educational and informational items shall be produced and published in print and/or on the Internet within the first year of permit coverage. In subsequent years (and for renewal permittees), the list of items published and the content in these items shall be reviewed, updated, and maintained annually. Your publications shall contain stormwater educational information that addresses one or more of the 6 MCMS.*

1. For new permittees only, attach your published stormwater educational or informational materials to the first report submitted to DEP.
2. If you are not a new permittee, did you complete and submit your published stormwater educational or informational materials to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
3. Do you have a municipal newsletter? ☒ Yes ☐ No
If Yes, how often was it published during the reporting period and what MS4-related material did it contain?
Newsletter is published quarterly. See attached
4. Do you have a municipal website? ☒ Yes ☐ No (URL:) www.latwp.org
If Yes, what MS4-related material does it contain?
See attached
5. Describe any other method(s) used during the reporting period to provide information on stormwater to the public:
Public meetings, training sessions-attached
6. Date of most recent review and/or update to published stormwater educational materials: 3/31/15
7. Identify specific plans for the publication of stormwater materials for the upcoming year:
Newsletter articles, facebook page, Township website

BMP #4: Distribute stormwater educational materials to the target audiences

***Measurable Goal:** All permittees shall select and utilize at least two distribution methods in each permit year. These are in addition to the newsletter and website provisions of BMP #3.*

Identify the two additional methods of distributing stormwater educational materials during the previous year (e.g., displays, posters, signs, pamphlets, booklets, brochures, radio, local cable TV, newspaper articles, other advertisements, bill stuffers, posters, presentations, conferences, meetings, fact sheets, giveaways, or storm drain stenciling).

Presentations, fact sheet, brochures

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– Penn State College of Agricultural Science – Resource Page (<http://agsci.psu.edu/aec/research-extension/conservation-tools/stormwater-management>)

– Homeowner's Guide to Stormwater – Start your own plan here (<http://www.stormwaterguide.org/>)

– Cumberland County Recycling and Waster Disposal – Main Page (<http://www.ccpa.net/124/Recycling-Waste>)

– Lower Allen Township – 2013-2014 Annual Report (<http://www.latwp.org/wp-content/uploads/2013-2014-Annual-Report.pdf>)

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▶ **Code Of Ordinances** (http://ecode360.com/LO1571?needHash=tru&target=_blank)

▶ **Zoning Map** (<http://www.latwp.org/wp-content/uploads/2014/07/zoningmap.jpg>)

▶ **The "PERMIT" Process** (http://www.latwp.org/?page_id=2638)

▶ **Applications and Forms** (http://www.latwp.org/?page_id=2627)


▶ **Fee Schedule, Supplemental Forms and Maps** (http://www.latwp.org/?page_id=2632)

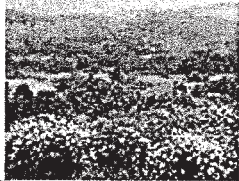
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▶ **Planning Reports** (http://www.latwp.org/?page_id=3982)

▶ **Zoning Hearing Board** (http://www.latwp.org/?page_id=2650)

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Real Estate and Relocation	Parks and Recreation	
Health Care		
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Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

Pennsylvania's Storm Water Management Act (Act 167)

Pennsylvania's Storm Water Management Act (Act 167) was enacted in 1978. This Act was in response to the impacts of accelerated stormwater runoff resulting from land development in the state. It requires counties to prepare and adopt watershed based stormwater management plans. It also requires municipalities to adopt and implement ordinances to regulate development consistent with these plans.

What is accelerated stormwater runoff?

Precipitation that falls on the natural landscape is managed by a system of vegetation, soil, groundwater and surface waters that has formed over time. Natural events shape this system to efficiently handle stormwater through infiltration, evaporation and runoff. When less precipitation is infiltrated into the soil and groundwater or evaporated, either directly to the air or through plants and trees, there is an increase in the volume and rate, or acceleration, of stormwater runoff.

Why is accelerated stormwater runoff a concern?

As changes to the landscape alter the balance of the natural water cycle, accelerated stormwater runoff causes further impacts to the landscape. Higher volumes and rates of stormwater runoff cause increased soil erosion, greater and more frequent flooding, and reshape surface waters through scour and deposition. It also reduces groundwater levels because less precipitation ends up there and this in turn reduces dry weather stream flows that are fed by groundwater. More soil and other water pollutants are picked up and carried further with accelerated stormwater runoff. Depending on the extent of these impacts, serious safety, property and environmental risks can also result.

How does development accelerate stormwater runoff?

Changing the soil cover by placing impervious surfaces (pavement, roofs), removing vegetation (grass, plants, trees) and changing the shape of the land and the way water flows across it can all accelerate stormwater runoff. During construction vegetation is removed, soil is exposed, the landscape is reshaped and impervious surfaces are installed. Following construction, some vegetation is replaced, the impervious surfaces prevent infiltration and may attract new pollution sources and the reshaped landscape alters the flow and destination of stormwater runoff.

How can the impacts of accelerated stormwater runoff be reduced and prevented?

If there is no change from preconstruction to post-construction stormwater runoff volume, rate and quality, accelerated stormwater runoff will be avoided and the impacts prevented. This is accomplished by minimizing changes to the landscape and implementing stormwater management practices that replicate pre-development conditions.

What is a watershed based Stormwater Management Plan?

Watershed based Stormwater Management Plans provide municipalities with a framework, including model

ordinances and management practices, to control stormwater runoff from new development in a watershed. These plans include standards for managing the quantity and quality of stormwater runoff given the characteristics of the watershed including current and future development plans. The goal is to control post-development stormwater runoff rate, volume and quality to replicate pre-development conditions. This is to prevent additional downstream flooding and to protect water resources and their uses. The Department of Environmental Protection (DEP) may require counties to develop joint plans where a watershed includes land in more than one county.

How is the public involved in this process?

During the watershed planning process, counties establish plan advisory committees consisting of county and municipal representatives. Counties may also appoint representatives of interest groups and the public. These committees help to define local concerns and develop stormwater control strategies. The processes for county adoption of the plan includes a public hearing. Municipal adoption of ordinances to implement the plan is also an opportunity for public input.

How are Stormwater Management Plans implemented?

Following adoption of the Stormwater Management Plan by the county and approval by DEP, anyone engaged in construction activities in the watershed is required to implement stormwater management measures consistent with the plan. In addition, each municipality in the watershed covered by the plan must, within six months of DEP's approval, adopt ordinances consistent with the plan. This includes zoning, subdivision and development, building code, erosion and sedimentation and post-construction stormwater management requirements in the municipality. This process is also consistent with municipal obligations under federal National Pollutant Discharge Elimination System (NPDES) permitting requirements for Municipal Separate Storm Sewer Systems (MS4).

What assistance is available to counties and municipalities?

DEP provides technical, administrative and financial assistance to counties in preparing Stormwater Management Plans. DEP pays for 75% of the costs counties incur in preparing plans, and it approves reimbursements to municipalities for 75% of the allowable costs of preparing plans and enacting, administering and implementing stormwater ordinances.

Invoice

Capital Region Council of Governments
230 S. Sporting Hill Road
Mechanicsburg, PA 17050
Phone 717-761-6211 Fax 717-761-7267
capcog@comcast.net

Date	Invoice #
7/1/2014	366

Bill To
Lower Allen Township 2233 Gettysburg Road Camp Hill, PA 17011

Quantity	Description	Rate	Amount
	2014 Stormwater Pollution Ad in Patriot News This was a 1/4 page ad, divided by 35 participants. The ad meets requirement #1 of Minimal Control Measure Payment due 30 days from receipt of the invoice Thank you	60.00	60.00
		Total	\$60.00

The Patriot-News Co.
2020 Technology Pkwy
Suite 300
Mechanicsburg, PA 17050
Inquiries - 717-255-8213

The Patriot-News
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CAPITOL REGION COUNCIL OF GOVERNMENTS
230 S. SPORTING HILL ROAD

MECHANICSBURG

PA 17055

**THE PATRIOT NEWS
THE SUNDAY PATRIOT NEWS**

Proof of Publication

Under Act No. 587, Approved May 16, 1929
Commonwealth of Pennsylvania, County of Dauphin} ss

Marianne S. Miller, being duly sworn according to law, deposes and says:

That she is the Assistant Controller of The Patriot News Co., a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, with its principal office and place of business at 2020 Technology Pkwy, Suite 300, in the Township of Hampden, County of Cumberland, State of Pennsylvania, owner and publisher of The Patriot-News and The Sunday Patriot-News newspapers of general circulation, printed and published at 1900 Patriot Drive, in the City, County and State aforesaid; that The Patriot-News and The Sunday Patriot-News were established March 4th, 1854, and September 18th, 1949, respectively, and all have been continuously published ever since;

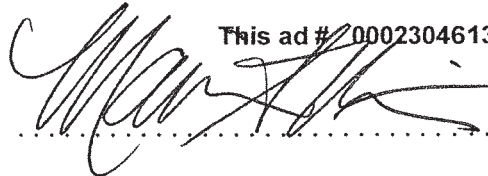
That the printed notice or publication which is securely attached hereto is exactly as printed and published in their regular daily and/or Sunday/ Community Weekly editions which appeared on the date(s) indicated below. That neither he nor said Company is interested in the subject matter of said printed notice or advertising, and that all of the allegations of this statement as to the time, place and character of publication are true; and

That he has personal knowledge of the facts aforesaid and is duly authorized and empowered to verify this statement on behalf of The Patriot-News Co. aforesaid by virtue and pursuant to a resolution unanimously passed and adopted severally by the stockholders and board of directors of the said Company and subsequently duly recorded in the office for the Recording of Deeds in and for said County of Dauphin in Miscellaneous Book "M", Volume 14, Page 317.

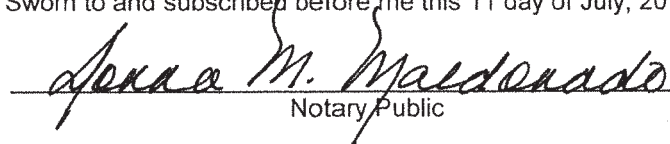
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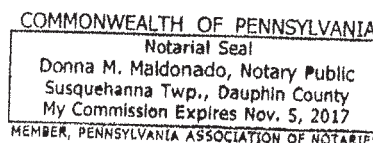
This ad # 0002304613 ran on the dates shown below:

June 26, 2014


.....

Sworn to and subscribed before me this 11 day of July, 2014 A.D.


Notary Public



Will att.

The Patriot-News Co.
2020 Technology Pkwy
Suite 300
Mechanicsburg, PA 17050
Inquiries - 717-255-8213

The Patriot-News
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LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
ATTN: THOMAS G. VERNAU JR., MANAGER

CAMP HILL PA 17011

THE PATRIOT NEWS
THE SUNDAY PATRIOT NEWS

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Commonwealth of Pennsylvania, County of Dauphin} ss

Marianne Miller, being duly sworn according to law, deposes and says:

That she is the Assistant Controller of The Patriot News Co., a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, with its principal office and place of business at 2020 Technology Pkwy, Suite 300, in the Township of Hampden, County of Cumberland, State of Pennsylvania, owner and publisher of The Patriot-News and The Sunday Patriot-News newspapers of general circulation, printed and published at 1900 Patriot Drive, in the City, County and State aforesaid; that The Patriot-News and The Sunday Patriot-News were established March 4th, 1854, and September 18th, 1949, respectively, and all have been continuously published ever since;

That the printed notice or publication which is securely attached hereto is exactly as printed and published in their regular daily and/or Sunday/ Community Weekly editions which appeared on the date(s) indicated below. That neither she nor said Company is interested in the subject matter of said printed notice or advertising, and that all of the allegations of this statement as

NOTICE

The following is a list of regularly scheduled meeting of the various Boards and Commissions of Lower Allen Township for 2015, unless otherwise stated and advertised in accordance with pertinent statute. Meetings are held in Gorgas Hall in the Lower Allen Township Municipal Services Center, 2233 Gettysburg Road, Camp Hill, PA 17011.

LOWER ALLEN TOWNSHIP 2015 MEETING SCHEDULE

Board of Commissioners - 7 pm (2nd and 4th Monday of each month)
January 12 & 26, February 9 & 23, March 9 & 23, April 13 & 27, May 11 & 26*, June 8 & 22, July 13 & 27, August 10 & 24, September 14 & 28, October 12 & 26, November 9 & 23, December 14 & 28.

Development Authority - 6 pm (3rd Monday of the month)
January 19, February 17**, March 16, April 20, May 18, June 15, July 20, August 17, September 21, October 19, November 16, December 21

Planning Commission - 7 pm (3rd Tuesday of the month)
January 20, February 17, March 17, April 21, May 20***, June 16, July 21, August 18, September 15, October 20, November 17, December 15

Recreation & Parks Board - 7 pm (4th Wednesday of each month)
January 28, February 25, March 25, April 22, July 22, August 26, September 23, October 28, November 18**** Park Tours - 6 pm; May 27, June 10 & 24

Zoning Hearing Board - 7 pm (3rd Thursday of the month)
January 15, February 19, March 19, April 16, May 21, June 18, July 16, August 20, September 17, October 15, November 19, December 17.

*Tuesday due to Memorial Day
**Tuesday due to Presidents Day
***Wednesday due to Primary Election

****3rd Wednesday due to Thanksgiving

LOWER ALLEN TOWNSHIP
BOARD OF COMMISSIONERS

edge of the facts aforesaid and is duly authorized and empowered to verify this statement on said by virtue and pursuant to a resolution unanimously passed and adopted severally by the f the said Company and subsequently duly recorded in the office for the Recording of Deeds Miscellaneous Book "M", Volume 14, Page 317.

This ad # 0002321863 ran on the dates shown below:

December 09, 2014

Sworn to and subscribed before me this 12 day of December, 2014 A.D.

Notary Public

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL

Sheryl Marie Leggere, Notary Public
Hampden Twp., Cumberland County
My Commission Expires July 16, 2018

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Everybody Wants Clean Water



Our rivers and streams supply water for:

- ☂ Drinking
- ☂ Fishing
- ☂ Swimming
- ☂ Canoeing and boating
- ☂ Wildlife

Polluted stormwater runoff is the greatest threat to clean water!

Stormwater picks up debris, chemicals, dirt, manure and other pollutants as it flows over surfaces such as driveways, roads and lawns. Without proper stormwater management, this polluted runoff flows untreated into our streams, rivers and wetlands.



But you can help! Residents, municipalities, businesses and developers need to work together to prevent stormwater pollution. To learn how you can make a difference and keep our water clean, go to www.capitalregioncog.org and click on "Keeping Our Water Clean" at the top of page.

In compliance with MS4 permits, this ad is sponsored and paid for by the following members and affiliates of

 **Capital Region Council of Governments (CapCOG)**
230 Sporting Hill Road, Mechanicsburg, PA 717-761-6211

Camp Hill Borough
Carlisle Borough
Carroll Township
Dauphin Borough
Derry Township
Dillsburg Borough
East Hanover Township
East Pennsboro Township
Fairview Township
Goldsboro Borough
Hampden Township

Lemoyne Borough
Londonderry Township
Lower Allen Township
Lower Paxton Township
Lower Swatara Township
Marysville Borough
Mechanicsburg Borough
Middletown Borough
Monaghan Township
New Cumberland Borough
Newberry Township
Paxtang Borough

Penbrook Borough
Penn Township, Perry Co
Royalton Borough
Shiremanstown Borough
Silver Spring Township
South Hanover Township
Steelton Borough
Susquehanna Township
Swatara Township
Upper Allen Township
West Hanover Township
Wormleysburg Borough

The Patriot-News

THURSDAY, JUNE 26, 2014 • A11

Everybody Wants Clean Water



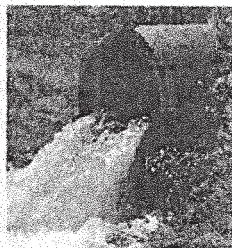
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Camp Hill Borough	Lemoyne Borough	Penbrook Borough
Carlisle Borough	Londonderry Township	Penn Township, Perry Co
Carroll Township	Lower Allen Township	Royalton Borough
Dauphin Borough	Lower Paxton Township	Shiremanstown Borough
Derry Township	Lower Swatara Township	Silver Spring Township
Dillsburg Borough	Marysville Borough	South Hanover Township
East Hanover Township	Mechanicsburg Borough	Steelton Borough
East Pennsboro Township	Middletown Borough	Susquehanna Township
Fairview Township	Monaghan Township	Swatara Township
Goldsboro Borough	New Cumberland Borough	Upper Allen Township
Hampden Township	Newberry Township	West Hanover Township
	Paxtang Borough	Wormleysburg Borough

REGISTRATION FORM

Gardening with Nature

Registration required 1 week prior to workshop date

Name _____

Address _____

City _____

State _____ ZIP _____

County _____

Daytime Phone _____

E-mail _____

Registration Fees:

\$5.00 for each Tuesday evening program.

\$10.00 for Saturday, July 11 program.

Please register me for the following workshops:

Check the box for the sessions you want to attend.

☐ March 10—\$5.00 ☐ July 11—\$10.00

☐ April 14—\$5.00 ☐ August 11—\$5.00

☐ May 12—\$5.00 ☐ September 8—\$5.00

☐ June 9—\$5.00 ☐ October 13—\$5.00

Total enclosed: _____

Please make checks payable to: PSCE Program Fund

Return registration form and payment to:

Penn State Extension, Cumberland County
310 Allen Road, Suite 601
Carlisle, PA 17013

**For credit card registration,
please call 717-240-6500.**

Gardening with Nature

PENNSYLVANIA STATE MASTER GARDENERS IN CUMBERLAND COUNTY
2015 WORKSHOP SERIES AT FREDRICKSEN LIBRARY, CAMP HILL, PA

Join Penn State Master Gardeners for a season-long series of informal workshop sessions about creating a beautiful garden while preserving a healthy environment.

Door prizes at each workshop!

March 10—7:00-8:30 p.m.

\$5.00

Green Your Blues: Creating a Green Plan to Manage Rainwater

Kristen Kyler, Lower Susquehanna Initiative

Too much rainwater flowing off hard surfaces can be bad news for local streams. Evaluate your property using the "Homeowner's Guide to Storm Water," and learn how rain gardens, native plantings, and other "green" landscaping practices can improve stream quality.

The Alliance for the Chesapeake Bay will also be on hand to introduce the "Reduce Your Storm Water" program for homeowners in the Yellow Breaches Creek watershed.

April 14—7:00-8:30 p.m.

\$5.00

Pennsylvania's Plant Communities: How to Use Ecology to Plan Your Garden

Dr. Greg Podniesinski, Pennsylvania Natural Heritage Program

Learn about Pennsylvania's plant communities. The ecological information found in plant community descriptions can help you to determine which native plants are appropriate for different locations around your landscape.

May 12—7:00-8:30 p.m.

\$5.00

Creating a More Bird-Friendly Yard

Paul Zeph, Audubon Pennsylvania

Birds use our communities and yards for a variety of purposes, such as feeding, nesting, roosting, and migratory rest-stops. Different plants are needed to provide for these many needs. Learn how making a bird-friendly yard can blend nicely with your goals of a beautiful landscape, storm water control, and energy conservation.

June 9—7:00-8:30 p.m.

\$5.00

Planting Your Rain Garden

Lois Kriens & Maggie Pepe, Penn State Master Gardeners

The success of your rain garden depends on selecting the right plants for each zone in the garden. Learn how to choose from a palette of plants that will create a beautiful and functioning rain garden while providing habitat for wildlife and pollinators.

August 11—7:00-8:30 p.m.

\$5.00

Not All Garden Thugs are Bugs and Slugs

Carol Caplinger & Jason Harrison, Penn State Master Gardeners

Invasive plants can degrade local habitats and harm native plants, insects, fish, birds, and eventually us. Learn how to identify invasive plants using live samples, methods of control, and suggestions for alternative native plants that provide food and habitat for native wildlife.

September 8—7:00-8:30 p.m.

\$5.00

Backyard Meadows

Tim Hoover, retired Environmental Center Advisor, Milton Hershey School

Warm season grass meadows can enhance the typical suburban landscape, providing habitat for pollinators and birds as well as season-long blooming wildflowers. Learn how to plan, install, and care for a beautiful low- (but not no-) maintenance meadow in your own backyard.

October 13—7:00-8:30 p.m.

\$5.00

Basics of Garden Design

Annette McCoy, Penn State Extension Horticulture Educator

The end of the gardening season is a good time to reflect on good and bad features in your landscape and to plan for improvements or changes in the coming years. Understanding the basic principles of garden design will help you create a home landscape that is both more attractive and more functional.

SPECIAL AFTERNOON PROGRAM

Saturday, July 11—1:30-4:30 p.m.

\$10.00

Going Native? PA Plants for PA Yards & Gardening with Mother Nature

George Weigel, central PA garden writer

Join garden guru George Weigel for an afternoon of fun and informative gardening talks.

Native doesn't mean no care and no problems; you still have to pick the right plants for the right place and be aware of each plant's good and not-so-good traits. Learn about 25 of the best garden-worthy native plants for Pennsylvania landscapes. Then, by taking cues from the world's best gardener, Mother Nature, we can become kinder, gentler, and better gardeners, while saving ourselves unnecessary work in the process.

George will sign copies of his two new books, available for sale at a discounted price of \$20 each.

Pennsylvania Getting Started Garden Guide
Pennsylvania Month-by-Month Gardening



TREE PLANTING FUNDS AVAILABLE • HOME STORM WATER ASSESSMENT

TREE PLANTING GUIDELINES

The Chesapeake Bay Alliance has received a \$3,200 grant for planting trees in the Cedar Run Watershed to assist with storm water management. These funds are being made available to Lower Allen Township residents.

An application to request funding for planting a tree or trees is available on the Lower Allen Township website at www.latwp.org. *Applications will be accepted between April 1st and May 31st.

Since funding is limited, priority will be given to:

- 1) Trees planted along street frontages
- 2) Neighborhoods in which there is a shortage of trees
- 3) Native species
- 4) Clusters of multiple property owners with one planting plan
- 5) Strength of the planting plan

All trees must be planted in accordance with Lower Allen's Landscape Design Standards found in the Subdivision and Land Development Ordinance, Chapter 192-58 which can be found online at <http://ecode360.com/14967602>.

Helpful tips for proper tree planting can be found at:

<http://stormwater.allianceforthebay.org/take-action/structural-bmps/tree-planting/>

Lower Allen staff will contact you if you are selected for funding. Once you have been selected for funding, then purchase, and plant the tree or trees, you will be reimbursed the previously agreed upon amount. Receipts and proof of planting will be required prior to reimbursement.



HOME STORM WATER ASSESSMENT

Home Management Plan

Landscape Maintenance

Grass clippings, leaves, brush and other “bio-degradable” debris that get into our waterways, decrease water quality by producing algae blooms and decreasing the amount of oxygen available for aquatic life.

How do you rate your household?

- Mow grasses at higher height
- Leave grass clippings on the lawn
- Use chemical fertilizers sparingly
- Consider using slow-release nitrogen fertilizers
- Avoid using fertilizers before a rain event
- Not dump yard waste into or near a waterway
- Compost yard waste
- Keep gutters and paved areas cleared

(This will prevent grass clippings, leaves and other yard wastes from being washed into storm drains)

<u>I DO</u>	<u>I WILL</u>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
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pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

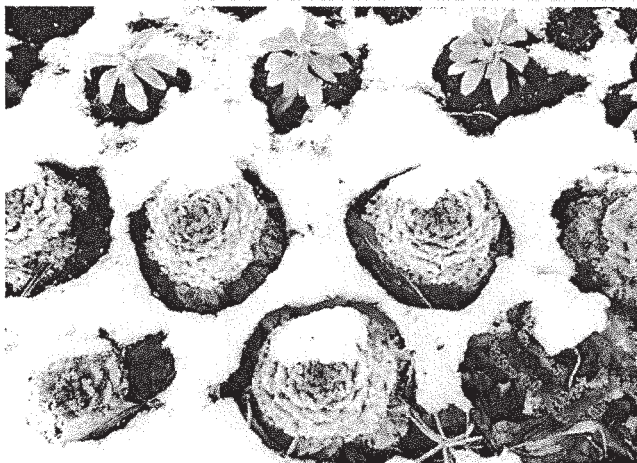
**For more information, visit
Department of Environmental Protection (DEP) website
www.depweb.state.us.**

WINTER READINESS

StormWater Tips for “Fall”ing into Winter

Fall is here! As you button up your yard before Winter comes, are your Fall yard practices protecting our rivers and lakes? They are if you:

- ◆ Keep your leaves and grass clippings out of the streets and storm drains. Yard plants that get into our waterways will rob aquatic life of oxygen as they decompose.
- ◆ Direct your down spouts away from hard surfaces. Rainwater leaving your roof has collected pollutants that can be safely captured by your lawn. If it runs across hard surfaces and into the storm drains instead this run-off goes directly into our waterways without any treatment.
- ◆ Remember that Fall is the best time for your lawn to be de-thatched, aerated, seeded, and fertilized. Use phosphorous-free fertilizers at the correct rate. Maintaining a healthy lawn reduces your need to use chemicals that can leave your lawn and enter our waterways where they harm aquatic life.



Preparing your Garden for Winter

You can postpone the inevitable (winter, that is) for a while by covering your vegetables with old sheets or bedspreads on cold nights. The declining light and chilly daytime temperatures will naturally bring plant growth to a halt. Putting your garden to bed for the winter is mostly a matter of cleaning up and covering up. Clear out the annual flowers and vegetables to prevent the possibility of their harboring disease pathogens and insect eggs over the winter. While it appears as if all activity in the garden has stopped, there's a lot going on under the soil until it freezes. Most likely the organic compost you spread to protect the soil during the summer months has substantially decomposed. It's important to spread new compost now—a thicker winter layer—to protect plants and soil over the winter months. The idea is not so much to keep the soil warm as it is to

keep the temperature even. Once the soil is frozen, compost keeps it frozen.

If some areas have hopelessly gone to weeds, cover them with black plastic and leave it in place over the winter and into the spring to kill sprouting seeds. Protect small trees or shrubs from extreme cold by surrounding it with a cylinder of snow fencing and pack leaf compost inside the cylinder.

WEATHER EMERGENCIES

Weather emergencies may be declared whenever there is a forecast or accumulation of 3 or more inches or when conditions are dangerous. A Snow Emergency will be declared and announced in the media giving a time (not less than 6 hours) in which **ALL VEHICLES** must be moved off all the streets.

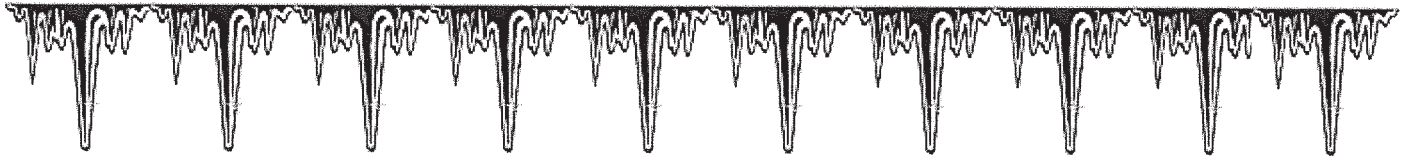
The Public Works department is concerned with keeping major arteries and feeder roads open. As the emergency subsides and crews become available the plows will clear curb to curb and move into residential areas.

Vehicles left on the street during a weather emergency are subject to being ticketed and also towed and stored at the owner's expense. Please adhere to the above regulations so emergency personnel can focus on recovery and returning life to normal in the Township.

Please contact the Police Department at 975-7575 if you have any questions or concerns.



WINTER READINESS



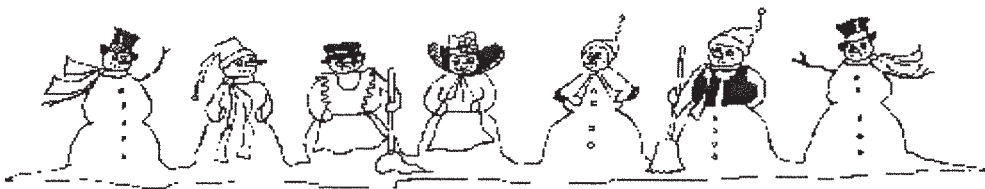
Winter Stormwater Pollution Prevention Tips

As winter approaches and rain turns to snow, it is still important to consider stormwater pollution. Pollutants such as soaps, fertilizers, automotive fluids, and pet waste can collect in the snow pack, accumulating until a thaw suddenly dumps them into the storm water system. Contaminants that end up in the storm drains are carried off, untreated, to streams and larger bodies of water that are used for drinking, swimming, or fishing.

A few helpful habits to reduce the amount of harmful pollutants entering storm drains this winter season:

- Winterizing vehicles. Check that your car is not leaking oil or other fluids. It takes only a small amount of motor oil to pollute thousands of gallons of water. Also, dispose of drained fluids properly. Many service stations will collect used motor oil and recycle it.
- Washing vehicles. On a warm winter day, you may be tempted to break out the hose and bucket to get some of the road grime off of your car. Take a moment to see where that runoff is going. Does it wash down the driveway and into the storm drain? If so, all that salt and dirt will enter a stream.
- De-icing driveways and sidewalks. While it may be habit to stock up on salt for the winter, many people would not consider dumping a bucket of salt on their lawn in the summer. But the results are similar. Salt runs off your sidewalk and onto the surrounding soil. Consider using more environmentally-friendly products which can be found at most home improvement stores.

Practicing healthy pollution prevention habits can keep pollutants from being washed into the storm drains. For more information go to www.stormwaterpa.org.



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The Public Works Department's initial priority is keeping major arteries and feeder roads open. As the emergency subsides and crews become available, the plows will clear curb to curb and move into residential areas.

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Please contact the Police Department at 975-7575 if you have any questions or concerns.



MCM #2 – PUBLIC INVOLVEMENT/PARTICIPATION

BMP #1: Develop, implement and maintain a written Public Involvement and Participation Program (PIPP)

Measurable Goal: A new permittee's PIPP shall be developed and implemented during the first year of coverage under this General Permit. All permittees shall re-evaluate the PIPP each permit year and revise as needed. Your PIPP shall include, but not be limited to:

- a. Opportunities for the public to participate in the decision-making processes associated with the development, implementation, and update of programs and activities related to this General Permit.
 - b. Methods of routine communication to groups such as watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the permittee's regulated small MS4s or their receiving waters.
 - c. Making your periodic reports available to the public on your website, at your municipal offices, or by US Mail upon request.
1. For new permittees only, attach your written PIPP or a summary thereof to the first report submitted to DEP.
 2. If you are not a new permittee, did you complete and submit your written PIPP or summary to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
 3. Date of last review and/or update to the PIPP: 3/31/15
 4. Explain how your PIPP addresses items a, b and c of the Measurable Goal:

See Attached

BMP #2: Prior to adoption of any ordinance (municipal permittees) or SOP (non-municipal permittees) required by the permit, provide adequate public notice and opportunities for public review, input, and feedback.

Measurable Goal: Advertise any proposed MS4 Stormwater Management Ordinance or SOP, provide opportunities for public comment, evaluate any public input and feedback, and document the comments received and the municipality's response.

1. Was an MS4-related ordinance or SOP developed during the reporting period? ☐ Yes ☐ No
2. If Yes, describe how you advertised the draft ordinance and how you provided opportunities for public review, input and feedback:
3. If an ordinance or SOP was enacted/developed or amended during the reporting period, provide the following information:

Ordinance No. / SOP Name	Date of Public Notice	Date of Public Hearing	Date Enacted

MCM #2 – Public Involvement/Participation

4. a. The public is invited to speak at all Board of Commissioners meetings on any topic/concern pertaining to Stormwater Management and Best Management practices.

The Township Facebook page is available for comment by the public

b. Township employee active with the Yellow Breeches Watershed Association.

YBWA has quarterly meetings open to the public, as well as an annual general meeting that are open for discussion. YBWA holds streamside cleanup events throughout the year.

c. MS4 Annual Reports are available for viewing on the township website.

– United States Environmental Protection Agency – EPA – Water: Permitting (NPDES) – Pollution Prevention & Control – EPA Website

– Penn State College of Agricultural Science – Resource Page

– Homeowner's Guide to Stormwater – Start your own plan here

– Cumberland County Recycling and Waster Disposal – Main Page

– Lower Allen Township – 2013-2014 Annual Report

– Lower Allen Township – 2013-2014 Annual Municipal Activity Report

Code Of Ordinances

Zoning Map

The “PERMIT” Process

Applications and Forms

Fee Schedule, Supplemental Forms and Maps

MS 4 – Storm Water

Planning Commission

Planning Reports

Zoning Hearing Board

Yellow Breeches Watershed Association Activities
Affiliated with Lower Allen Township

Reporting Period 2014-2015

COMMUNITY NEWS



Eagle Scout Frank Lavery built this informational kiosk at Creekwood Park.

Sensory Garden at LACP

Girl Scout Troop 20719 installed this sensory garden next to the Fun Fort at Lower Allen Community Park.



Scout Victor Cavataio planted these trees in Highland Park as a buffer along the perimeter adjacent to neighborhood homes.



Yellow Breeches Watershed Association Annual Community Gathering

Taking care of Stormwater: Creek Friendly Ideas for Homeowners

A Presentation by Donna Morelli of the Alliance for the Chesapeake Bay, plus hear from the youth sojourners of the Sierra Club Inner City Outings Program who enjoyed a June expedition down the Yellow Breeches

Complimentary food and beverage, special exhibits, and more!

Thursday, October 9, 2014, 6:30 p.m. – 8:30 p.m.,

The Barn at Lower Allen Community Park

Discover the great work of the watershed association, plans for the coming year, and how you can get involved! Please join us!



**Stormwater
Management**



NEW BUSINESSES IN LOWER ALLEN TOWNSHIP

Heel Your Sole
4922 Louise Drive

Ameriprise
5001 Louise Drive

Walmart
3400 Hartzdale Drive

Torrid
3529 Capital City Mall Drive

Michelle Mull, Licensed Professional Counselor
1517 Cedar Cliff Drive, Suite 101

COMMUNITY ACTIVITIES



YELLOW BREECHES CLEANUP

Everyone enjoys the Yellow Breeches Creek. Now it is time to remove all of the trash from the water. *Bring your own boat and join us for a massive clean sweep of the Yellow Breeches!* Led by experienced paddlers, fed and gloved by generous donations from sponsors, we will paddle/float and scour the creek to remove trash and debris from the water. Please join us for the day. Participants must bring their own kayak or canoe, life jacket, and paddles. For more information and registration forms please visit www.ybwa.org.

SCOUT NEWS

Trevor Krug, son of Earl and Diane Krug of Lower Allen Township, recently completed his Eagle Scout project in the Highland Estates playground on Letchworth Drive. Trevor is a member of Boy Scout Troop 312 in Lewisberry.

Trevor made several improvements to the playground including planting additional landscaping, spreading mulch and Fibar, putting new shingles on the information kiosk, and painting the pavilion, swing set, and benches. We'd like to thank Trevor for his contribution toward improving the Highland Estates playground for the enjoyment of our residents and guests.



Cedar Spring Run Park

Lower Allen Township, Cumberland County, Pennsylvania



Cedar Spring Run Park

Proposed Bridge without Roof

Construction will begin this summer on a new 2.5 acre park next to the Lower Allen Township Municipal Services Building located on Gettysburg Road. The park will be named Cedar Spring Run Park, after the stream that runs through it. The Cedar Spring Run stream is the focal point of the park, serving as a way to connect people to nature in an urban environment.

A pedestrian bridge with a pavilion area will span the stream connecting the Municipal Services Building to the park. A path will meander through the park along the banks of the stream and eventually connect to the existing sidewalk on Gettysburg Road. A riparian buffer has been planted along the stream to improve both the appearance and health of the stream in order to provide improved fish habitat. The park will also have a handicapped accessible fishing area. Other elements will include a graded amphitheater area for outdoor classrooms or a place to lunch and a play area that will include swings, climbing logs, and a tunnel.

The park will cost approximately \$650,000. The Department of Conservation and Natural Resources (DCNR) supported the park with two different grants which will cover 50% of the total cost. DCNR supported the park because "green techniques" such as porous pavement, composting toilets, and bike facilities were employed in the design. The park will be open by Spring of 2015.

Yellow Breeches Family Creek Cleanup

4/9/14

Planning Meeting Agenda

Jmk

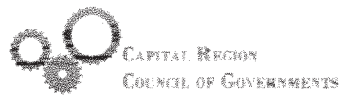
JULY 19, 2014

- I. Route/Sections Same as 2013
- II. Shuttles Volunteer crew & rental vehicle v. out litter
- III. Event/Times Reg. at/after lunch → Supper
- IV. What's included/Provided ~~and~~ Snack @ reg. & on water
Pizza party @ Conclusion
T-shirt
- V. Team/Roles
- VI. Sponsors/Costs PAWC
- VII. Publicity
- VIII. Other Ground crew - shadow for safety & litter pickup
- Shuttle
Scouting stream hazards

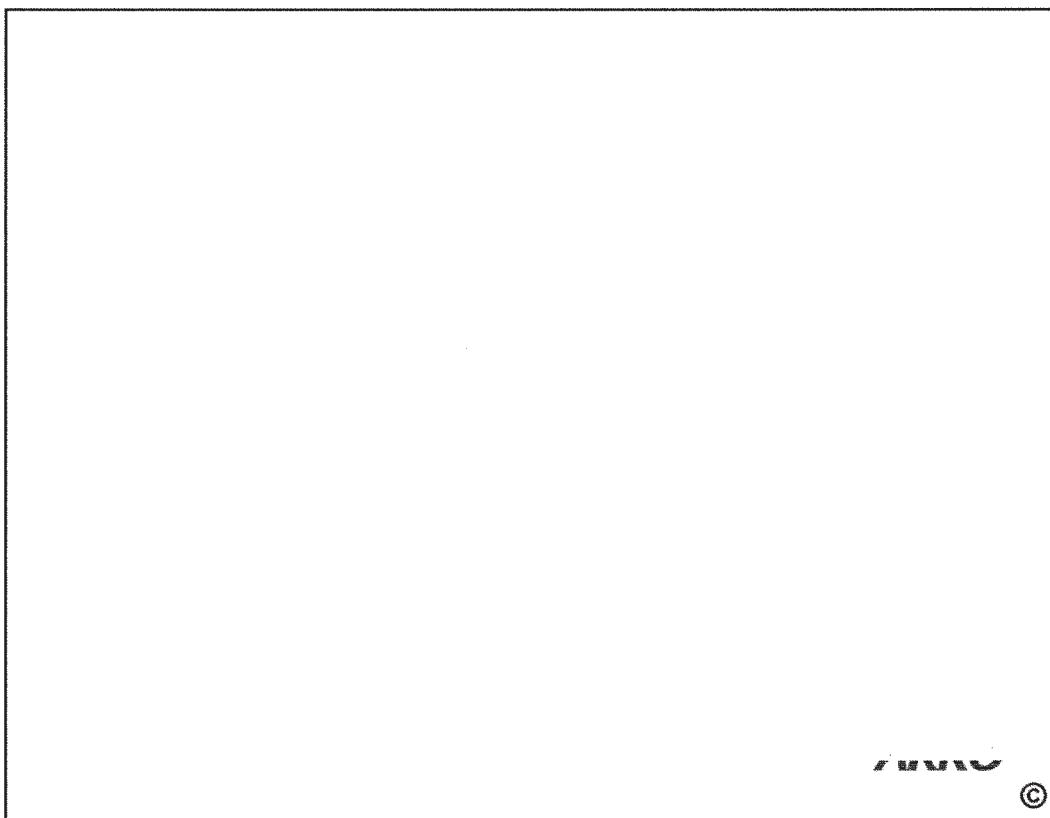
Lower Allen Township Participant in CapCOG Training

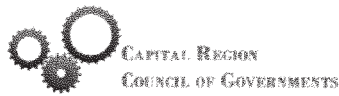
December 3, 2014

Material Handouts



**CapCOG MS4 Training
MS4 Audits – Made Simple 4 U
December 3, 2014**





DEP MS4 Inspection



PA DEP



...so, DEP Southcentral Region (Mike Hickman) called/emailed and said DEP is coming for an MS4 inspection.



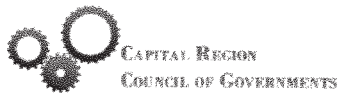
DEP MS4 Inspection



List of items that DEP requests to have on site, separated and stacked on a table, in order to expedite the inspection process (list provided by Mike Hickman, DEP).

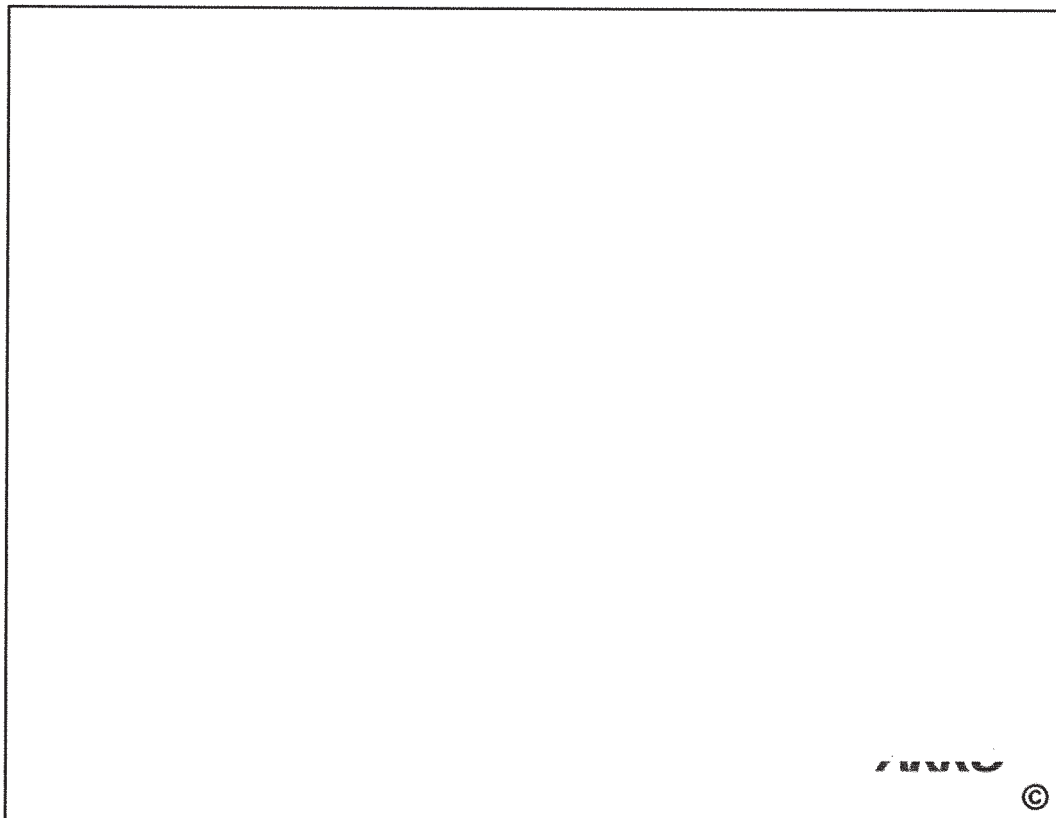
- A copy of all past Annual Reports
- A copy of the original and renewal NOI
- A copy of the original and renewal permits
- The Public Education and Outreach Program (PEOP) (written plan)
- The Public Involvement and Participation Program (PIPP) (written plan)
- The Illicit Discharge Detection and Elimination (IDD&E) Program (written plan)
- The inventory of municipal facilities and activities that are owned or operated by the permittee and have the potential for generating stormwater runoff to the regulated small MS4
- The written Operation & Maintenance Plan for municipal facilities and activities
- The written employee training program
- A map of all outfalls, receiving waters, stormwater collection systems, swales, basins, etc.
- Ordinance prohibiting non-stormwater discharges
- The stormwater management ordinance
- The Inventory all PCSM BMPs installed since March 10, 2003 that discharge directly or indirectly to your regulated small MS4.
- The Memorandum of Understanding between the permittee and the County Conservation District.





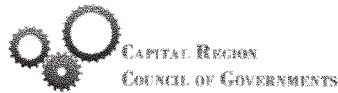
DEP MS4 Inspection

MCM	Item	Yes	No	NA
1	Public Education and Outreach Program (PEOP) (written plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Lists of target audience groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Published stormwater educational materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Two methods of distributing educational materials in past year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Public Involvement and Participation Program (PIPP) (written plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Public notice prior to adoption of any ordinance (municipal) or SOP (non-municipal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	At least one public meeting in past year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Illicit Discharge Detection and Elimination (IDDE) Program (written plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Outfall inspection and illicit discharge tracking system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Complaint tracking system for illicit discharges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Map of all outfalls, receiving waters, stormwater collection system, swales, basins, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Stormwater sampling and monitoring records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Ordinance (municipal) or SOP (non-municipal) prohibiting non-stormwater discharges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not relying on PA's program, a written stormwater associated with construction activities program (written plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not relying on PA's program, an ordinance (municipal) or SOP (non-municipal) requiring implementation of erosion and sediment control BMPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not relying on PA's program, written procedures for managing public inquiries of local construction activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	If not relying on PA's program, a written post-construction stormwater management plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not relying on PA's program, a tracking system containing post-construction BMPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not relying on PA's program, inspection results of post-construction BMPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	An ordinance (municipal) or SOP (non-municipal) to enforce post-construction BMPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	An inspection program ensuring stormwater BMPs are properly operated and maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Inventory of municipal facilities and land uses that contribute to stormwater runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Written Operation & Maintenance Plan for municipal facilities addressing housekeeping Written employee training program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



ARRO





DEP Inspection

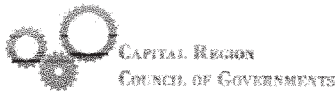


Illicit Discharge & Outfalls

- Looking for maps, field inspection reports.
- Will visit a couple sites that might be questionable.
 - use this opportunity to talk about what DEP wants.
- Records of illicit discharge and follow through.
 - Process for taking a call through follow-up to disposal of clean up.
 - ...not likely that you did not have any illicit discharges.

Municipal Facilities

- Inspect Facilities to see how maintained and operated (oil/fuel, sweepings, salt, stone/sand covered, trash, vehicle washing and drainage)
- Documentation showing inlets, drainage swales and facilities inspected and maintained.
 - Street sweeping and other logs



DEP MS4 Inspection



Inspection at Lemoyne Borough

- First MS4 Inspection done by DEP in Southcentral Region

Who, what, where, when...

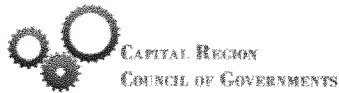
Overall experience

- What we learned
- What we liked
- What we were concerned about

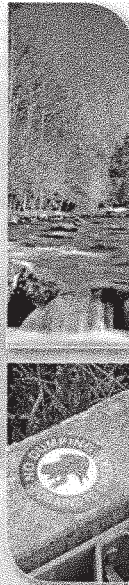
Strategies

- Records
- Fire, Police, Staff and Public Works





EPA Inspection Agenda



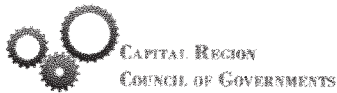
Tentative Agenda for MS4 Program Inspection
Borough: Township, PA

Day	Time	Topic	
		Topic 1	Topic 2
Thursday, Date, 2014	8:00 - 8:30 am	Operating Discharge (Office)	Construction Site Stormwater Runoff Control (Office)
	8:30 - 10:00 am	Pollution Prevention Good Housekeeping for Municipal Operations (Office)	Construction Site (Field)
	10:00 am - 12:00 pm	Municipal Facilities (Field)	Construction Site (Field)
	12:00 - 1:00 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management in New and Re-developing (Office)
	1:00 - 4:00 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	4:00 - 4:30 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
Friday, Date, 2014	8:00 - 9:30 am	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	9:30 am - 12:00 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	12:00 - 1:00 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	1:00 - 3:00 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	3:00 - 3:30 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)
	3:30 - 4:30 pm	Storm and Logistics Planning for Today	Post-Construction Stormwater Management (Field)

Example

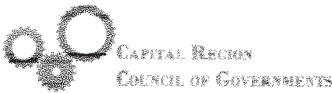
* Internal Discussions - Discussions among members of the EPA inspection team. Goal is to compare notes and prepare information to be discussed with the borough during Closing Discussion. Borough participants to see as requested.
*The MS4 is encouraged to invite representatives from all applicable organizations, departments, divisions, etc.





EPA Records Request

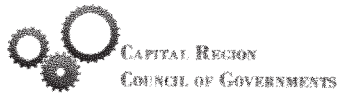
Category	Document Request	Name of Document(s) Provided	Description/ Comments/ Notes
The EPA Inspection Team would like to request, if possible, that electronic copy of the items below be provided prior to the inspection.			
Program Management	1. Permit Notice of Intent (NOI)		
	2. MS4 Annual Reports (two most recent reporting years)		
	3. Stormwater Management Program (SWMP) document		
	4. Stormwater Management Ordinance document		
	5. Organizational chart clearly indicating positions or divisions responsible for your MS4 program		
Illicit Discharge Detection and Elimination	6. Inventory map of storm drain outfalls, date of last inspection, and prioritized schedules for inspections		
	7. List of high priority areas and locations within the last year where illicit discharges were observed		
Construction Site Stormwater Runoff Control	8. Inventory map of all public and private current active construction sites including location (differentiating public and private)		
Post-Construction Stormwater Management	9. Inventory map of all public and private stormwater BMPs that discharge into the MS4		
Pollution Prevention/ Good Housekeeping or Municipal Facilities	10. Inventory map of all municipal owned operated facilities discharging to the MS4 or surface water (e.g., municipal waste water treatment facilities, portable drinking water facilities, municipal fleet operations, maintenance garages, parks and recreation, street and infrastructure, grounds maintenance)		
The EPA Inspection Team would like to request that the items below be made available (electronically available is sufficient) for review and/or discussion during the inspection. The EPA Inspection Team will provide a revised list of requested documents after the inspection.			
Program Management	11. Any formal agreements with other entities or local governments for implementation of the MS4 program (e.g., memoranda of understanding)		
	12. Demonstration of MS4 system mapping tools, focusing on layers mapping that informs the MS4 program activities (storm drain systems, structural controls, outfalls, receiving waters, etc.)		
	13. Ordinances or regulatory mechanisms that prohibit or eliminate non-stormwater illegal discharges, and dumping into the MS4 system		
	14. Written procedures to detect and address non-stormwater discharges (i.e., written protocol for DDE program)		
	15. Tracking mechanism inventory of illicit discharges identified and actions taken to control or eliminate the discharges, including those identified by citizens, MS4 staff, and other municipal staff (e.g., Fire Department)		



Inspection – what they wanted to see

Illicit Discharge & Outfalls

- Looking for maps, field inspection reports and priority areas.
- Will visit industrial and residential areas to check, trash, sediment, stains/deposits at the outfall, sediment build-up in inlets, and pollutant sources by inlets.
- Public Works, Office Staff, Police Department and Fire Department understanding of Illicit Discharges and their responsibilities (written)
- Process for taking a call through follow-up to disposal of clean up.
- Records of illicit discharge and follow through.
 - ...not likely that you did not have any illicit discharges.



EPA MS4 Inspection



► Inspection

- Who, what, where, when...

► Overall experiences

- What we learned
- What we liked
- What we were concerned about

► Strategies

- Get your entire team together for MS4 refresher
- Try to keep EPA from splitting your team up
- Make sure Fire Chief & Police Chief are there
- Make sure County Conservation District Representative is there for MCM 4 & 5 discussion.

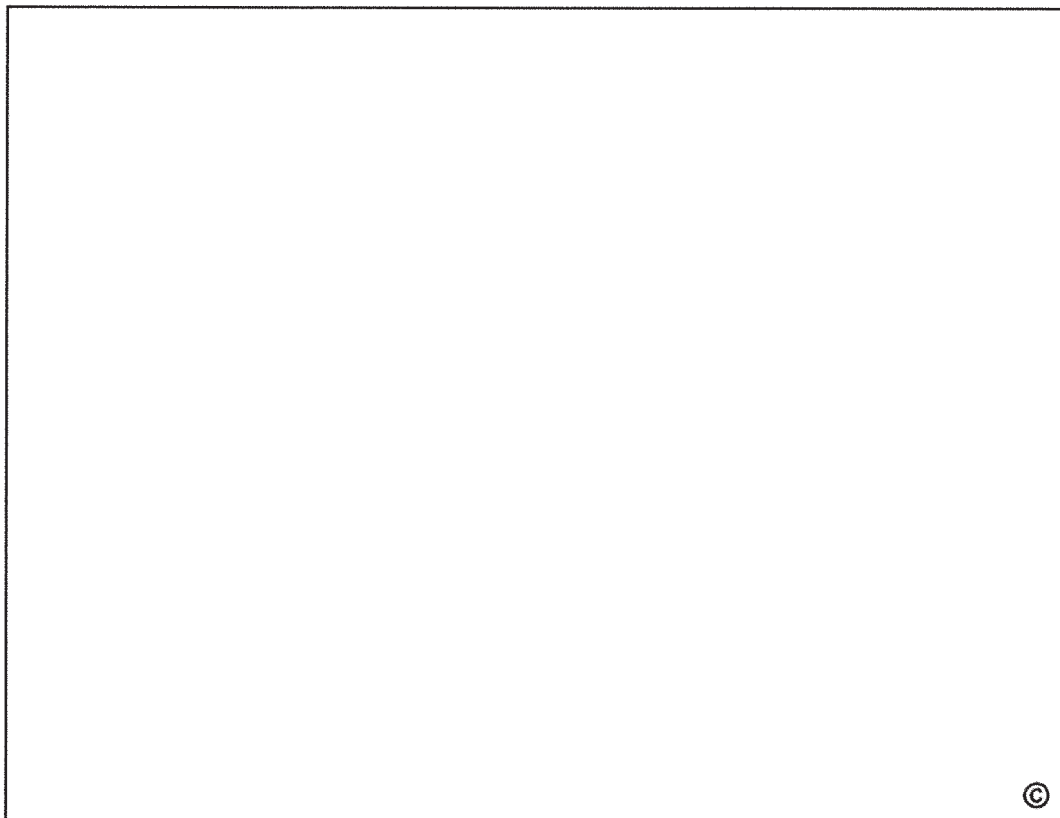




**Thank you for your time and
commitment to making our
communities a better place to live.**



ARRG



BMP #3: Regularly solicit public involvement and participation from the target audience groups. This should include an effort to solicit public reporting of suspected illicit discharges. Assist the public in their efforts to help implement your SWMP. Conduct public meetings to discuss the on-going implementation of your SWMP.

Measurable Goals: Conduct at least one public meeting per year to solicit public involvement and participation from target audience groups. The public should be given reasonable notice through the usual outlets a reasonable period in advance of each meeting. During the meetings, you should present a summary of your progress, activities, and accomplishments with implementation of your SWMP, and you should provide opportunities for the public to provide feedback and input. Your presentation can be made at specific MS4 meetings or during any other public meeting. Under this MCM, you should document and report instances of cooperation and participation in your activities; presentations you made to local watershed organizations and conservation organizations; and similar instances of participation or coordination with organizations in your community. You also should document and report activities in which members of the public assisted or participated in your meetings and in the implementation of your SWMP, including education activities or organized implementation efforts such as cleanups, monitoring, storm drain stenciling, or others.

1. Date of the public meeting(s): 3/9/15
2. How were meeting(s) advertised to the public? Twp website, newspaper, message board
in front of Township Building
3. Indicate where the meeting(s) were held and the number of attendees:
2233 Gettysburg Rd, with 17 attendees
4. What types of MS4-related activities did you solicit public involvement and participation for?
Concerns related to construction activities, illicit discharges
5. What MS4-related activities did the public participate in?
Streamside cleanup

MCM #3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E)

BMP #1: You shall develop and implement a written program for the detection, elimination, and prevention of illicit discharges into your regulated MS4s. Your program shall include dry weather field screening of outfalls for non-stormwater flows, and sampling of dry weather discharges for selected chemical and biological parameters. Test results shall be used as indicators of possible discharge sources.

Measurable Goal: For new permittees, the IDD&E program shall be developed during the first year of coverage under this General Permit and shall be implemented and evaluated each year thereafter. For renewal permittees, the existing IDD&E program shall continue to be implemented and evaluated annually. Records shall be kept of all outfall inspections, flows observed, results of field screening and testing, and other follow-up investigation and corrective action work performed under this program.

1. For new permittees only, attach your written IDD&E program to the first report.
2. If you are not a new permittee, did you complete and submit your written IDD&E program to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
3. Date of last review and/or update to IDD&E program: 3/9/15

BMP #2: Develop and maintain a map of your regulated small MS4. The map must also show the location of all outfalls and the locations and names of all surface waters of the Commonwealth (e.g., creek, stream, pond, lake, basin, swale, channel) that receive discharges from those outfalls.

Measurable Goals: For new permittees, develop the map(s) of your regulated small municipal separate storm sewer systems and the information on all outfalls from your regulated small MS4 by the end of the fourth (4th) year of permit coverage. For renewal permittees, the existing map(s) of your regulated small MS4 shall be updated and maintained as necessary during each year of coverage under the permit.

1. Have you completed a map(s) of all outfalls and receiving waters of your storm sewer system? ☒ Yes ☐ No

LOWER ALLEN TOWNSHIP, PA – A Township of the First Class

(http://www.latwp.org)

MS 4 - Storm Water

Stormwater Program Meeting

Lower Allen Township is issued a permit from the PaDEP to operate the Municipal Separate Storm Sewer System (MS4). As part of that permit, a presentation on the Township's Stormwater Program is made annually at an advertised public meeting. That presentation for 2015 will be held in conjunction with the regular Board of Commissioners meeting on Monday, March 9, 2015, beginning at 7:00 PM at the Township Office, 2233 Gettysburg Road, Camp Hill, Pa. The public is invited to attend an

The federal Clean Water Act (CWA) prohibits the discharge of pollutants into waterways without the appropriate permits. Pennsylvania's Stormwater Management Act (better known as Act 167), MS4 Program, Chapter 102 (Erosion and Sediment Control Requirements), and NPDES Permit Program for Stormwater Discharges Associated with Construction Activities are amongst the Commonwealth's methods for meeting the runoff-related requirements of the Clean Water Act.

For all practical purposes, though, implementation of stormwater management efforts in Pennsylvania occurs at the community level because individual municipalities are ultimately responsible for adopting zoning ordinances, subdivision and land development regulations, and other programs that keep their locality's runoff under control.

Contrary to the common perception, properly planning for stormwater can accomplish this goal while speeding the permitting process, saving on construction costs, and resulting in profitable projects that enhance a community in multiple ways.

- Pennsylvania's Storm Water Management Act (Act 167) – Pennsylvania Department of Environmental Protection Fact Sheet on storm water runoff (<http://www.stormwaterpa.org/assets/media/regulatory/3930-FS-DEP4101.pdf>)
- StormwaterPA MS4 Website – StormwaterPA Website (<http://www.stormwaterpa.org/ms4-program>) – Resource Page for Cumberland County (<http://stormwaterpa.org/cumberland-county.html>)
- United States Environmental Protection Agency – EPA – Water: Permitting (NPDES) – Pollution Prevention & Control – EPA Website (<http://water.epa.gov/polwaste/npdes/>)
- Penn State College of Agricultural Science – Resource Page (<http://agsci.psu.edu/aec/research-extension/conservation-tools/stormwater-management>)
- Homeowner's Guide to Stormwater – Start your own plan here (<http://www.stormwaterguide.org/>)
- Cumberland County Recycling and Waster Disposal – Main Page (<http://www.ccpa.net/124/Recycling-Waste>)
- Lower Allen Township – 2013-2014 Annual Report (<http://www.latwp.org/wp-content/uploads/2013-2014-Annual-Report.pdf>)
- Lower Allen Township – 2013-2014 Annual Municipal Activity Report (<http://www.latwp.org/wp-content/uploads/2013-2014-Annual-Report-Attachment.pdf>)

2. For new permittees only, attach the completed map to the 4th year Annual Report.

3. Date of last update or revision to map(s): 3/9/15

4. Total number of discharge points in your storm sewer system that:

Discharge directly to surface waters (outfalls): 90

Discharge to storm sewers owned by others: 0

5. Total number of outfalls that are mapped at this time: 90

BMP #3: In conjunction with the map(s) created under BMP #2 (either on the same map or on a different map), new permittees shall show, and renewal permittees shall update, the entire storm sewer collection system, including roads, inlets, piping, swales, catch basins, channels, basins, and any other features of the permittee's storm sewer system including municipal boundaries and/or watershed boundaries.

Measurable Goals: For new permittees, develop the map(s) by the end of the fourth (4th) year of coverage under the permit and update and maintain the map(s) as necessary each year of permit coverage thereafter. For renewal permittees, update and maintain the map(s) as necessary during each year of permit coverage.

1. Have you completed a map(s) that includes roads, inlets, piping, swales, catch basins, channels, basins, municipal boundaries and watershed boundaries? ☒ Yes ☐ No

2. If Yes, is the map(s) on the same map(s) as for outfalls and receiving waters? ☒ Yes ☐ No

3. For new permittees only, attach the completed map to the 4th year Annual Report.

4. If you are not a new permittee, did you complete and submit your map to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:

5. Date of last update or revision to map: 3/9/15

BMP #4: Following the IDD&E program created pursuant to BMP #1, the permittee shall conduct outfall field screening, identify the source of any illicit discharges, and remove or correct any illicit discharges using procedures developed under BMP #1.

For all permittees, outfall inspections need to be prioritized according to the perceived chance of illicit discharges within the outfall's contributing drainage area. Observations of each outfall shall be recorded each time an outfall is screened, regardless of the presence of dry weather flow. Proper quality assurance and quality control procedures shall be followed when collecting, transporting or analyzing water samples. All outfall inspection information shall be recorded on the Outfall Reconnaissance Inventory/Sample Collection field sheet excerpted from the Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (CWP, October 2004). Adequate written documentation shall be maintained to justify a determination that an outfall flow is not illicit. If an outfall flow is illicit, the actions taken to identify and eliminate the illicit flow also shall be documented.

The results of outfall inspections and actions taken to remove or correct illicit discharges shall be summarized in periodic reports.

1. For new permittees only, were at least 40% of all outfalls screened during dry weather? ☐ Yes ☐ No

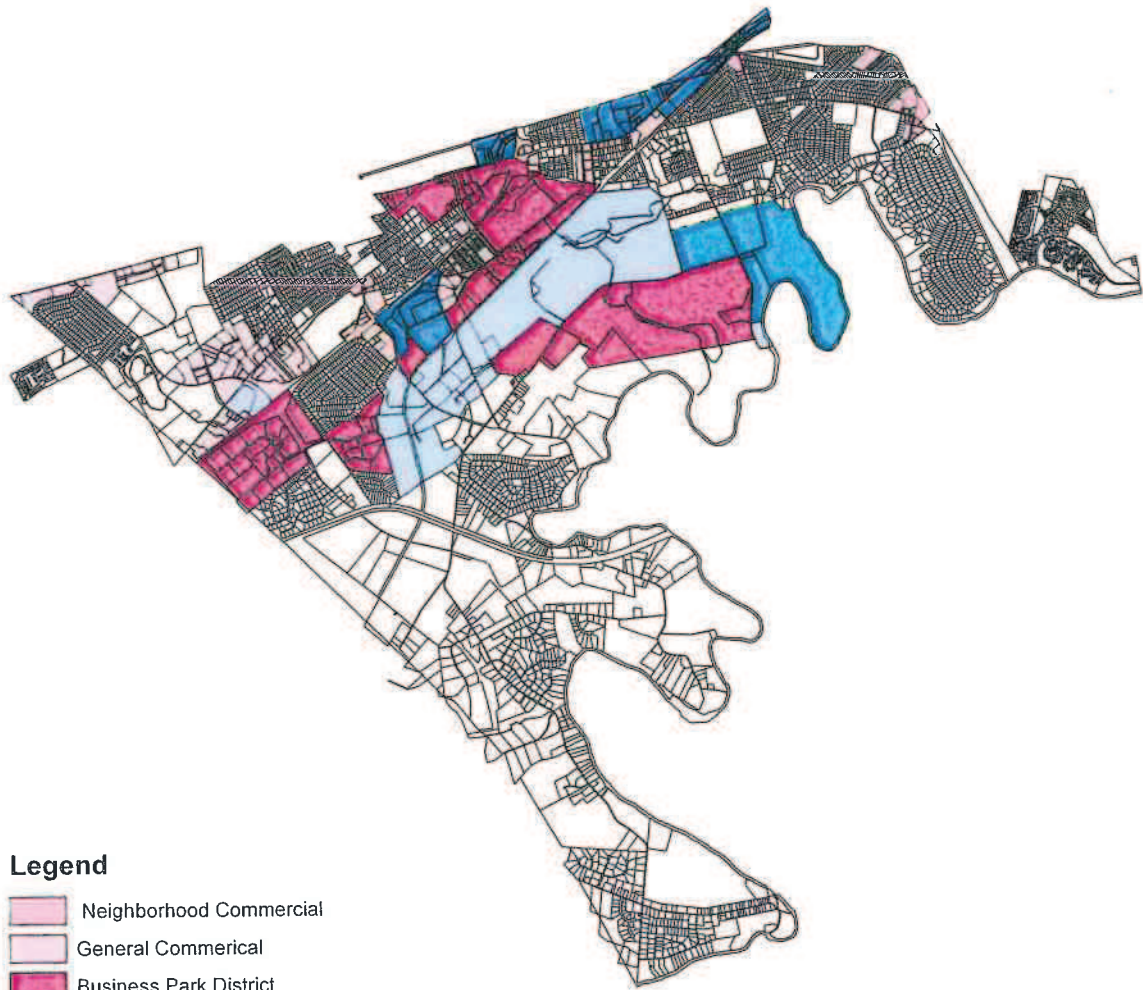
If Yes for #1, indicate the number screened and the percent of all outfalls it represents. If No for #1, indicate reason(s) why this was not completed:

Are you on pace to screen all outfalls twice during the permit term? ☐ Yes ☐ No

2. For renewal permittees, indicate the percent of outfalls screened during the reporting period: 23 %

Are you on pace to screen all outfalls once during the permit term? ☒ Yes ☐ No


LOWER ALLEN TOWNSHIP MS4 2014-2015
AREAS OF POTENTIAL ILLICIT DISCHARGE



Legend

-  Neighborhood Commercial
-  General Commercial
-  Business Park District
-  Regional Commercial
-  General Industrial
-  Mineral Recovery
-  Industrial/Commercial
-  (MUN) Mixed Use Neighborhood
-  Single Family Established Residential
-  Single Family Rural Residential
-  Multi-Family Residential

2014 – 2015 MS4 FIELD INSPECTION
SAMPLE PHOTOS



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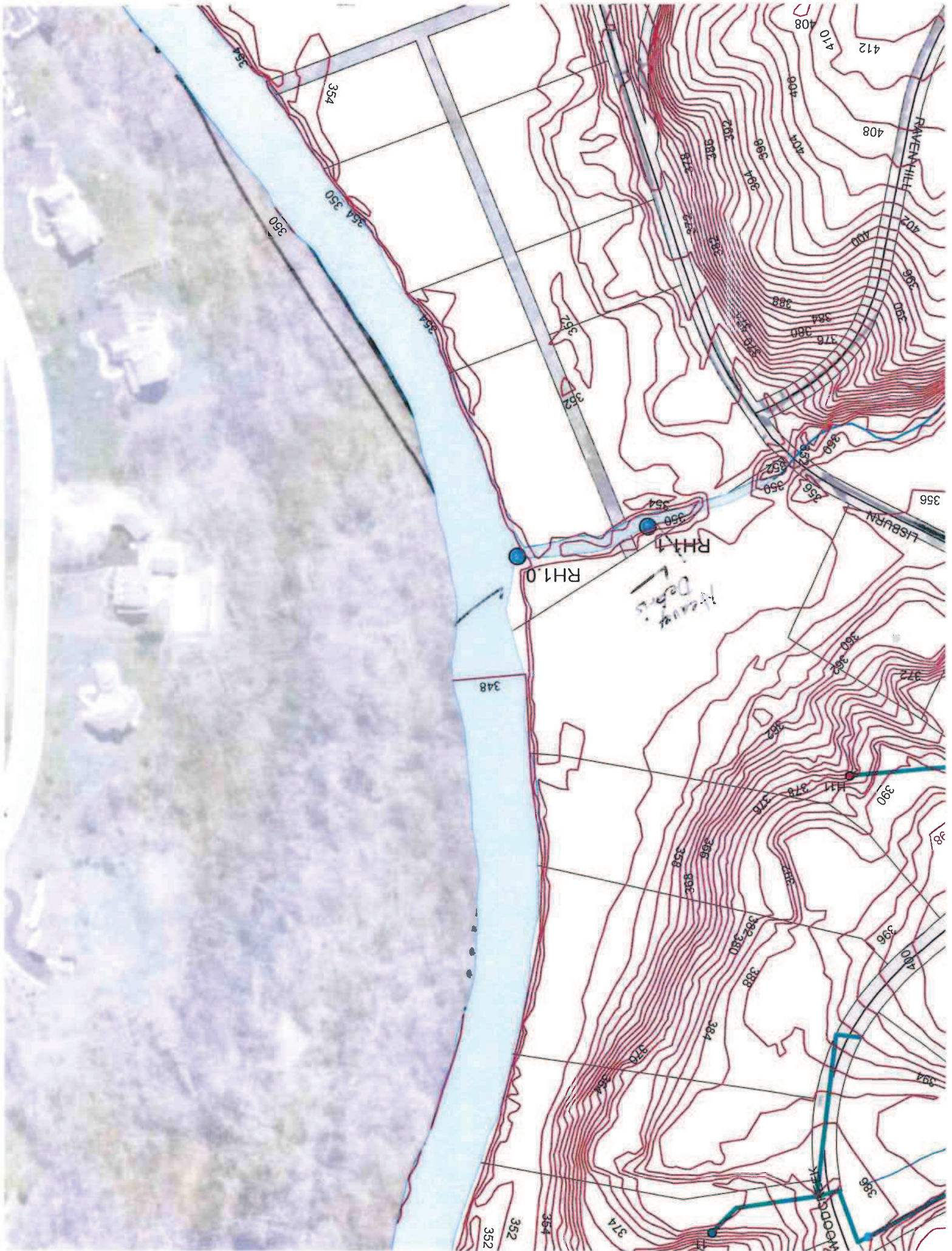
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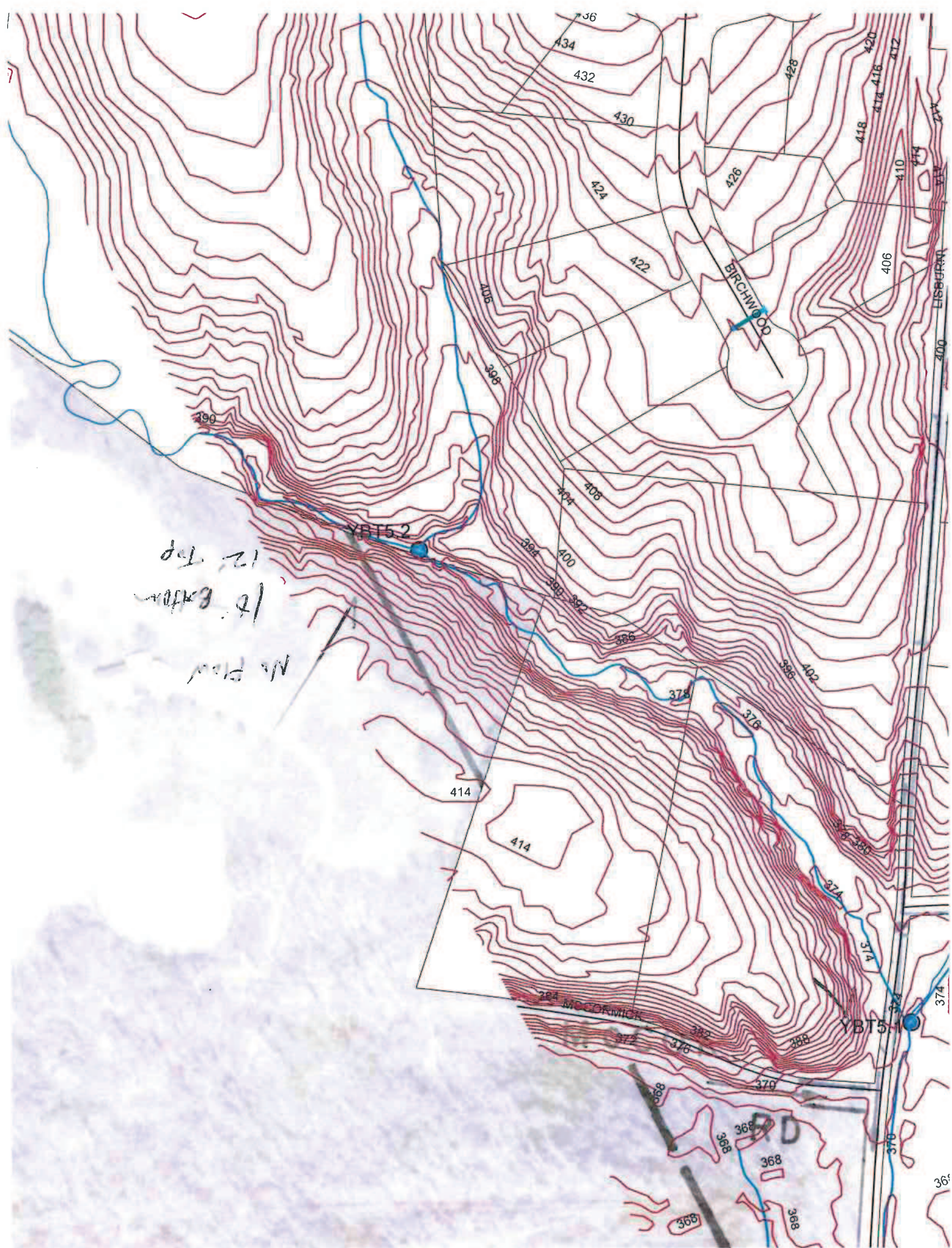
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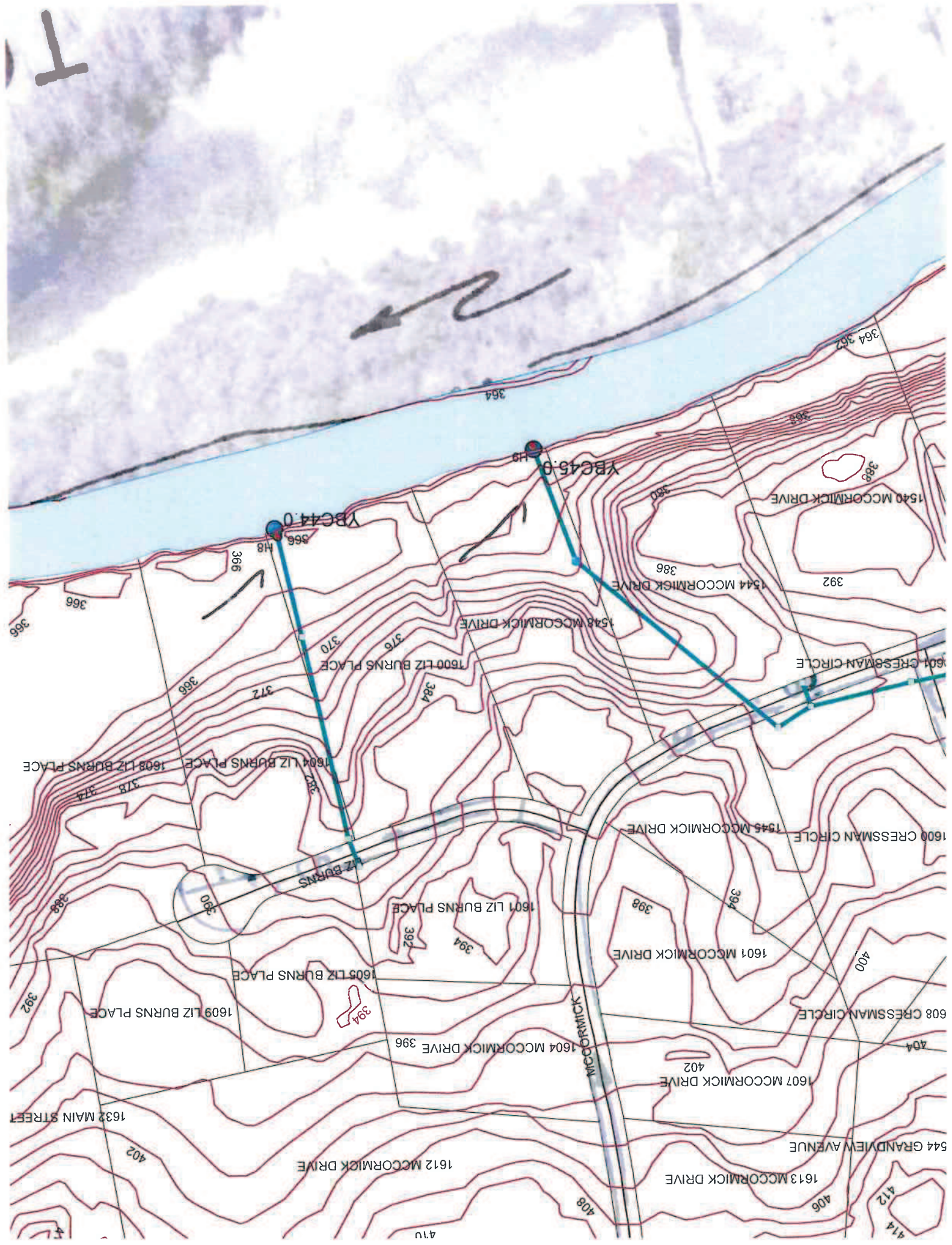


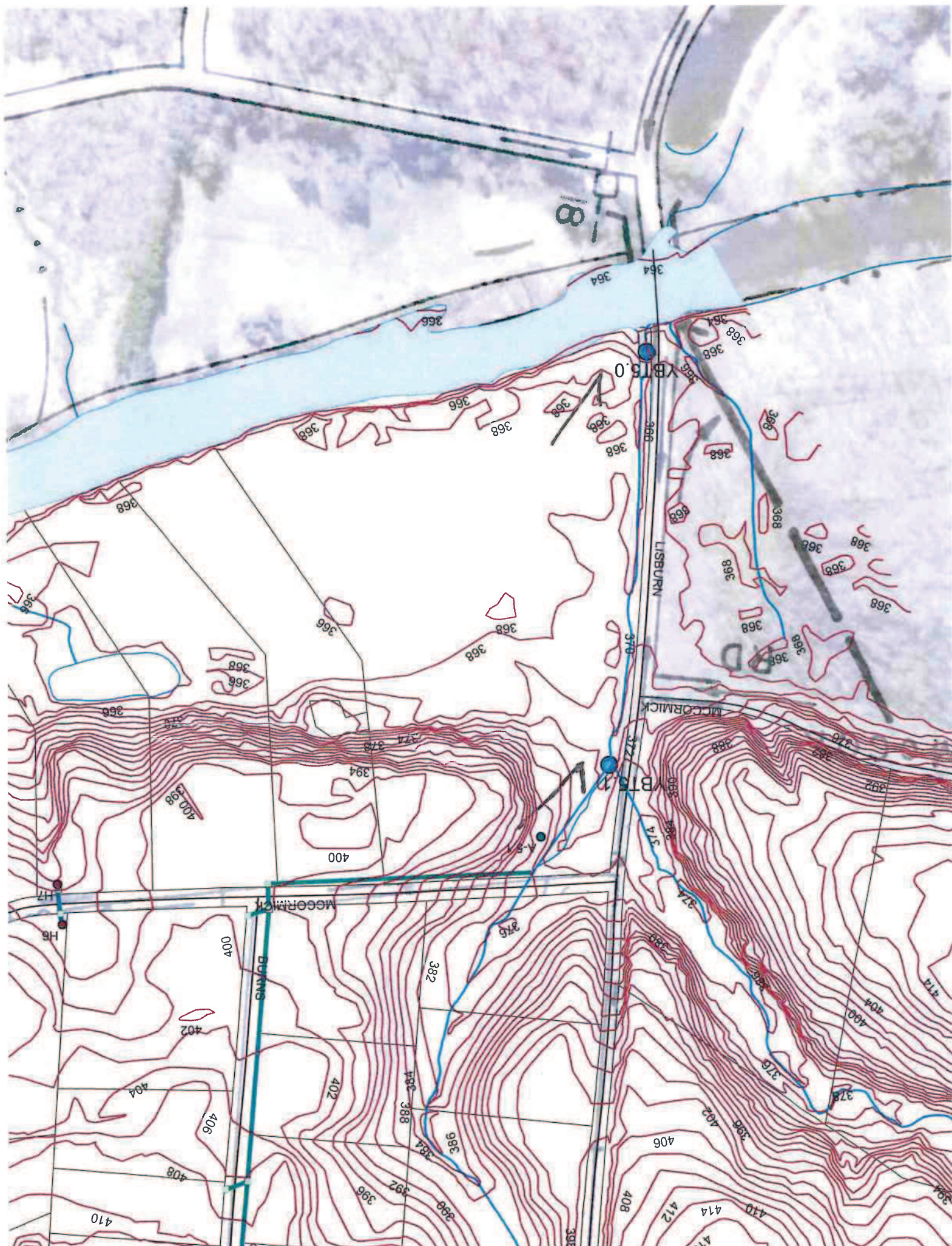




















Guy @ WSC Canyon

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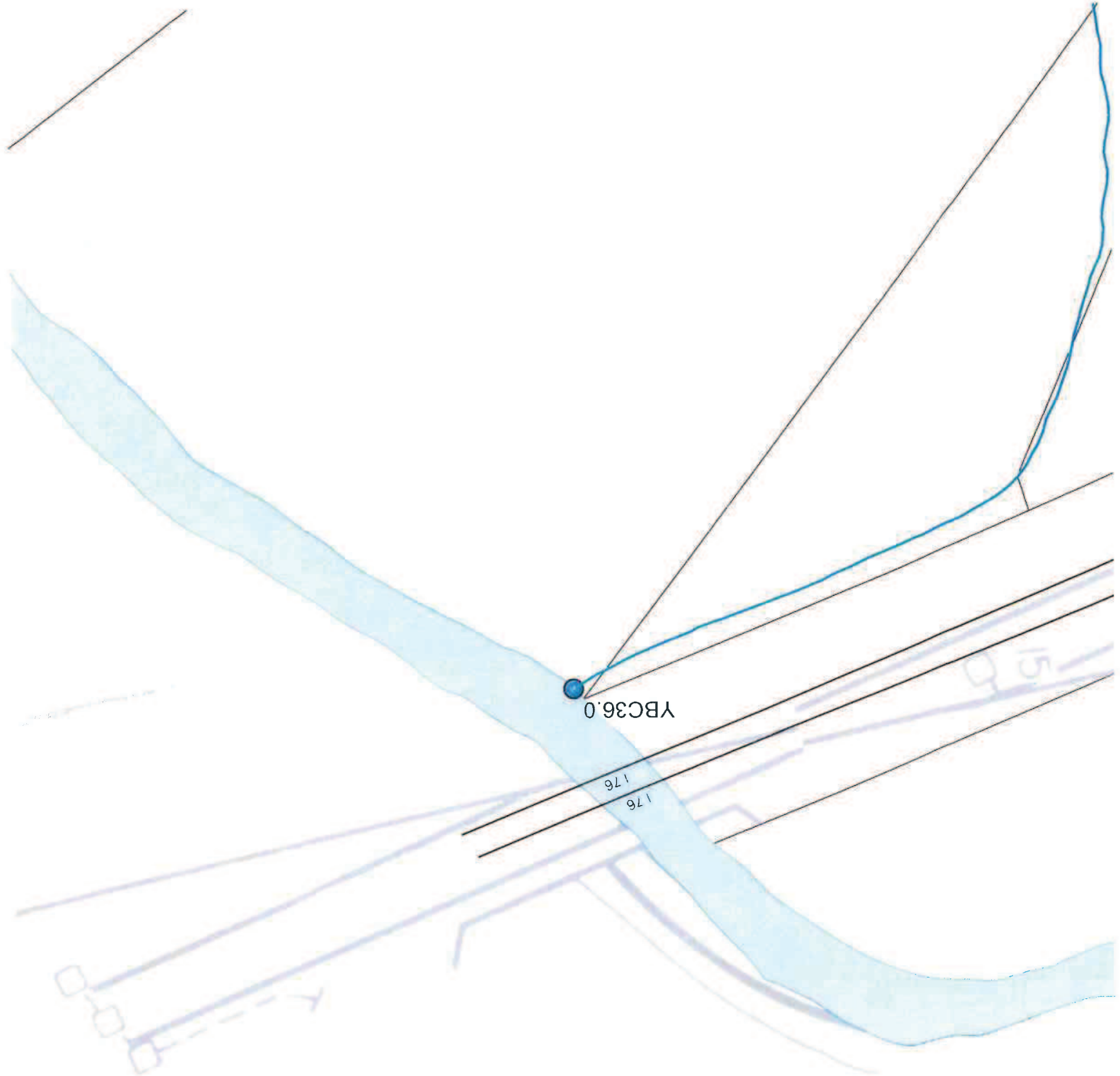
A4.283

A4.284

A4.285

A4.286

A4.287







3. For all permittees, indicate the percent of outfalls screened that revealed dry weather flows: 100 %
4. Did any dry weather flows reveal color, turbidity, sheen, odor, floating or submerged solids? ☐ Yes ☒ No
5. If Yes for #4, attach all sample results to this report with a map identifying the sample location. Explain the corrective action(s) taken in the attachment.

6. Do you use the "Outfall Reconnaissance Inventory / Sample Collection Field Sheet" provided in the permit?
☒ Yes ☐ No
If No, attach a copy of your monitoring form.

BMP #5: Enact a stormwater management ordinance (municipal entities) or develop an SOP (non-municipal entities) to implement and enforce a stormwater management program that includes prohibition of non-stormwater discharges to the regulated small MS4.

Measurable Goal: Within the first year of coverage under the permit, new permittees shall enact and implement an ordinance from an Act 167 Plan approved by the Department in 2005 or later, the MS4 Stormwater Management Ordinance; or an ordinance that satisfies all applicable requirements in a completed and signed MS4 Stormwater Management Ordinance Checklist. (For non-municipal permittees, new permittees shall develop and implement a Standard Operating Procedure (SOP) within the first year of coverage).

Renewal permittees must continue to maintain, update, implement, and enforce a Stormwater Management Ordinance that satisfies all applicable requirements. (For non-municipal permittees, the SOP satisfies this requirement. If no existing SOP exists, it should be developed during the first year of coverage).

Measurable Goal: New permittees shall submit a letter signed by a municipal official, municipal engineer, or the municipal solicitor as an attachment to their first year report certifying the enactment of an ordinance that meets all applicable requirements of this permit. Renewal permittees shall update their existing ordinance, if necessary, and submit documentation of completion to the Department. (For non-municipal permittees, submit the SOP to the first report).

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that prohibits non-stormwater discharges? ☒ Yes ☐ No
If Yes, indicate the date of the ordinance or SOP: Adopted 3/8/04, amended 2/14/11
2. For new permittees only, attach an ordinance (or SOP) and letter from an official, engineer or solicitor that prohibits non-stormwater discharges to the first report submitted to DEP.
3. If you are not a new permittee, did you complete and submit your ordinance (or SOP) and letter from an official, engineer or solicitor that prohibits non-stormwater discharges to DEP? ☐ Yes ☒ No
4. Were there any violations of the ordinance during the reporting period? ☒ Yes ☐ No
If Yes, describe what enforcement actions were taken for each violation:

Notices of Violation were issued, attached

BMP #6: Provide educational outreach to public employees, business owners and employees, property owners, the general public and elected officials (i.e., target audiences) about the program to detect and eliminate illicit discharges.

Measurable Goals: During each year of permit coverage, appropriate educational information concerning illicit discharges shall be distributed to the target audiences using methods outlined under MCM #1. If not already established, set up and promote a stormwater pollution reporting mechanism (e.g., a complaint line with message recording) by the end of the first year of permit coverage for the public to use to notify you of illicit discharges, illegal dumping or outfall pollution. Respond to all complaints in a timely and appropriate manner. Document all responses, include the action taken, the time required to take the action, whether the complaint was resolved successfully.

1. Was IDD&E-related information distributed to public employees, businesses, and the general public during the reporting period? ☒ Yes ☐ No
If Yes, what was distributed? Concrete washout guidelines, attached

2014-2015 MS4 FIRST INSPECTION

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT5.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0.25</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>8'</u> Top Width: <u>12'</u> Bottom Width: <u>10'</u>	
<input checked="" type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Skip to Section 5		
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION		RELATIVE SEVERITY INDEX (1-3)		
		<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Red <input type="checkbox"/> Orange <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint <input type="checkbox"/> 1 - Faint colors in sample bottle <input type="checkbox"/> 1 - Slight cloudiness <input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Easily detected <input type="checkbox"/> 2 - Clearly visible in sample bottle <input type="checkbox"/> 2 - Cloudy <input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Noticeable from a distance <input type="checkbox"/> 3 - Clearly visible in outfall flow <input type="checkbox"/> 3 - Opaque <input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Odor	<input type="checkbox"/>					
Color	<input type="checkbox"/>					
Turbidity	<input type="checkbox"/>		See severity			
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:			

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION		COMMENTS
		<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Outfall Damage	<input type="checkbox"/>			
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 5.1</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input checked="" type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream (applicable when collecting samples)					
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
		<input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
		<input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:			
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
		<input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:			

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam	

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 46.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>4'</u> Top Width: <u>10'</u> Bottom Width: <u>12"</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter
	Time to fill		Sec
<input type="checkbox"/> Flow #2	Flow depth		In
	Flow width	____' ____"	Ft, In
	Measured length	____' ____"	Ft, In
	Time of travel		S
	Temperature		°F
	pH		pH Units
	Ammonia		mg/L

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☒ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 45.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream (applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 44.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream (applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBM 1,1</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input checked="" type="checkbox"/> CMP <input type="checkbox"/> HDPE <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
	PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
	pH		pH Units	Test strip/Probe
	Ammonia		mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OEM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YEM 1.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: <u>18"</u> Top Width: <u>30'</u> Bottom Width: <u>25'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam	

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 5.2</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>0-12"</u> Top Width: <u>102"</u> Bottom Width: <u>10"</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
 Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>Y62 43.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>18"</u> Top Width: <u>12'</u> Bottom Width: <u>8'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☒ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 43.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>8"</u> Top Width: <u>10'</u> Bottom Width: <u>5'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	Ft, In	Tape measure	
	Measured length	Ft, In	Tape measure	
	Time of travel	S	Stop watch	
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RHA 1.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>3"</u> Top Width: <u>5'</u> Bottom Width: <u>4'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 4.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>6" 4'</u> Top Width: <u>18"</u> Bottom Width: <u>4'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Bottle
	Time to fill		
<input type="checkbox"/> Flow #2	Flow depth		Tape measure
	Flow width	____' ____"	Tape measure
	Measured length	____' ____"	Tape measure
	Time of travel		Stop watch
Temperature		°F	Thermometer
pH		pH Units	Test strip/Probe
Ammonia		mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only ☒ No (If No, Skip to Section 5)
Are Any Physical Indicators Present in the flow? ☐ Yes

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible studs or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, studs, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)
Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam	

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RH 1.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: <u>2'</u> Top Width: <u>35'</u> Bottom Width: <u>32'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only Are Any Physical Indicators Present in the flow? ☒ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls Are Physical Indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RH 1.1</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>2'</u> Top Width: <u>3'</u> Bottom Width: <u>2'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only *(If No, Skip to Section 5)*

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls *(If No, Skip to Section 6)*

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

<input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Potential (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with a severity of 3) <input type="checkbox"/> Obvious
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Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 41.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: _____ Last 48 hours: _____		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>5'</u> Top Width: <u>12'</u> Bottom Width: <u>12'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK (if Present)	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK (if Present)	DESCRIPTION	COMMENTS	
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint		
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 40.7</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input checked="" type="checkbox"/> Rip-rap <u>w/ Fabric</u> <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: <u>4'</u> Top Width: <u>6'</u> Bottom Width: <u>8'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only *(If No, Skip to Section 5)*

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No

INDICATOR	CHECK IF Present	DESCRIPTION		RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity				
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Some; indications of origin (e.g., possible suds or oil sheen)
						<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls *(If No, Skip to Section 6)*

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION		COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds	<input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 39.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>5'</u> Top Width: <u>8'</u> Bottom Width: <u>3</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Ripe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RHALL</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OEM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 38.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☒ Yes ☐ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/> Excessive <input checked="" type="checkbox"/> Inhibited	Tree stump at outfall
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>XBC 37.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>4'</u> Top Width: <u>22'</u> Bottom Width: <u>11'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)
Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)
Are physical indicators that are not related to flow present? ☒ Yes ☐ No

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 36.0</u>	
Today's date: <u>3/29/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>24"</u> Top Width: <u>35"</u> Bottom Width: <u>18"</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION		RELATIVE SEVERITY INDEX (1-3)		
				<input type="checkbox"/> 1 - Paint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> See severity	<input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Turbidity	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:			

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

Section 3: Physical Indicators for Flow Restriction				
Are physical indicators that are not related to flow present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If No, Skip to Section 6)				
INDICATOR	CHECK IF Present	DESCRIPTION		COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

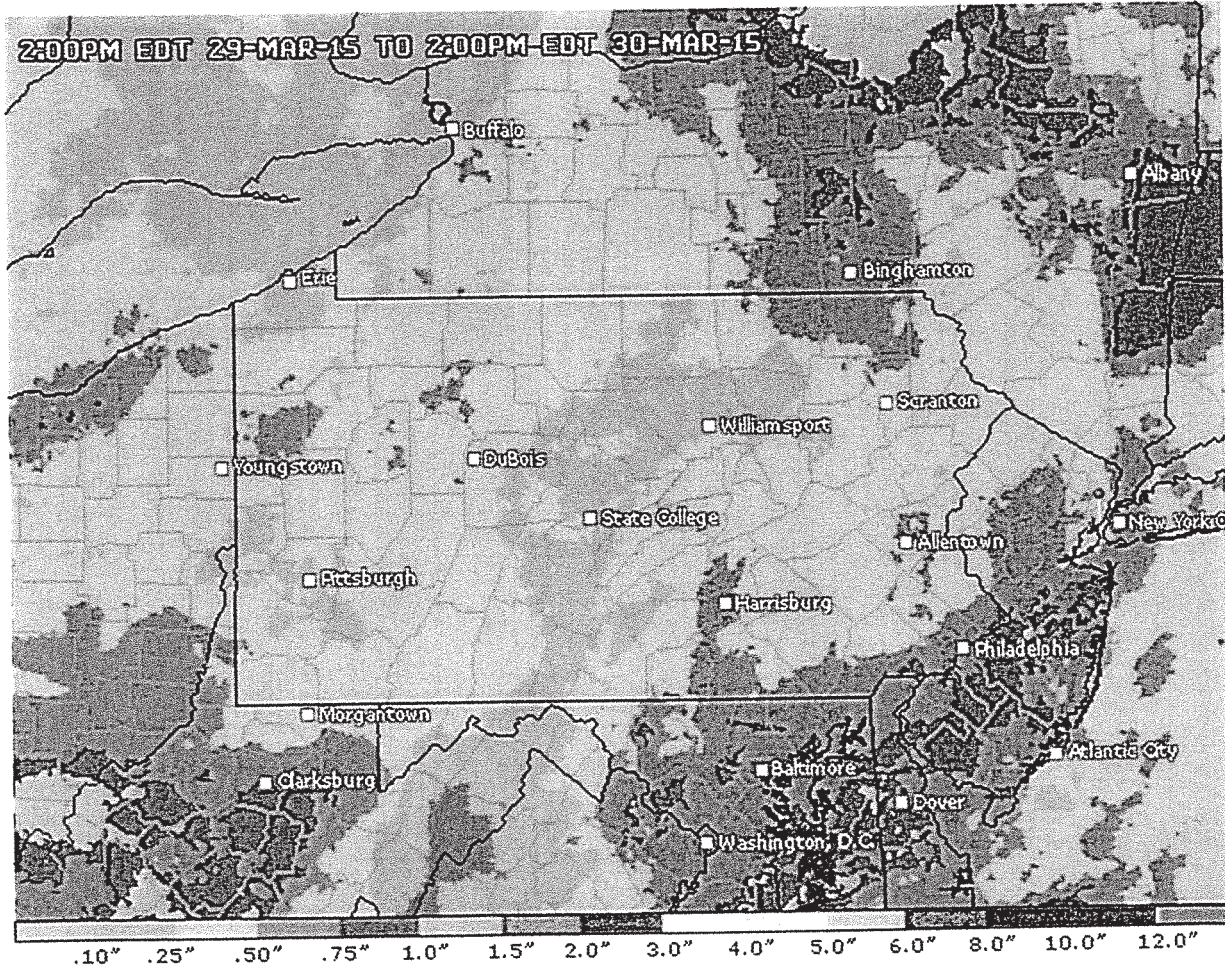
2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

1st Inspection

Zoom out to Region



2014-2015 MS4

SECOND INSPECTION - NOTE

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

IN RED

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT5.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>PAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8'</u> <u>5'</u> <u>8'</u>	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: <u>8'</u> Top Width: <u>12'</u> <u>22'</u> Bottom Width: <u>10'</u>	
<input checked="" type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam


Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 5.1</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26° 41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____ <u>Concrete</u>	<input type="checkbox"/> Circular <input checked="" type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____ <u>Pipe</u>	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ 	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No

INDICATOR	CHECK (If Present)	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK (If Present)	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 46.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>4'</u> Top Width: <u>10'</u> Bottom Width: <u>12" 8'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool	
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 45.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK/If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/If Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 44.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool	
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBM 1,1</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream (applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i> <u>check pipe @ Brenda</u>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OEM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Illicit Discharge Detection and Elimination: Technical Appendices

could not see light in SW inlet at Brenda

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBM 1.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>18"</u> Top Width: <u>30'</u> Bottom Width: <u>25'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 5.2</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>0-12"</u> Top Width: <u>12'</u> Bottom Width: <u>10'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 43.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>47°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>15" 8'</u> Top Width: <u>12'</u> Bottom Width: <u>8'</u> <i>4' pipe at path</i>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Skip to Section 5		
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☒ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam	

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 43.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>41°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>8'</u> Top Width: <u>10'</u> Bottom Width: <u>5'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	Ft, In	Tape measure	
	Measured length	Ft, In	Tape measure	
	Time of travel	S	Stop watch	
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION		COMMENTS
		DESCRIPTION	DESCRIPTION	
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion		
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OEM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RHA 1.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>42°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>3'</u> Top Width: <u>5'</u> Bottom Width: <u>4'</u>	
<input type="checkbox"/> In-Stream (applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If Yes, type:	<input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBT 4.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>42°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>6'</u> Top Width: <u>18'</u> Bottom Width: <u>4' 8'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only Are Any Physical Indicators Present in the flow? ☒ No ☐ Yes (If No, Skip to Section 5)

INDICATOR	CHECK (If Present)	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK (If Present)	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam	

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RH 1.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33° 42°</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>5.5'</u> Top Width: <u>35'</u> Bottom Width: <u>32'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Skip to Section 5		
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No

INDICATOR	CHECK (If Present)	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK (If Present)	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RH 1.1</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>33°</u> <u>42°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>2'</u> Top Width: <u>3'</u> Bottom Width: <u>2'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)			
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Orange	<input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle <input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Clearly visible in sample bottle <input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Clearly visible in outfall flow <input type="checkbox"/> 3 - Opaque
Turbidity	<input type="checkbox"/>	See severity				
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious <input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)	

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint	<input type="checkbox"/> Other:
Abnormal Vegetation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae	<input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green	<input type="checkbox"/> Other:

Section 6: Overall Outfall Characterization

☒ Unlikely
☐ Potential (presence of two or more indicators)
☐ Suspect (one or more indicators with a severity of 3)
☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 41.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u> <u>41°</u>	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input checked="" type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____ <i>Rock and fabric</i>	Depth: <u>5'-5"</u> Top Width: <u>12'-20"</u> Bottom Width: <u>12'-18"</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Ripe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization
☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 40.7</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39° 41°</u>	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input checked="" type="checkbox"/> Rip-rap <input type="checkbox"/> Other: <u>w/ Fabric</u>	<input type="checkbox"/> Trapezoid <input checked="" type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>4' 5"</u> Top Width: <u>8' 12"</u> Bottom Width: <u>8'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Skip to Section 5		
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only (If No, Skip to Section 5)

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floating debris - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls (If No, Skip to Section 6)

Are physical indicators that are not related to flow present? ☐ Yes ☒ No

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam		

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 39.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39° 42"</u>	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>5'-6"</u> Top Width: <u>8'</u> Bottom Width: <u>3-4'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF PRESENT	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

INDICATOR	CHECK IF PRESENT	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>RHA1.1</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u> <u>41°</u>	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input checked="" type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____ <u>plastic End wall</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ Diameter/Dimensions: <u>24"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Paint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION		COMMENTS
		1 - Few/slight; origin not obvious	2 - Cloudy	
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion		
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 38.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u> <u>42°</u>	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>6'</u> Top Width: <u>18</u> Bottom Width: <u>12'</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
	pH		pH Units	Teststrip/Probe
	Ammonia		mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK/IF Present	DESCRIPTION		RELATIVE SEVERITY INDEX (1-3)		
		<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Clear <input type="checkbox"/> Green	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Other: <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint <input type="checkbox"/> 1 - Faint colors in sample bottle <input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Easily detected <input type="checkbox"/> 2 - Clearly visible in sample bottle <input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Noticeable from a distance <input type="checkbox"/> 3 - Clearly visible in outfall flow <input type="checkbox"/> 3 - Opaque
Odor	<input type="checkbox"/>					
Color	<input type="checkbox"/>					
Turbidity	<input type="checkbox"/>		See severity			
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☒ Yes ☐ No (If No, Skip to Section 6)

INDICATOR	CHECK/IF Present	DESCRIPTION		COMMENTS
		<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<input type="checkbox"/> Peeling Paint <input type="checkbox"/> Inhibited <input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Outfall Damage	<input type="checkbox"/>			
Deposits/Stains	<input type="checkbox"/>			
Abnormal Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/> Excessive	<input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	Tree stump at outfall
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab? ☐ Yes ☐ No

2. If yes, collected from: ☐ Flow ☐ Pool

3. Intermittent flow trap set? ☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>XBC 37.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>39°</u> <u>44°</u>	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>4'</u> Top Width: <u>22'</u> Bottom Width: <u>11'</u>	
<input type="checkbox"/> In-Stream (applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
pH			pH Units	Teststrip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only
 Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No (If No, Skip to Section 5)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
 Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID: <u>YBC 36.0</u>	
Today's date: <u>3/29/15</u> <u>3/31/15</u>		Time (Military):	
Investigators:		Form completed by: <u>RAY ALLEN</u>	
Temperature (°F): <u>26°</u> <u>44°</u>	Rainfall (in.): Last 24 hours: <u>0</u>	Last 48 hours: <u>0</u>	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: <u>35' 14' debris, stump</u>	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input checked="" type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: <u>14"</u> Top Width: <u>35"</u> Bottom Width: <u>18"</u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Skip to Section 5		
Flow Description (if present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____, ____"	Ft, In	Tape measure
	Measured length	____, ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
	Temperature		°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only ☒ No (If No, Skip to Section 5)
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No

INDICATOR	CHECKIF Present	DESCRIPTION		RELATIVE SEVERITY INDEX (1-3)		
		<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Clear <input type="checkbox"/> Green	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Other: <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint <input type="checkbox"/> 1 - Faint colors in sample bottle <input type="checkbox"/> 1 - Slight cloudiness <input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Easily detected <input type="checkbox"/> 2 - Clearly visible in sample bottle <input type="checkbox"/> 2 - Cloudy <input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Noticeable from a distance <input type="checkbox"/> 3 - Clearly visible in outfall flow <input type="checkbox"/> 3 - Opaque <input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Odor	<input type="checkbox"/>					
Color	<input type="checkbox"/>					
Turbidity	<input type="checkbox"/>		See severity			
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:			

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No (If No, Skip to Section 6)

INDICATOR	CHECKIF Present	DESCRIPTION		COMMENTS
		<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Outfall Damage	<input type="checkbox"/>			
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:		
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds <input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:		
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:		

Section 6: Overall Outfall Characterization

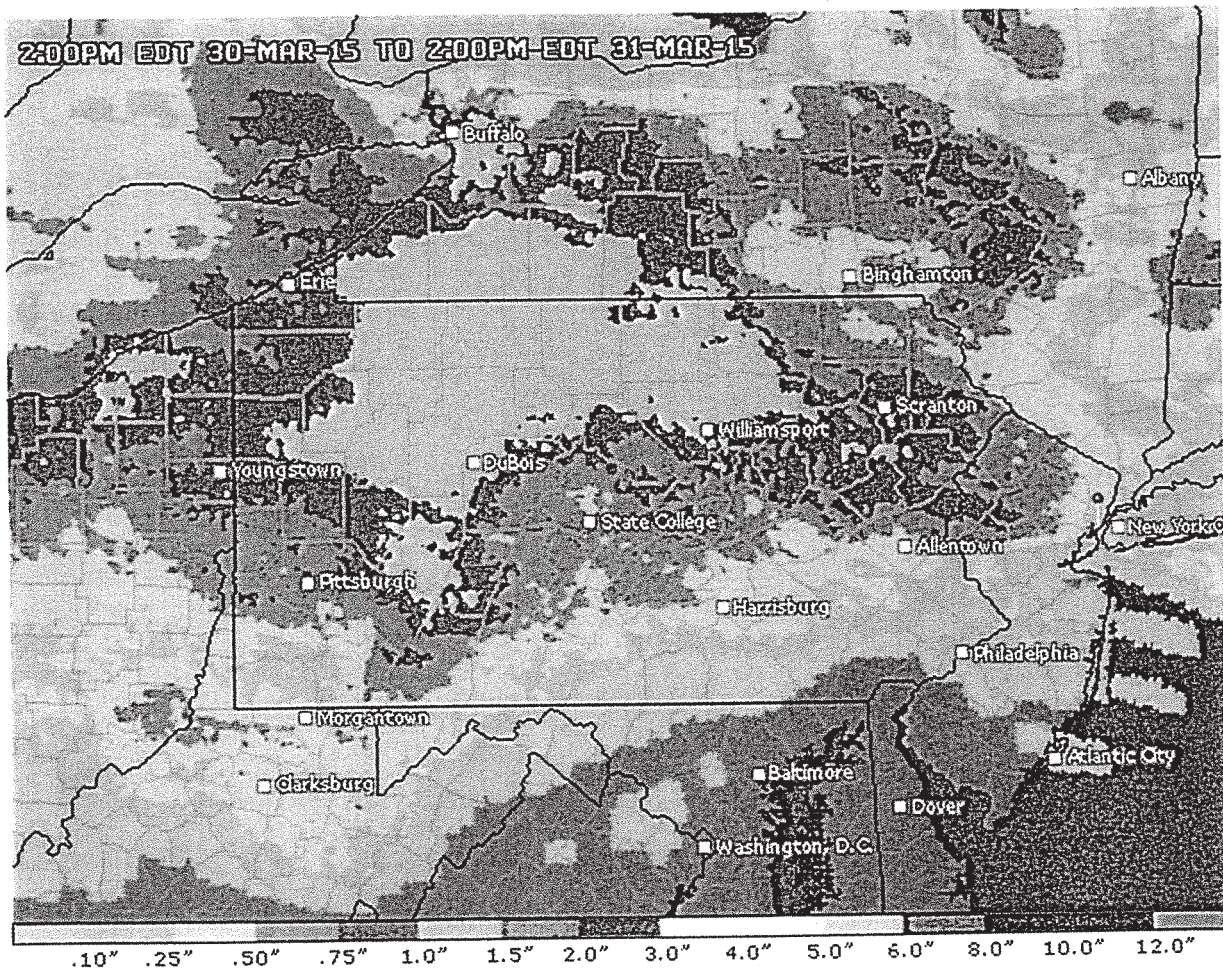
☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

2nd Inspection



Township of Lower Allen, PA
Wednesday, June 17, 2015

Chapter 184. Stormwater Management

[HISTORY: Adopted by the Board of Commissioners of the Township of Lower Allen 2-14-2011 by Ord. No. 2011-01.^[1] Amendments noted where applicable.]

GENERAL REFERENCES

Building construction and safety standards — See Ch. 70.

Filling and excavating — See Ch. 98.

Floodplain management — See Ch. 110.

Subdivision and land development — See Ch. 192.

Zoning — See Ch. 220.

184a References 

184b Appendix A 

184c Map 

[1] *Editor's Note: This ordinance also repealed former Ch. 184, Stormwater Management, adopted 3-8-2004 by Ord. No. 2004-03.*

Article I. General Provisions

§ 184-1. Short title.

This chapter shall be known and may be cited as the "Lower Allen Township Act 167 Stormwater Management Ordinance."

§ 184-2. Statement of findings.

The governing body of the municipality finds that:

- A. Inadequate management of accelerated runoff of stormwater resulting from development throughout a watershed increases flows and velocities, contributes to erosion and sedimentation, overtakes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines floodplain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety and increases nonpoint source pollution of water resources.
- B. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated runoff, is fundamental to the public health, safety and welfare and the protection of people of the commonwealth, their resources and the environment.
- C. Stormwater is an important water resource, which provides groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.
- D. Federal and state regulations require certain municipalities to implement a program of stormwater

This report is official notification that a representative of the Department of Environmental Protection has conducted an inspection of your earth disturbance activity to determine compliance with Title 25, Chapter 92a, National Pollutant Discharge Elimination System, Title 25, Chapter 102, Erosion and Sediment Control, and the Pennsylvania Clean Streams Law. This representative may be an employee of the local County Conservation District, which by delegation agreement with the Department of Environmental Protection, is authorized to investigate complaints, inspect earth disturbance activities and conduct compliance actions. Any violations observed by the Department/Conservation District have been noted on this report form and constitute unlawful conduct as defined in Section 611 of the Clean Streams Law.

There will be no written confirmation of those violations from the Department. Failure to take corrective actions to resolve the violations may result in administrative, civil and/or criminal penalties being instituted by the Department of Environmental Protection as defined in Section 602 of the Clean Streams Law of Pennsylvania. The Clean Streams Law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.

This report does not constitute an Order or appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

For further information or assistance please contact:

Vincent McCollum
Cumberland County Conservation District
310 Allen Road, Suite 301
Carlisle, PA 17013
717-240-7812

Permit No. PAG-02-0021-13-016
 Report No. 14-02

EARTH DISTURBANCE INSPECTION REPORT

Project Name Rossmoyne Business Center Hotel Inspection Date 7/24/2014 Inspection Time 930am
 Weather Conditions 70's sunny Total Project Area 5.07
 Location Rossmoyne Business Center Total Disturbed Area 4.41
 Municipality Lower Allen Twp County Cumberland
 Receiving Water(s) UNT to Cedar Run Designated/Existing Use CWF

Responsible Party(s) Thomas Smithgall Brad Shullenberger
 (name & address) High Hotels, LTD HL Wiker, Inc
1853 Penn Way 709 Hartman Station Rd
 Phone () Lancaster, PA 17601 () Lancaster, PA 17605

Site Representative (name) Garland Treese Inspector (name) Vince McCollum
 (title) Site Superintendent (title) District Technician

Type of Inspection (check only one) Photographs Taken Yes ☒ No ☐
 Routine complete ☐ Routine partial ☐ Follow-up ☒ Complaint ☐ Final ☐

Site Description & Observations Most of the site, excluding the parking lot area, is seeded and mulched. Baffle is repaired. Area along Ritter Rd where culvert was extended is seeded and mulched and the ECB is installed. Discussed with Site Rep about getting ECB installed in curb cut areas before paving is installed, so grass has time to grow and area is stable to handle runoff from impervious area.

☒ Continued on page 3 of 4.

Permit and Plan Requirements		Type of Activity (check as many as appropriate)	
Y	N		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pub. Road Constr./Maint. (PRC)	<input type="checkbox"/> Other _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Res. Subdivision (RSBD)	<input type="checkbox"/> Pvt. Road/Residence (PRRS)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Govmt. Facilities (GOV)	<input checked="" type="checkbox"/> Comm./Indust. Dev. (CMIN)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Utilities Facilities (UTL)	<input type="checkbox"/> Recreation Facilities (RECF)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Sewer/Water Systems (SWS)	<input type="checkbox"/> Agricul. Activities (AGA)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Remediation/Restoration (RRES)	<input type="checkbox"/> Pipeline (PL)
	<input type="checkbox"/> Phased Constr.		<input type="checkbox"/> Silviculture (SILV)
	<input checked="" type="checkbox"/> Non-Phased Constr.		
Permit #: <u>PAG-02-0021-13-016</u> Exp. Date: <u>9/30/2018</u>			



EARTH DISTURBANCE INSPECTION REPORT

Project Name Rossmoyne Business Center Hotel Inspection Date 7/24/2014 Inspection Time 930am

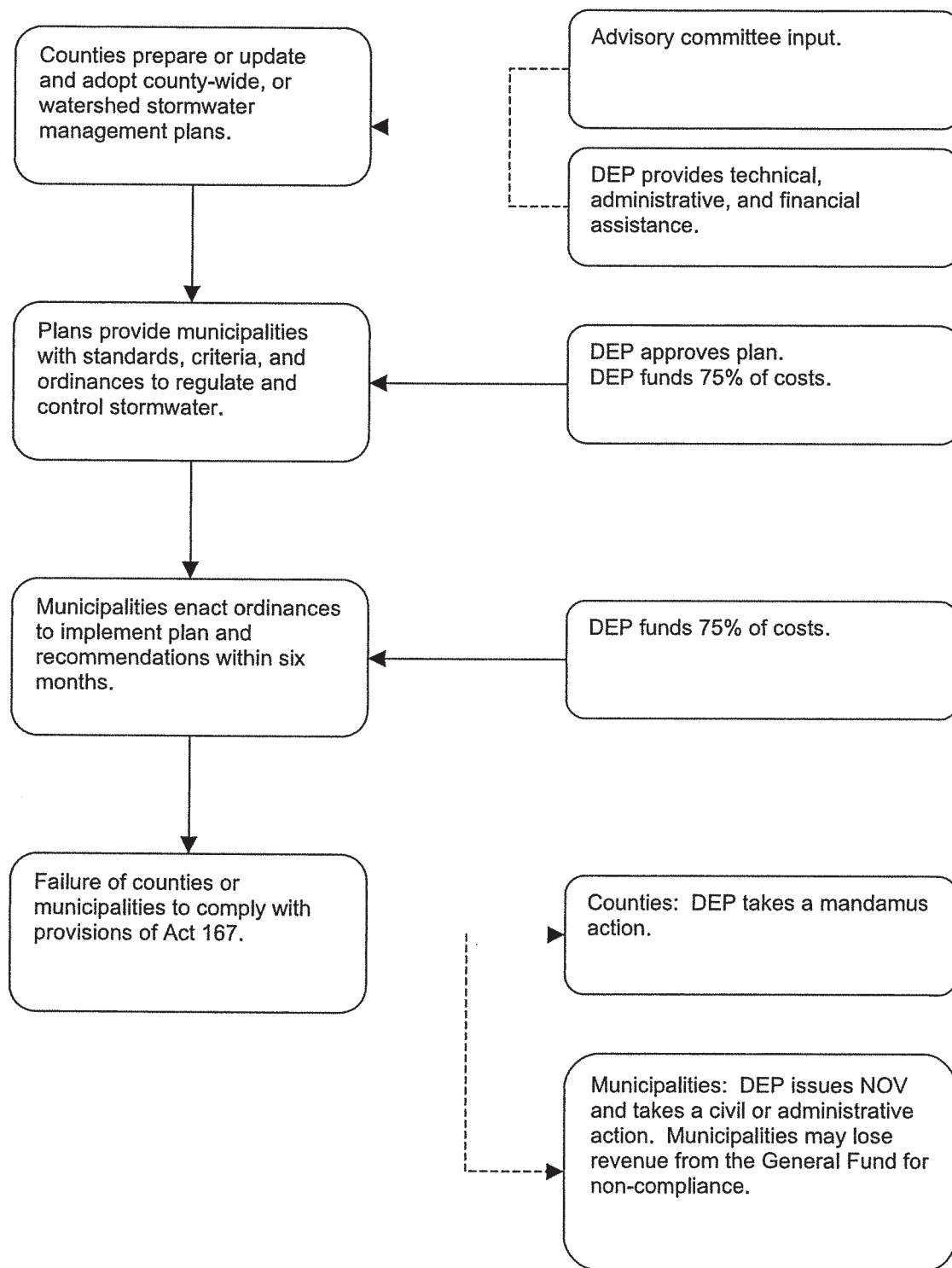
Inspection Findings

Reference

- | | |
|--|---|
| 1. No violations observed at this time. | <input checked="" type="checkbox"/> (N/A) |
| 2. Failure to (check all that apply). | |
| a. develop a written Erosion and Sediment (E&S) Plan. | <input type="checkbox"/> (102.4) |
| b. have E&S Plan available onsite. | <input type="checkbox"/> (102.4) |
| c. submit an E&S Plan as requested. | <input type="checkbox"/> (102.4) |
| d. implement effective E&S Best Management Practices (BMPs). | <input type="checkbox"/> (102.4) |
| e. maintain effective E&S BMPs. | <input type="checkbox"/> (102.4) |
| f. use Antidegradation Best Available Combination of Technologies (ABACT) BMPs for discharges to High Quality or Exceptional Value Waters. | <input type="checkbox"/> (102.4) |
| g. obtain an NPDES Permit for Stormwater Discharges Associated with Construction Activities. | <input type="checkbox"/> (102.5) |
| h. obtain an E&S Permit. | <input type="checkbox"/> (102.5) |
| i. prepare and implement a PPC Plan. | <input type="checkbox"/> (102.5) |
| j. submit Notice of Termination. | <input type="checkbox"/> (102.7) |
| k. develop written Post Construction Stormwater Management (PCSM) Plan. | <input type="checkbox"/> (102.8) |
| l. have PCSM Plan available onsite. | <input type="checkbox"/> (102.8) |
| m. submit PCSM Plan as requested. | <input type="checkbox"/> (102.8) |
| n. implement effective PCSM BMPs. | <input type="checkbox"/> (102.8) |
| o. maintain effective PCSM BMPs. | <input type="checkbox"/> (102.8) |
| p. perform reporting and recordkeeping as required. | <input type="checkbox"/> (102.8) |
| q. implement riparian buffer or riparian forest buffer. | <input type="checkbox"/> (102.14) |
| r. meet regulatory requirements for riparian forest buffer. | <input type="checkbox"/> (102.14) |
| s. provide temporary stabilization of the earth disturbance site. | <input type="checkbox"/> (102.22) |
| t. provide permanent stabilization of the earth disturbance site. | <input type="checkbox"/> (102.22) |
| u. comply with permit conditions. | <input type="checkbox"/> (402 CSL) |
| 3. Sediment or other pollutant was discharged into waters of the Commonwealth. | <input type="checkbox"/> (401 CSL) |
| 4. Site conditions present a potential for pollution to waters of the Commonwealth. | <input type="checkbox"/> (402 CSL) |
| 5. Other (describe). _____ | <input type="checkbox"/> _____ |
| 6. Other (describe). _____ | <input type="checkbox"/> _____ |
| 7. Other (describe). _____ | <input type="checkbox"/> _____ |
| 8. Other (describe). _____ | <input type="checkbox"/> _____ |
| 9. Other (describe). _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Inspection of this project has revealed site conditions which constitute violations of 25 Pa. Code Chapters 92a and/or 102 and the Clean Streams Law, the act of June 22, 1937, P.L. 1987, 35 P.S. §691.1 et seq. | |

Additional information regarding these violations can be found on the back of this page.

ACT 167 STORMWATER MANAGEMENT PLANNING PROCESS



For more information, visit DEP's Web site at www.depweb.state.pa.us, Keyword: "Stormwater."

Project Name Rossmoyne Business Center Hotel Inspection Date 7/24/2014 Inspection Time 930am

Site Description & Observations

Compliance Assistance Measures Continue to maintain E&S bmp's as per plan.

Follow-up Inspection will occur on or about (date)

(Signature of Site Representative)

(Date)

(Inspector's Signature)

7/25/2014

(Date)

The Site Representatives' signature acknowledges that they have read the report and received a copy and that they were given an opportunity to discuss it with the inspector. The signature does not necessarily mean the signee agrees with the report.

Page 3 of 4

☐ White - Inspector

☐ Yellow - Responsible Party

☐ Pink - Department☐ Goldenrod - Other

This report is official notification that a representative of the Department of Environmental Protection has conducted an inspection of your earth disturbance activity to determine compliance with Title 25, Chapter 92a, National Pollutant Discharge Elimination System, Title 25, Chapter 102, Erosion and Sediment Control, and the Pennsylvania Clean Streams Law. This representative may be an employee of the local County Conservation District, which by delegation agreement with the Department of Environmental Protection, is authorized to investigate complaints, inspect earth disturbance activities and conduct compliance actions. Any violations observed by the Department/Conservation District have been noted on this report form and constitute unlawful conduct as defined in Section 611 of the Clean Streams Law.

There will be no written confirmation of those violations from the Department. Failure to take corrective actions to resolve the violations may result in administrative, civil and/or criminal penalties being instituted by the Department of Environmental Protection as defined in Section 602 of the Clean Streams Law of Pennsylvania. The Clean Streams Law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.

This report does not constitute an Order or appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

For further information or assistance please contact:

Vincent McCollum
Cumberland County Conservation District
310 Allen Road, Suite 301
Carlisle, PA 17013
717-240-7812

LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
CAMP HILL, PA. 17011
(717) 975-7575 FAX (717) 737-4182

NOTICE OF VIOLATION OF THE CODE OF LOWER ALLEN TOWNSHIP
CHAPTER 184 KNOWN AS "STORMWATER MANAGEMENT"
AND CEASE AND DESIST ORDER
NO. 2014-12

Charter Homes

(Name of Record Owner)

1190 Dillerville Road

Lancaster, PA 17601

(Address of Record Owner)

Paul Commero

(Name of Occupant or other Person
Against whom action may be taken)

(Address of occupant or other Person
Against whom action may be taken)

Re: 1445 Arcona Road, Mechanicsburg, PA
(Location of Property upon which violation exists)

13-10-0256-011

(Tax Map/Parcel)

You are hereby notified that you are violating the Lower Allen Township Code of Ordinances, known as the "Code", Chapter No. 184, as amended. The Section or Sections of the Ordinance which you have violated and an explanation of the violations are listed on the second page of this Notice. You must comply with this Notice of Violation promptly and must correct the following-listed violations no later than May 23, 2014. In no case shall you abandon the premises in such condition as to create a hazard or menace to the public safety, health, morals or welfare.

Please be advised that you have the right to appeal this Notice of Violation and Cease and Desist Order in writing to the Board of Appeals of Lower Allen Township within thirty (30) days if you believe that I have misinterpreted or misapplied Chapter No. 184 of the "Code".

Failure to commence action to correct the violation within the time specified above, unless an appeal of this Notice of Violation has been filed with the Township Commissioners, constitutes a violation of the "Code" of Lower Allen Township Chapter No. 184. Violation of Chapter No. 184 may result in the institution of civil enforcement proceedings before a District Justice where the District Justice may impose a fine of not more than Five (\$500.00) Hundred Dollars, plus all costs of prosecution, including the Townships' attorney's fees, incurred as a result of such action. Each day that a violation continues shall constitute a separate offense and may subject you to a daily fine. The Township may also institute other appropriate action at law or in equity which may be necessary to enforce the provisions of Chapter No. 184.

Date : May 13, 2014

Township Engineer

Section 184-11(A) 1-2 184-12(B)-184-30(E) Description of violation and requirements which have not been met:

Earth disturbance without any E&S controls, stone pad/impervious coverage constructed. Stormwater management controls not in place

Permit not obtained prior to construction activity.

^A Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control," and in accordance with the Cumberland County Conservation District and the standards and specifications of the municipality.

This listing of violations may not represent all violations presently occurring on this property. Other violations may appear upon application for required permits or upon further investigation, and the Township right to take any and all action authorized to enforce it's "Code" as to all violations.

This list represents only violations of the "Code", Chapter No. 184 . Violations of other Sections may have occurred and the Township reserves it's rights to enforce these and any other "Code" Sections.

Permits are required for Demolition, Construction, Reconstruction, Alterations and Major Repairs to all structures of all types.

Date: May 13, 2014

Daniel J. Flint, P.E.
Township Engineer

LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
CAMP HILL, PA. 17011
(717) 975-7575 FAX (717) 737-4182

NOTICE OF VIOLATION OF THE CODE OF LOWER ALLEN TOWNSHIP
CHAPTER 184 KNOWN AS "STORMWATER MANAGEMENT"
AND CEASE AND DESIST ORDER
NO. 2014-13

Vitran Pennsylvania

(Name of Record Owner)

1190 Dillerville Road

(Name of Occupant or other Person
Against whom action may be taken)

Lancaster, PA 17601

(Address of Record Owner)

(Address of occupant or other Person
Against whom action may be taken)

Re: 1200 St. John's Road

(Location of Property upon which violation exists)

13-10-0256-011

(Tax Map/Parcel)

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Date : May 13, 2014

Township Engineer

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Date: May 13, 2014

Daniel J. Flint, P.E.
Township Engineer





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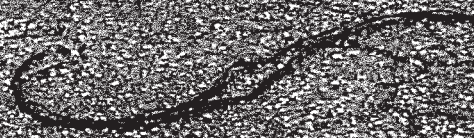
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VITRAN



LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
CAMP HILL, PA. 17011
(717) 975-7575 FAX (717) 737-4182

NOTICE OF VIOLATION OF THE CODE OF LOWER ALLEN TOWNSHIP
CHAPTER 184 KNOWN AS "STORMWATER MANAGEMENT"
AND CEASE AND DESIST ORDER
NO. 2014-13

Brooks Edge LP

(Name of Record Owner)

5351 Jaycee Avenue

Harrisburg, PA 17112

(Address of Record Owner)

Triple Crown-John Yarnell

(Name of Occupant or other Person

Against whom action may be taken)

(Address of occupant or other Person
Against whom action may be taken)

Re: 850 Lisburn Road

(Location of Property upon which violation exists)

13-24-0803-018

(Tax Map/Parcel)

You are hereby notified that you are violating the Lower Allen Township Code of Ordinances, known as the "Code", Chapter No. 184, as amended. The Section or Sections of the Ordinance which you have violated and an explanation of the violations are listed on the second page of this Notice. You must comply with this Notice of Violation promptly and must correct the following-listed violations no later than May 30, 2014. In no case shall you abandon the premises in such condition as to create a hazard or menace to the public safety, health, morals or welfare.

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Date : May 28, 2014

Township Engineer

Section 184-11D. Description of violation and requirements which have not been met:

Earth disturbance without Erosion&Sediment controls in place.

For all regulated earth disturbance activities, erosion and sediment control BMP's shall be designed, implemented, operated and maintained during the regulated earth disturbance activities(e.g., during construction) to meet the purposes and requirements of this chapter and to meet all requirements under the PA Code Title 25.

A Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control," and in accordance with the Cumberland County Conservation District and the standards and specifications of the municipality.

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Permits are required for Demolition, Construction, Reconstruction, Alterations and Major Repairs to all structures of all types.

Date: May 28, 2014

Daniel J. Flint, P.E.
Township Engineer

LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
CAMP HILL, PA. 17011
(717) 975-7575 FAX (717) 975-2287

NOTICE OF VIOLATION OF THE CODE OF LOWER ALLEN TOWNSHIP
CHAPTER 184 KNOWN AS "STORMWATER MANAGEMENT"
AND CEASE AND DESIST ORDER
NO. 2014-25

CH and N Site Construction

(Name of Record Owner)

1190 Dillerville Road

Lancaster, PA 17601

(Address of Record Owner)

Matt Eshelman

(Name of Occupant or other Person
Against whom action may be taken)

(Address of occupant or other Person
Against whom action may be taken)

Re: 1445 Arcona Lane, Mechanicsburg, PA

(Location of Property upon which violation exists)

13-10-0256-011

(Tax Map/Parcel)

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Date : October 9, 2014

Engineering Technician

Section 184-37(B). - Description of violation and requirements which have not been met: Prohibited discharges and connections

Discharges to the municipality's separate storm sewer system or to waters of the commonwealth which are not composed entirely of stormwater shall be prohibited, except as provided in Subsection C, and discharges allowed under a state or federal permit..

Concrete washwater is a prohibited discharge.

Corrective Action to be taken:

Maintain proper stormwater management practices. Use approved concrete washout.

^A Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control," and in accordance with the Cumberland County Conservation District and the standards and specifications of the municipality.

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Permits are required for Demolition, Construction, Reconstruction, Alterations and Major Repairs to all structures of all types.

Date:October 9, 2014

Raymond J. Allen
Engineering Technician

LOWER ALLEN TOWNSHIP
2233 GETTYSBURG ROAD
CAMP HILL, PA. 17011
(717) 975-7575 FAX (717) 975-2287

NOTICE OF VIOLATION OF THE CODE OF LOWER ALLEN TOWNSHIP
CHAPTER 184 KNOWN AS "STORMWATER MANAGEMENT"
AND CEASE AND DESIST ORDER
NO. 2014-24

Delaware Valley Concrete

(Name of Record Owner)

248 E. County Line Rd, P.O. Box 457

Hatboro, PA 19040

(Address of Record Owner)

Jeff Stellwagon

(Name of Occupant or other Person
Against whom action may be taken)

(Address of occupant or other Person
Against whom action may be taken)

Re: 1445 Arcona Road, Mechanicsburg, PA 17055
(Location of Property upon which violation exists)

13-10-0256-011

(Tax Map/Parcel)

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Date : October 9, 2014

Engineering Technician

Section 184-37(B) - Description of violation and requirements which have not been met: Prohibited discharges and connections

(B) Discharges to the municipality's separate storm sewer system or to waters of the commonwealth which are not composed entirely of stormwater shall be prohibited, except as provided in Subsection C, and discharges allowed under a state or federal permit..

Concrete washwater is a prohibited discharge.

Corrective Action to be taken:

Maintain proper stormwater management practices. Use approved concrete washout.

Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control," and in accordance with the Cumberland County Conservation District and the standards and specifications of the municipality.

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Date: October 10, 2014

Raymond Allen
Engineering Technician

Lower Allen Township

2233 Gettysburg Road Camp Hill, Pa. 17011

Complaints Report

From: 04/01/2014 : To: 03/31/2015

Comp #	Date	Type	Tax Id	Legal Address	Inspector	Status
14-50343	4/14/2014	Stormwater Mgmt.	13-24-0799-143	131 LIMESTONE DRIVE		
Desc: allegedly dumping wood, railings etc into creek						Closed
14-50346	4/15/2014	Stormwater Mgmt.	13-24-0799-142	129 LIMESTONE DRIVE		
Desc: dumped his wooden jungle gym along Ward trucking fence						Closed
14-50366	4/30/2014	Stormwater Mgmt.	13-24-0795-004	4700 GETTYSBURG ROAD		
Desc: concerned about amount of runoff from parking lot area onto the roadway						Closed
14-50387	5/1/2014	Stormwater Mgmt.	13-10-0256-011	1445 ARCONA ROAD		
Desc: work done on construction site for job trailer prior to obtaining permit E&S controls not in place						Closed
14-50383	5/9/2014	Stormwater Mgmt.	13-25-0010-260	95 DEERFIELD ROAD		
Desc: concerned about dirt pile(in right rear corner of property from 105 Deerfield) blocking natural drainage and creating stagnant water bamboo growing in yard....						Closed
14-50419	5/30/2014	Stormwater Mgmt.	13-24-0799-175A	1200 SAINT JOHNS ROAD		
Desc: a white substance flowing into Cedar Run from the terminal's parking lot.						Closed
14-50446	6/11/2014	Stormwater Mgmt.	48-24-0795-072	200 SOMERSET DRIVE		
Desc: mowing grass into the street						Closed
14-50459	6/17/2014	Stormwater Mgmt.	48-24-0795-045	313 SOMERSET DRIVE		
Desc: blowing grass into street						Closed

Lower Allen Township
2233 Gettysburg Road
Camp Hill, Pa. 17011
Complaints Report

From: 04/01/2014

To: 03/31/2015

Comp #	Date	Type	Tax Id	Legal Address	Inspector	Status
14-50497	7/2/2014	Stormwater Mgmt.	13-25-0010-001	233 CREEKWOOD DRIVE		
Desc: <p>It has been brought to our attention that the drain pipe and stone infiltration and drainage feature installed in your front yard needs to be maintained. Drainage water from your site is once again being obstructed, cannot reach the street right-of-way and is backing up into the yard of your neighbor. The stones installed at the discharge pipe last year must have settled and were not visible at the site inspection last week. Drainage is not being directed to the street as approved and originally installed.</p> <p>Please re-establish the drainage around the tree near the street and keep water from ponding over the adjacent property. Let me know when this work is completed.</p>						Closed
14-0077	10/20/201	Stormwater Mgmt.	13-24-0793-145	5218 ROYAL DRIVE		
Desc: <p>blowing grass onto the street</p>						Closed
15-0061	3/11/2015	Stormwater Mgmt.	13-26-0247-087	5043 RAVENWOOD ROAD		
Desc: <p>Sediment controls not in place - no silt fence downslope from disturbed area and no silt bag in the storm water inlet</p>						Closed

Lower Allen Township
2233 Gettysburg Road
Camp Hill, Pa. 17011
Complaints Report

From: 04/01/2014 To: 03/31/2015

Totals by Complaint Type & Status

ComplaintType	Complaint Status	Count
Stormwater Mgmt.		11
Total:		11
	Closed	11

Best Management Practices

Follow these BMPs to control pollutant discharges. The objectives are: 1) to keep pollutants from contacting rain, and 2) to keep pollutants from being dumped or poured into the storm drains. The goal is "only rain in the storm drain."

How to properly dispose of concrete wastes:

- \$ Use a squeegee or similar tool to remove all excess concrete from the chute.
- \$ Place all excess concrete in a form, holder, box, or a designated washout area where it may be removed once it is hardened. You may need to make a number of smaller piles because solid concrete is very heavy. All concrete finishing tools and pumping hoses should also be cleaned in the washout area.
- \$ Use the minimum amount of water to wash down the chute, finishing tools, and any other equipment.
- \$ Remove the concrete sediment from the street, gutters, and area surrounding the washout area before it hardens.
- \$ Dispose of concrete wash water properly. Two examples are described below.

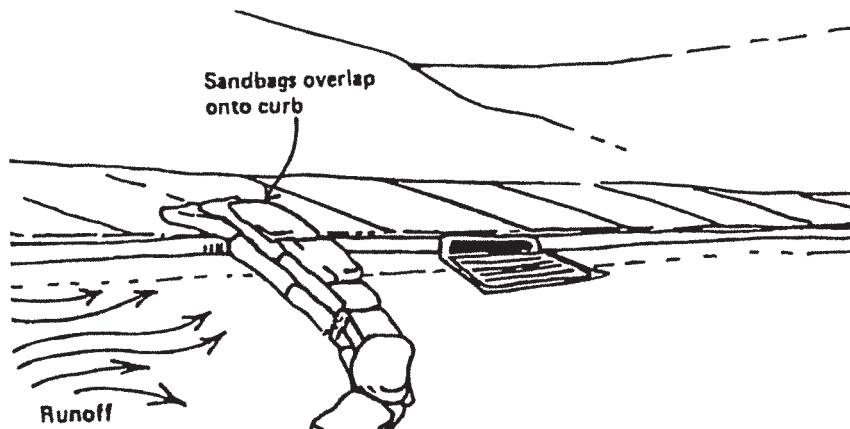
Disposing of Washwater

Preferred Practice: Contain all washwater on soil, preferably in a bowl shaped area to prevent the wash water from flowing from the washout area.

Alternate Practice:

1. Find the storm drain immediately down stream from the designated washout area. Block the storm drain and dam an area to collect the washwater. One effective control method is to use sandbags. To properly install, first wet down the sand bags, then compact them tightly to one another and to the curb so that no silty water can flow through.
2. Allow particles to settle and allow the water to evaporate.
3. Remove any remaining concrete sediment.
4. Discard the concrete particles to the trash or landfill.

Remember, it is illegal to dispose of concrete or washwater in the storm drain. Also, do not dispose of concrete in the sanitary sewer.



PA DEP - Concrete Washout Guidelines

CONCRETE WASHOUT - For any project on which concrete will be poured or otherwise formed on site, a suitable washout facility must be provided for the cleaning of chutes, mixers, and hoppers of the delivery vehicles unless such a facility will be used at the source of the concrete. Under no circumstances may wash water from these vehicles be allowed to enter any surface waters. Make sure that proper signage is provided to drivers so that they are aware of the presence of washout facilities.

Washout facilities should not be placed within 50 feet of storm drains, open ditches or surface waters. They should be in a convenient location for the trucks, preferably near the place where the concrete is being poured, but far enough from other vehicular traffic to minimize the potential for accidental damage or spills. Wherever possible, they should be located on slopes not exceeding a 2% grade. Additional information on washouts may be obtained from EPA's stormwater website at: <http://cfpub.epa.gov/npdес/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=117&minmeasure=4>.

Compost Sock Washout

Wherever compost sock washouts are used, a suitable impervious geomembrane should be placed at the location of the washout. Compost socks should be staked in the manner recommended by the manufacturer around perimeter of the geomembrane so as to form a ring with the ends of the sock located at the upslope corner (Figure 3.18). Care should be taken to ensure continuous contact of the sock with the geomembrane at all locations. Where necessary, socks may be stacked and staked so as to form a triangular cross-section.

Minimum Measure

Construction Site Stormwater Runoff Control

Subcategory

Good Housekeeping/Materials Management

Description of Concrete Washout at Construction Sites

Concrete and its ingredients

Concrete is a mixture of cement, water, and aggregate material. Portland cement is made by heating a mixture of limestone and clay containing oxides of calcium, aluminum, silicon and other metals in a kiln and then pulverizing the resulting clinker. The fine aggregate particles are usually sand. Coarse aggregate is generally gravel or crushed stone. When cement is mixed with water, a chemical reaction called hydration occurs, which produces glue that binds the aggregates together to make concrete.

Concrete washout

After concrete is poured at a construction site, the chutes of ready mixed concrete trucks and hoppers of concrete pump trucks must be washed out to remove the remaining concrete before it hardens. Equipment such as wheelbarrows and hand tools also need to be washed down. At the end of each work day, the drums of concrete trucks must be washed out. This is customarily done at the ready mixed batch plants, which are usually off-site facilities, however large or rural construction projects may have on-site batch plants. Cementitious (having the properties of cement) washwater and solids also come from using such construction materials as mortar, plaster, stucco, and grout.

Environmental and Human Health Impacts

Concrete washout water (or washwater) is a slurry containing toxic metals. It's also caustic and corrosive, having a pH near 12. In comparison, Drano liquid drain cleaner has a pH of 13.5. Caustic washwater can harm fish gills and eyes and interfere with reproduction. The safe pH ranges for aquatic life habitats are 6.5 – 9 for freshwater and 6.5 – 8.5 for saltwater.

Construction workers should handle wet concrete and washout water with care because it may cause skin irritation and eye damage. If the washwater is dumped on the ground (Fig. 1), it can run off the construction site to adjoining roads and enter roadside storm drains, which discharge to surface waters such as rivers, lakes, or estuaries. The red arrow in Figure 2 points to a ready mixed truck chute that's being washed out into a roll-off bin, which isn't watertight. Leaking washwater, shown in the foreground, will likely follow similar



Figure 1. Chute washwater being dumped on the ground

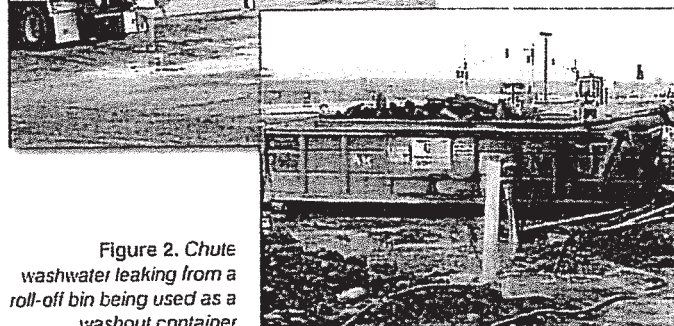
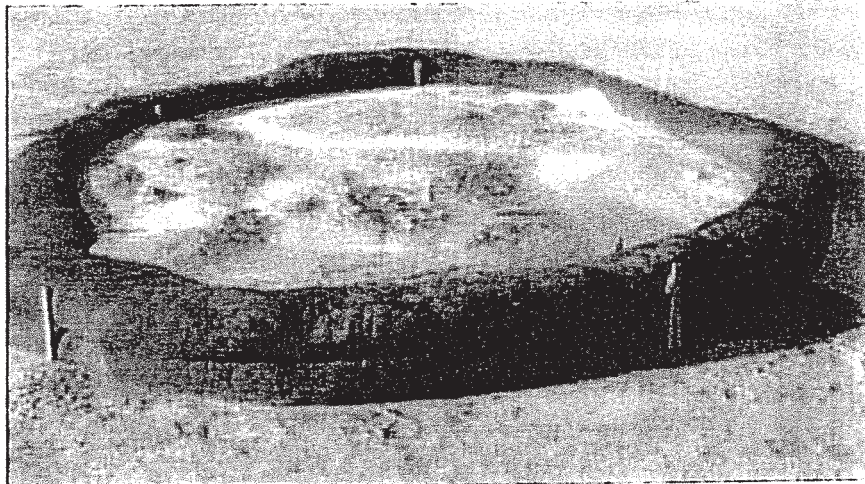


Figure 2. Chute washwater leaking from a roll-off bin being used as a washout container

paths to nearby surface waters. Rainfall may cause concrete washout containers that are uncovered to overflow and also transport the washwater to surface waters. Rainwater polluted with concrete washwater can percolate down through the soil and alter the soil chemistry, inhibit plant growth, and contaminate the groundwater. Its high pH can increase the toxicity of other substances in the surface waters and soils. Figures 1 and 2 illustrate the need for better washout management practices.

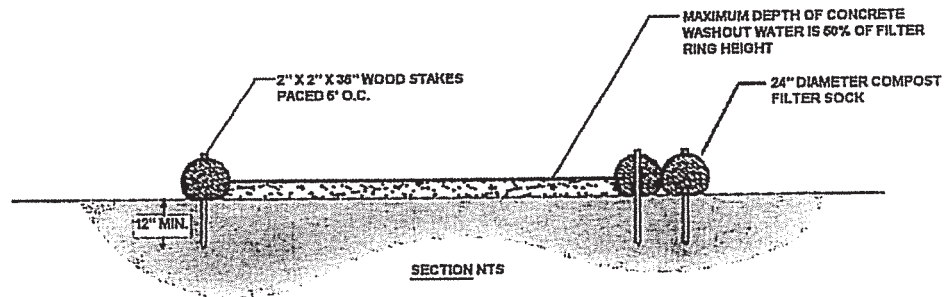
Best Management Practice Objectives

The best management practice objectives for concrete washout are to (a) collect and retain all the concrete washout water and solids in leak proof containers, so that this caustic material does not reach the soil surface and then migrate to surface waters or into the ground water, and (b) recycle 100 percent of the collected concrete washout water and solids. Another

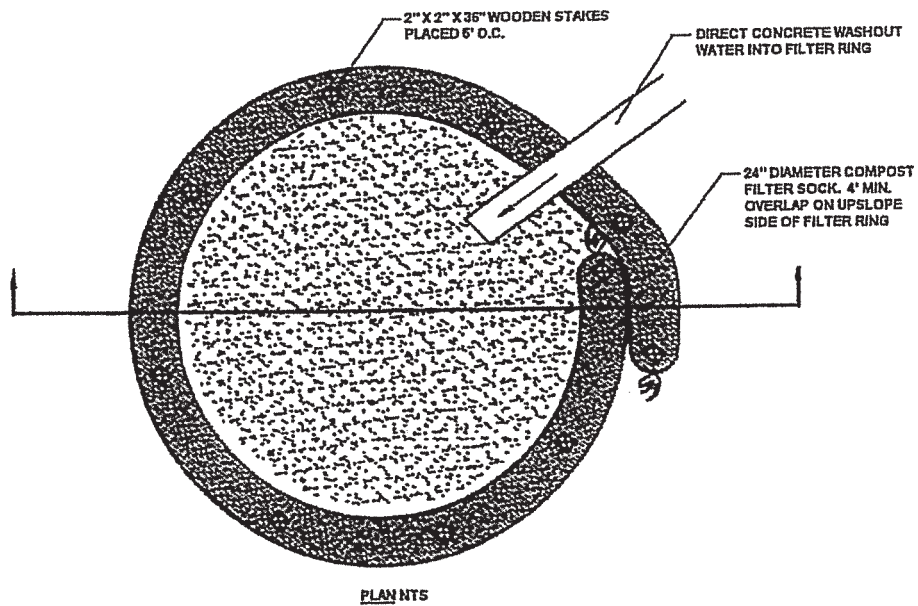


Filtrex

FIGURE 3.18
Typical Compost Sock Washout Installation



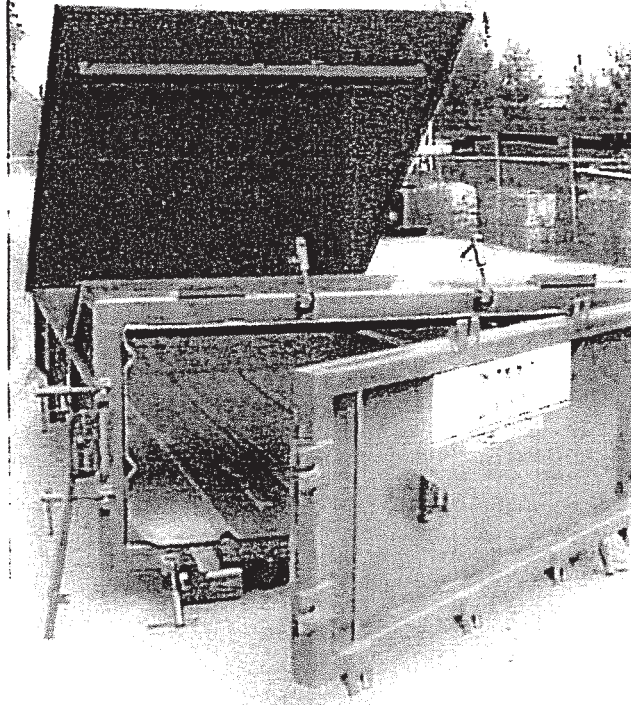
NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO
DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL
CONFIGURATION FOR ADDED HEIGHT.



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrex

Prefabricated Washout Containers

Care should be taken to ensure that the containers are intended by the manufacturer for use as concrete washout BMPs, that they are watertight, and appropriately sized. Accumulated materials must be properly disposed of (preferably recycled) when they reach the cleanout level.



All World Equipment

Self-installed Washouts

These types of washouts should be excavated below grade to prevent runoff of the wash water and minimize the potential for breaching. They should be sized to handle solids, wash water, and rainfall. A good rule of thumb is that 7 gallons of wash water are required to wash one truck chute and 50 gallons for the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be a minimum of 10 feet wide and provide at least 12 inches of freeboard above the liquid and solid waste anticipated between cleanout intervals. The pit should be lined with plastic sheeting of at least 10-mil thickness (with no holes or tears) to prevent leaching of liquids into the ground.



PA DEP

Washwater Recycling Systems

Washwater recycling systems have also been developed which separate the solids from the washwater, capturing both in impermeable bags and allowing them to be recycled. These systems may be used in lieu of washouts if manufacturers' specifications are followed. Care must be taken to prevent the filtered water from entering any surface waters.

Sediment Basins and Sediment Traps

Sediment basins and sediment traps may not be used as concrete washout devices, since they discharge directly to surface waters. This discharge would have an adverse effect upon the receiving water. In addition, continued use of a basin or trap as a washout facility would significantly reduce the storage capacity of the basin or trap.

Maintenance

All concrete washout facilities should be inspected daily. Damaged or leaking washouts should be deactivated and repaired or replaced immediately.

Accumulated materials should be removed when they reach 75% capacity.

Plastic liners should be replaced with each cleaning of the washout facility.

Stormwater Best Management Practice: Concrete Washout

objective is to support the diversion of recyclable materials from landfills. Table 1 shows how concrete washout materials can be recycled and reused.

Table 1 – Recycling concrete washout materials

Uses of Recycled Materials	Concrete Washout Materials					
	Washwater	Cement fines ^a	Fine aggregate	Coarse aggregate	Hardened concrete	Unused wet concrete
Reused to washout additional mixer truck chutes or drums	x					
Reused as a ready mixed concrete ingredient	x	x ^b	x	x		
Reused as an ingredient of precast concrete products, e.g., highway barriers, retaining wall blocks, riprap	x	x	x	x		x
Reused as crushed concrete products, e.g., road base or fill		x	x	x	x	
Reused to pave the yards of ready mixed concrete plants						x
Returned back to a surface water, e.g., river, lake, or estuary	x ^c					

a. Fine particles of cementitious material (e.g., Portland cement, slag cement, fly ash, silica fume)

b. Recyclable, if allowed by the concrete quality specifications

c. Treated to reduce the pH and remove metals, so it can be delivered to a municipal wastewater treatment plant, where it is treated further and then returned to a natural surface water

Washwater recycling, treatment, disposal

Washwater from concrete truck chutes, hand mixers, or other equipment can be passed through a system of weirs or filters to remove solids and then be reused to wash down more chutes and equipment at the construction site or as an ingredient for making additional concrete. A three chamber washout filter is shown in Figure 3. The first stage collects the coarse aggregate. The middle stage filters out the small grit and sand. The third stage has an array of tablets that filter out fines and reduces the pH. The filtered washwater is then discharged through a filter sock. An alternative is to pump the washout water out of the washout container (Fig 4) and treat the washwater off site to remove metals and reduce its pH, so it can be delivered to a publicly owned treatment works (POTW), also known as a municipal wastewater treatment plant, which provides additional treatment allowing the washwater to be discharged to a surface water. The POTW should be



Figure 3. Concrete washout filter

contacted to inquire about any pretreatment requirements, i.e., the National Pretreatment Standards for Prohibited Dischargers (40CFR 403.5) before discharging the washwater to the POTW. The washwater can also be retained in the washout container and allowed to evaporate, leaving only the hardened cementitious solids to be recycled.

Solids recycling

The coarse aggregate materials that are washed off concrete truck chutes into a washout container can be either separated by a screen and placed in aggregate bins to be reused at the construction site or returned to the ready mixed plant and washed into a reclaimer (Fig. 5). When washed out into a reclaimer, the fine and coarse aggregates are separated out and placed in different piles or bins to be reused in making fresh concrete. Recyclers with settling tanks separate cement fines from the washwater, and these fines can also be used in new concrete unless prohibited by the user's concrete quality specifications.

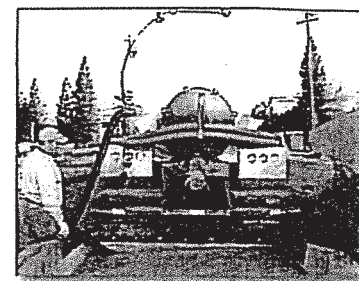


Figure 4. Vacuuming washwater out of a washout container for treatment and reuse

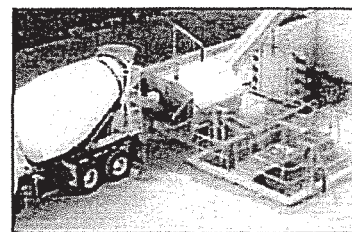


Figure 5. Ready mixed truck washing out into a reclaimer

Hardened concrete recycling

When the washwater in a construction site concrete washout container has been removed or allowed to evaporate, the hardened concrete that remains can be crushed (Fig. 6) and reused as a construction material. It makes an excellent aggregate for road base and can be used as fill at the

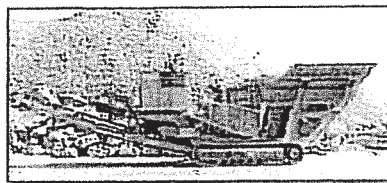


Figure 6. Crushed concrete stockpile and crusher

construction site or delivered to a recycler. Concrete recyclers can be found at municipal solid waste disposal facilities, private recycling plants, or large construction sites.

Stormwater Best Management Practice: Concrete Washout

Wet concrete recycling

Builders often order a little more ready mixed concrete than they actually need, so it is common for concrete trucks to have wet concrete remaining in their drum after a delivery. This unused concrete can be returned to the ready mixed plant and either (1) used to pour precast concrete products (e.g., highway barriers, retaining wall blocks, riprap), (2) used to pave the ready mixed plant's yard, (3) washed into a reclaimer, or (4) dumped on an impervious surface and allowed to harden, so it can be crushed and recycled as aggregate. Unused wet concrete should not be dumped on bare ground to harden at construction sites because this can contribute to ground water and surface water contamination.

Washout Containers

Different types of washout containers are available for collecting, retaining, and recycling the washwater and solids from washing down mixed truck chutes and pump truck hoppers at construction sites.

Chute washout box

A chute washout box is mounted on the back of the ready mixed truck. If the truck has three chutes, the following procedure is used to perform the washout from the top down: (1) after the pour is completed, the driver attaches the extension chute to the washout box, (2) the driver then rotates the main chute over the extension chute (Fig. 7) and washes down the hopper first then the main chute, (3) finally the driver washes down the flop down chute and last the extension chute hanging on the box. All washwater and solids are captured in the box.

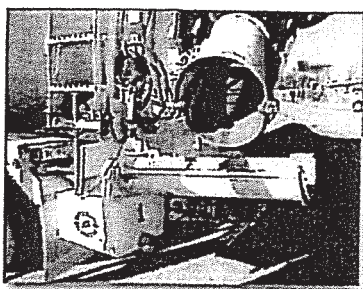


Figure 7. Chute washout box

After the wash down, washwater and solids are returned to the ready mixed plant for recycling. A filter basket near the top of the washout box separates out the coarse aggregates so they can be placed in a bin for reuse either at the construction site or back at the cement plant.

Chute washout bucket and pump

After delivering ready mixed concrete and scraping the last of the customer's concrete down the chute, the driver hangs a washout bucket shown in Figure 8 (see red arrow) on the end of the truck's chute and secures the hose to insure no leaks. The

driver then washes down the chute into the bucket to remove any cementitious material before it hardens. After washing out the chute, the driver pumps (yellow arrow points to the pump) the washwater, sand, and other fine solids from the bucket up into the truck's drum to be returned to the ready mixed plant, where it can be washed into a reclaimer.

A removable screen at the bottom of the washout bucket prevents coarse aggregate from entering the pump. This coarse aggregate can also be returned to the plant and added to the coarse aggregate pile to be reused. All the materials are recycled.

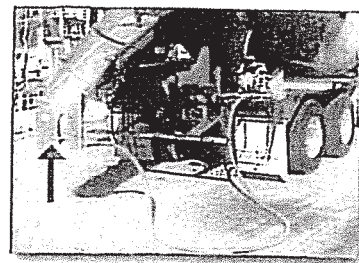


Figure 8. Chute washout bucket and pump

Hay bale and plastic washout pit

A washout pit made with hay bales and a plastic lining is shown in Figure 9. Such pits can be dug into the ground or built above grade. The plastic lining should be free of tears or holes that would allow the washwater to escape (Fig. 10). After the pit is used to wash down the chutes of multiple ready mixed trucks and the washwater has evaporated or has been vacuumed off, the remaining hardened solids can be broken up and removed from the pit. This process may damage the hay bales and plastic lining. If damage occurs, the pit will need to be repaired and relined with new plastic. When the hardened solids are removed, they may be bound up with the plastic lining and have to be sent to a landfill, rather than recycled. Recyclers usually accept only unmixed material. If the pit is going to be emptied and repaired more than a few times, the hay bales and plastic will be generating additional solid waste. Ready mixed concrete

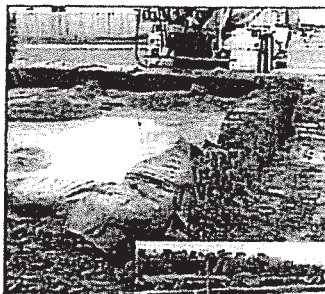


Figure 9. Hay bale and plastic washout pit



Figure 10. Leaking washout pit that has not been well maintained

Stormwater Best Management Practice: Concrete Washout

trucks can use hay bale washout pits, but concrete pump trucks have a low hanging hopper in the back that may prevent their being washed out into bale-lined pits.

Vinyl washout container

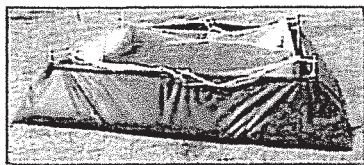


Figure 11. Vinyl washout pit with filter bag

The vinyl washout container (Fig. 11) is portable, reusable, and easier to install than a hay bale washout pit.

The biodegradable filter bag (Fig. 12) assists in

extracting the concrete solids and prolongs the life of the vinyl container. When the bag is lifted, the water is filtered out and the remaining concrete solids and the bag can be disposed of together in a landfill, or the hardened concrete can be delivered to a recycler. After the solids have been removed several times and the container is full of washwater, the washwater can be allowed to evaporate, so the container can be reused. The washwater can be removed more quickly by placing another filter bag in the container and spreading water gelling granules evenly across the water. In about five minutes, the water in the filter bag will turn into a gel that can be removed with the bag. Then the gel and filter bag can be disposed of together.

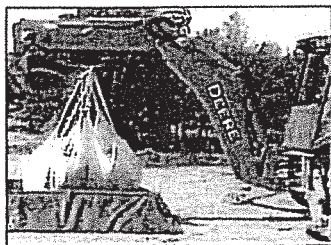


Figure 12. Extracting the concrete solids or gelled washwater

Metal washout container

The metal roll-off bin (Fig. 13) is designed to securely contain concrete washwater and solids and is portable and reusable. It also has a ramp that allows concrete pump trucks to wash out their hoppers (Fig. 14). Roll-off providers offer recycling services, such as, picking up the roll-off bins after the washwater has evaporated and the solids have hardened, replacing them with empty washout bins, and delivering the hardened concrete to a recycler (Fig. 15), rather than a landfill. Some providers will vacuum off the washwater, treat it to remove metals and reduce the pH, deliver it to a wastewater treatment plant for additional treatment and

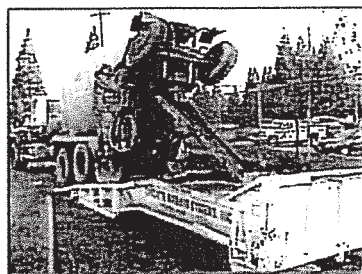


Figure 13. Mixer truck being washed out into a roll-off bin

subsequent discharge to a surface water. Everything is recycled or treated sufficiently to be returned to a natural surface water.

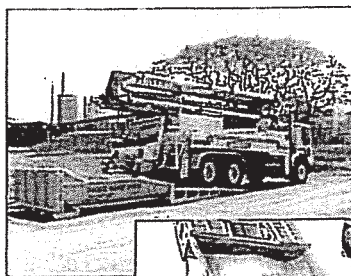


Figure 14. Pump truck using the ramp to wash out into a roll-off bin

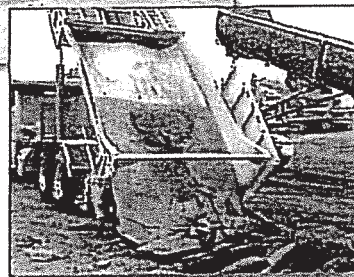


Figure 15. Delivering hardened concrete to a recycler

Another metal, portable, washout container, which has a rain cover to prevent overflowing, is shown in Figure 16. It is accompanied by an onsite washwater treatment unit, which reduces the pH and uses a forced weir tank system to remove the coarse aggregate, fine aggregate, and cement fines. The washwater can then be reused at the construction site to wash out other mixer truck chutes and equipment. The solids are

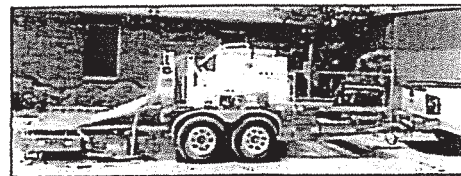


Figure 16. Washout container with a rain cover and onsite washwater treatment

allowed to harden together and can be taken to a concrete recycler (Fig. 17) to be crushed and used as road base or aggregate for making precast products, such as retaining wall blocks. All materials are recycled.

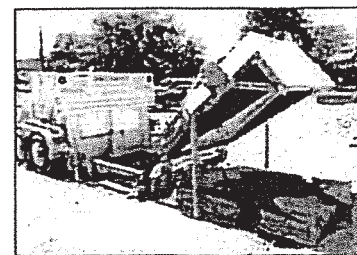


Figure 17. Delivering hardened concrete to a recycler

Siting Washout Facilities

Concrete washout facilities, such as washout pits and vinyl or metal washout containers, should be placed in locations that provide convenient access to concrete trucks, preferably near the area where concrete is being poured. However they

Stormwater Best Management Practice: Concrete Washout

should not be placed within 50 feet of storm drains, open ditches, or waterbodies. Appropriate gravel or rock should cover approaches to concrete washout facilities when they are located on undeveloped property. On large sites with extensive concrete work, washouts should be placed at multiple locations for ease of use by ready mixed truck drivers. If the washout facility is not within view from the pour location, signage will be needed to direct the truck drivers.

Operating and Inspecting Washout Facilities

Concrete washout facilities should be inspected daily and after heavy rains to check for leaks, identify any plastic linings and sidewalls have been damaged by construction activities, and determine whether they have been filled to over 75 percent capacity. When the washout container is filled to over 75 percent of its capacity, the washwater should be vacuumed off or allowed to evaporate to avoid overflows. Then when the remaining cementitious solids have hardened, they should be removed and recycled. Damages to the container should be repaired promptly. Before heavy rains, the washout container's liquid level should be lowered or the container should be covered to avoid an overflow during the rain storm.

Educating Concrete Subcontractors

The construction site superintendent should make ready mixed truck drivers aware of washout facility locations and be watchful for improper dumping of cementitious material. In addition, concrete washout requirements should be included in contracts with concrete delivery companies.

Reference

NRMCA 2009. Environmental Management in the Ready Mixed Concrete Industry. 2PEMRM. 1st edition. By Gary M. Mullins. Silver Springs, MD: National Ready Mixed Concrete Association.

Websites and Videos

Construction Materials Recycling Association
www.concreterecycling.org

National Ready Mixed Concrete Association
www.nrmca.org

National Ready Mixed Concrete Research and Education Foundation
www.rmc-foundation.org

Additional information and videos on concrete washout containers and systems can be found by a web search for "concrete washout."

Photograph Credits

Figures 1, 2. Mark Jenkins, Concrete Washout Systems, Inc.

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Figure 7. Brad Burke, Innovative Concrete Solutions, LLC

Figure 8. Ron Lankester, Enviroguard

Figures 9, 10. Mark Jenkins, Concrete Washout Systems, Inc.

Figures 11, 12. Tom Card, RTC Supply

Figures 13, 14, 15. Mark Jenkins, Concrete Washout Systems, Inc.

Figures 16, 17. Rick Abney Sr., Waste Crete Systems, LLP

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Don't Let Storm Water Run Off With Your Time and Money!

What the Construction Industry Should Know About Storm Water In Our Community

The construction industry plays an important role in improving our community's quality of life by not only providing new development, but also protecting our streams and rivers through smart business practices that prevent pollution from leaving construction sites.

Storm water runoff leaving construction sites can carry pollutants such as dirt, construction debris, oil, and paint off-site and into storm drains. In our community, storm drains carry storm water runoff directly to local creeks, streams, and rivers with no treatment. Developers, contractors, and homebuilders can help to prevent storm water pollution by taking the following steps:

1. Comply with storm water permit requirements.
2. Practice erosion control and pollution prevention practices to keep construction sites "clean."
3. Conduct advanced planning and training to ensure proper implementation on-site.

The remainder of this fact sheet addresses these three steps.

Storm Water Permit Requirements for Construction Activity

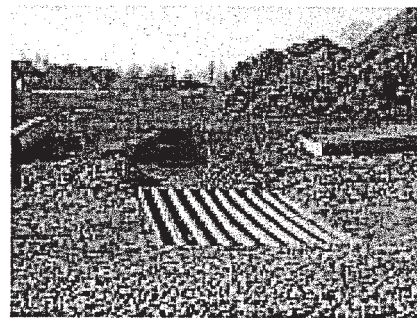
Planning and permitting requirements exist for construction activities. These requirements are intended to minimize storm water pollutants leaving construction sites.

- Pennsylvania's Erosion and Sediment Pollution Control Program (25 Pa. Code, Chapter 102) requires Erosion and Sediment Control Plans for all earth disturbing activities.
- The National Pollutant Discharge Elimination System (NPDES) Permit Program (25 Pa. Code, Chapter 92) requires that construction activities disturbing greater than one acre submit a Notice of Intent for coverage under a general NPDES permit.

Knowing your requirements before starting a project and following them during construction can save you time and money, and demonstrate that you are a partner in improving our community's quality of life. For more information about these programs, contact your local county conservation district office or the Department of Environmental Protection.

What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what are commonly called storm sewers. These are the drains you see at street corners or at low points on the sides of streets. Collectively, the draining water is called **storm water runoff**.



Erosion Control Practices:

- Perimeter controls (e.g. silt fence)
- Sediment traps
- Immediate revegetation
- Phased, minimized grading
- Construction entrance
- Protection of streams and drainage ways
- Inlet protection



An Ounce of Prevention

Rain that falls onto construction sites is likely to carry away soil particles and other toxic chemicals present on construction sites (oil, grease, hazardous wastes, fuel). Storm water, if not properly managed, carries these pollutants to streams, rivers, and lakes. Erosion and sediment control practices can serve as a first line of defense,

Pollution Prevention Practices:

- Designated fueling and vehicle maintenance area away from streams.
- Remove trash and litter.
- Clean up leaks immediately.
- Never wash down dirty pavement.
- Place dumpsters under cover.
- Dispose of all wastes properly.

minimizing clean up and maintenance costs, and the impacts to water resources caused by soil erosion during active construction. Erosion controls can reduce the volume of soil going into a sediment control device, such as a sediment trap, therefore, "clean out" frequencies are lower and maintenance costs are less. When possible, divert water around the construction site using berms or drainage ditches.

In addition, use pollution prevention and "good housekeeping measures" to reduce the pollution leaving construction sites as well. This can be as simple as minimizing the pollution source's contact with rainwater by covering it, maintaining a "clean site" by reducing trash and waste, and keeping vehicles well maintained.

The Best Laid Plans

Plans such as erosion and sediment control plans and storm water pollution prevention plans are important tools for outlining the erosion control and pollution prevention practices that you will use to manage storm water runoff prior to breaking ground. Developing good plans allows for proper budgeting and planning for the life of the project. Proper installation and maintenance of erosion and storm water controls is essential to a plan that works. Training for on-site staff helps to ensure the proper installation and maintenance of erosion controls and pollution prevention practices. Inspect controls and management techniques regularly to ensure they are working, especially after storm events. If polluted storm water is leaving the site, you may need to repair or add additional storm water controls.



The Bigger Storm Water Picture

Your community is preventing storm water pollution through a comprehensive storm water management program. This program addresses storm water pollution from construction, but it also deals with new development, illegal dumping to the storm sewer system, and municipal operations. It will also continue to educate the community and get everyone involved in making sure the only thing that storm water contributes to our streams is . . . water! Contact your community or the Pennsylvania Department of Environmental Protection for more information about storm water management.

For more information:

Pennsylvania Association of Conservation District's:
<http://www.pacd.org/default.html>

Pennsylvania Handbook of Best Management Practices for Developing Areas:
http://www.pacd.org/products/bmp/bmp_handbook.html

Storm Water Manager's Resource Center:
<http://www.stormwatercenter.net>

Pennsylvania Department of Environmental Protection:
<http://www.dep.state.pa.us>



2. Is there a well-publicized method for employees, businesses and the public to report stormwater pollution incidents?
☒ Yes ☐ No Township e-mail account as well as Facebook
3. Do you maintain documentation of all responses, action taken, and the time required to take action? ☒ Yes ☐ No

MCM #4 – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Are you relying on PA's statewide program for stormwater associated with construction activities to satisfy this MCM?
☒ Yes ☐ No (If No, complete all remaining questions for this MCM; if Yes, skip to MCM #5).

BMP #1: Develop your program consisting of all procedures necessary to comply with the requirements of this MCM. Your program shall provide for construction stormwater permitting, construction inspection, and enforcement of installation and maintenance of the necessary E&S control measures. Your program shall describe clearly how your program will be coordinated with DEP's NPDES Construction Stormwater Permitting program.

Measurable Goals: For new permittees, the written program for this MCM shall be developed during the first year of permit coverage; nevertheless, you are responsible for implementation of this MCM during entire term of this permit, including the time you are developing your program.

For all permittees, your program shall be reviewed and updated during each year of permit coverage. The purpose of the written program is to establish clear roles and responsibilities for the implementation of the MCM #4 requirements. An agreement between the permittee, the CCD, and any other resources to be used by the permittee that clearly defines roles for each entity is recommended. If an agreement is made, you shall place and keep a written copy in your file, consistent with the Retention of Records requirements in this Permit. Please note that in accordance with Section A.2.h in Part A of the Authorization to Discharge, as the permittee you are responsible to ensure that implementation of all requirements under this Permit are fulfilled.

1. For new permittees only, attach the written stormwater associated with construction activities program to the first report submitted to DEP.
N/A
2. If you are not a new permittee, did you complete and submit your written stormwater associated with construction activities program to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:
3. Date of last update or revision to the stormwater associated with construction activities program: 2/14/11

BMP #2: The permittee shall enact, implement, and enforce an ordinance to require the implementation of erosion and sediment control BMPs, as well as sanctions to ensure compliance.

Measurable Goal: Within the first year of coverage under the permit, new permittees shall enact and implement an ordinance that meets all applicable requirements of this permit. (Non-municipal permittees shall develop and implement an SOP).

Measurable Goal: Permittees shall submit a letter signed by a municipal official, municipal engineer or the municipal solicitor as an attachment to their first periodic report certifying the enactment and implementation of a stormwater management ordinance that meets all requirements of this permit.

1. For new permittees only, attach an ordinance (or SOP) and letter from an official, engineer or solicitor that addresses stormwater associated with construction activities to the first report submitted to DEP.
2. If you are not a new permittee, did you complete and submit your ordinance (or SOP) and letter from an official, engineer or solicitor that addresses stormwater associated with construction activities to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:

2014-2015 MS4

**Conditions placed on various permits pertaining
to Stormwater Maintenance**

[Type here]

Curb, sidewalk and driveway must each be placed individually, with joints separating each one.

Curb cut and adjacent accessible ramp to sidewalk must be installed at intersection.

Street pavement must be restored in-kind at completion of curb/driveway.

Street tree(s) must be planted in accordance with the approved Subdivision Plan prior to issuance of a Certificate of Occupancy.

Standard Single Family Home conditions:

Concrete monuments and property corner pins must be in place in accordance with the approved Subdivision Plan prior to issuance of a Certificate of Occupancy.

Iron pins are required to be placed at each property corner to verify setbacks at footing inspection and must be visible at final site inspection prior to issuance of a Certificate of Occupancy.

Concrete monuments, if applicable, and property corner pins are required to be placed at each property corner to verify setbacks at footing inspection and must be visible at final site inspection prior to issuance of a Certificate of Occupancy.

9

Within the public right-of-way, all driveways shall be paved with 4" of portland cement concrete or 1" bituminous material over a 4" aggregate base.

A separate permit for work in the street right of way for the driveway, apron and utilities shall be required.

Prior to occupancy the property owner must execute a SWM Facilities and BMP Maintenance and Monitoring Agreement with Lower Allen Township.

A Standard Stormwater Facilities and Best Management Practices Maintenance and Monitoring Agreement with the Township must be recorded before a Certificate of Occupancy is issued.

Permittee shall return all right-of-way improvements to their pre-project condition including sidewalks soil and grass, cross walks stripes and stop bars and any other pavement markings. Markings shall be completed with thermo plastic tape.

Designated BMP infiltration trench area must be protected from compaction during construction. Infiltration area must be staked /or fenced before start of construction, and not disturbed during construction.

All runoff from the dwelling must be directed to the infiltration area.

Be advised the holder of this permit is responsible for the proper clean-up of equipment and work area and proper containment and disposal of concrete wash water in compliance with EPA, DEP, and Township regulations. Concrete washout facilities must be provided at the job site prior to delivery of concrete or an alternative method of concrete clean up and disposal must be provided.

Structures in street or road right-of-way – In areas where there is curbing or curbing is proposed, structures, including mailbox structures, may be constructed in the right-of-way providing they are no closer than 18" from the face of curb. In areas where there is no curbing and none is proposed,

[Type here]

Standard Erosion and Sediment Control Conditions:

Erosion and Sediment Control measures are required for this project in accordance with Pennsylvania Department of Environmental Protection and US Environmental Protection Agency including:

1. Installation and maintenance of a Rock Construction Entrance.
2. Installation of a silt barrier fence or silt sock down slope of all stock piles and disturbed areas prior to earth disturbance, and maintained until final restoration of disturbed areas.
3. Installation of a concrete washout area with signage identifying the area is required.
4. Protection of storm water inlet and outlet features is required.
5. Designated BMP areas on the site must be protected from compaction during construction.
6. A Standard Stormwater Facilities and Best Management Practices Maintenance and Monitoring Agreement with the Township must be recorded before a Certificate of Occupancy is issued.
7. Diversion swale must be installed according to the approved plan.
8. Temporary sediment controls must be in place prior to earth disturbance according to the approved plan.
9. Please be advised the holder of this permit is responsible for the proper clean-up of equipment and work area and proper containment and disposal of concrete wash water in compliance with EPA, DEP, and Township regulations. Concrete washout facilities must be provided at the job site prior to delivery of concrete or an alternative method of concrete clean up and disposal must be provided.

Standard Public Sidewalk and Apron conditions:

1. Contact the Township at least 24 hours before starting work to schedule an inspection.
2. Traffic control must be in accordance with PennDOT Pub. 2131.
3. Sidewalk must be installed to the line, grade and cross section as shown on the approved Subdivision Plan and/or Township Standard, and in compliance with ADA accessibility standards.
4. The method for constructing the driveway connection to the sidewalk, curb and street must be approved by the Township Engineer prior to commencing this work.
5. Curb, sidewalk and driveway must each be placed individually, with joints separating each one.
6. Within the public right-of-way all driveways shall be paved with 4" of Portland cement concrete or 1" of bituminous material over a 4" aggregate base.

Standard Street Cut conditions:

1. Contact the Township at least 24 hours before starting work to schedule an inspection.
2. Traffic control must be in accordance with PennDot Pub. 213.
3. Temporary and permanent restoration shall be in accordance with attached details or as shown on the approved plans. Applicant is responsible for maintenance of pavement until accepted by the Township.

BMP #3: Develop and implement requirements for construction site operators to control waste at the construction site that may cause adverse impacts to water quality. While sediment is the most common pollutant of concern for MCM #4, there are other types of pollutants that also can be a concern and the intent of this BMP is to address these other types of pollutants, such as, but not limited to, discarded building materials, washout from concrete trucks, chemicals, litter, and sanitary waste.

Measurable Goal: New permittees shall establish requirements to address this BMP by the end of the first year of permit coverage. Renewal permittees shall continue to implement existing requirements and update as necessary. This could be implemented by written municipal ordinance/code provisions, by standard notes on the site plans, by any other written format that accomplishes the objectives of this BMP, or by any combination of these measures. The goal of this BMP shall be communicated to construction site operators during pre-construction meetings. This BMP shall be implemented during each year of the MS4 permit. Permittees must prepare and maintain records of site inspections, including dates and results and you must maintain these records in accordance with the Retention of Records requirements in this Permit.

1. Identify the mechanism(s) in place to regulate construction site operators and wastes produced at construction sites:
DEP State program followed. Site inspections to verify that BMPs are adhered to
2. During the reporting period what has been the results of implementing the mechanism(s) described above?

Prompt action taken to correct violations

BMP #4: Develop and implement procedures for the receipt and consideration of public inquiries, concerns, and information submitted by the public (to the permittee) regarding local construction activities. The permittee shall demonstrate acknowledgement and consideration of the information submitted, whether submitted verbally or in writing.

Measurable Goal: Permittees shall establish and implement a tracking system to keep a record of any submitted public information as well as your response, actions, and results. This BMP shall be implemented during each year of coverage under this General Permit and information should be submitted with the each periodic report.

Describe the tracking system established for documenting public information concerning local construction activities and describe responses taken during the reporting period:

Information is entered into computer with codes personnel assigned to inspect and follow up, results documented

MCM #5 – POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Are you relying on PA's statewide program for MCM #5 BMPs #1 - #3? ☒ Yes ☐ No

(If No, complete all remaining questions for this MCM; if Yes, skip to BMP #4)

BMP #1: Develop a written procedure that describes how the permittee shall address all required components of this MCM. Guidance can be found in the Pennsylvania Stormwater Best Management Practices Manual.

Measurable Goal: The written procedure shall be developed by the end of the first year of permit coverage and be reviewed and updated every permit year thereafter, as needed. The intent of BMP #1 is for the permittee to describe how the listed tasks will be accomplished.

1. For new permittees only, attach your written procedure for post-construction management to the first report.
2. If you are not a new permittee, did you complete and submit your written procedure for post-construction management to DEP? ☐ Yes ☒ No

If Yes, provide the latest submission date:

3. Date of last review or update of post-construction management procedure: 3/9/15

	A	B	C	D	E	F	G	H
Lower Allen Township								
1								
2	Stormw							
3	Lower Allen Township							
4								
				Identifier			Description of Actions	
5	Date	Empl oyee	Location	Permit #	SLD or DP #	Other		
6	03/04/14	RJA	1302 Slate Hill Rd.	Pending			Meeting w/ Hartman and Assoc.	
7	04/01/14	RJA	4915 Ritter Rd		2013-03		Checked concrete washout and E and S measures – ok	
8	04/03/14	RJA	3400 Hartzdale Dr		2012-07		Walmart E and S – ok	
9	04/03/14	RJA	LAT Park				Inspected grass parking area. Grid reported exposed.	
10	04/08/14	RJA	5017 Hart Crossing	20130535			Site inspection. Grading.	
11	4/14/14	RJA	850 Lisburn Rd.	20140069			E and S email sent to Triple Crown	
	4/28/14	JME	Lisburn Rd between Spangler Mill Rd and west end of SCIC property				Observed top-dressing, final grading and seeding of earth disturbance from UGI pipeline project	
12				MS4			Reported observations from May 28 to CCCC (McCollum)	
	4/29/14	JME	Lisburn Rd between Spangler Mill Rd and west end of SCIC property	MS4				
13			1525 Slate Hill Rd.	20130363			Site and BMP inspection. Level spreader needed at the BMP	
14	4/29/14	RJA						
15	4/30/14	DJF	Chatham Rd/Elmhurst Rd			MS4	Rain event inspection. New catch basin working properly.	
16	4/30/14	DJF	1301 Carlisle Rd – CCHS		2008-11		Rain event inspection. Rain garden with minimal storage, performing ok.	
17	4/30/14	DJF	Deerfield Rd at Allendale Way			MS4	Rain event inspection. Repaired pipe section draining.	
18	4/30/14	DJF	Edgar Lane Channel			MS4	Rain event inspection. Moderate channel flow. New gabion wall extension performing ok.	
19	4/30/14	DJF	St Johns Rd – Gettysburg Rd to US 15			MS4	Rain event inspection. System ok, no excessive flow in street.	
20	4/30/14	DJF	4641 Westport Drive – MEPS			MS4	Rain event inspection. Second channel cut has been re-established. Follow up with upstream property owner.	
21	4/30/14	DJF	Gettysburg Rd at Audobon Rd			MS4	Rain event inspection. Roadside swales filling, no flow on roadway.	
22	4/30/14	DJF	4713 Gettysburg Rd – Bortek			MS4	Rain event inspection. Upstream flowing ok, not near top of bank. Downstream, starting to pond at outlet.	
23	4/30/14	DJF	4732 Gettysburg Rd		2013-01		Rain event inspection. Minimal basin storage, basin not yet seeded/planted.	

	A	B	C	D	E	F	G	H
24	4/30/14	DJF	3601 Simpson Ferry Rd, Trinity HS	20120516			Rain event inspection. Discharge from basin properly controlled. No further action required.	
25	4/30/14	DJF	Seneca SW pump			MS4	Rain event inspection. Pump not running, not needed.	
26	4/30/14	DJF	Oneida Rd low point				Rain event inspection. Clear, no ponding.	
27	4/30/14	DJF	Slate Hill Rd (backside)			MS4	Rain event inspection. Check roadside drainage.	
28	4/30/14	DJF	St Johns Rd – Lisburn Rd to Slate Hill Rd.				Rain event inspection. Check roadside and crosspipe drainage.	
29	4/30/14	DJF	Brandton Rd			MS4	Rain event inspection. Check roadside and low point drainage.	
30	4/30/14	DJF	Indian Lane			MS4	Rain event inspection. Check roadside drainage.	
31	4/30/14	DJF	Rosemont Ave			MS4	Rain event inspection. Check roadside and low point drainage.	
32	4/30/14	DJF	Primrose Ave			MS4	Rain event inspection. Check roadside drainage.	
33	4/30/14	DJF	Rana Villa Ave			MS4	Rain event inspection. Check roadside drainage.	
34	4/30/14	DJF	Cedar Ave			MS4	Rain event inspection. Check roadside and low point/potential crosspipe drainage.	
35	4/30/14	DJF	Fernwood Ave			MS4	Rain event inspection. Check roadside drainage.	
36	4/30/14	DJF	Laurel Ave			MS4	Rain event inspection. Check roadside drainage.	
37	4/30/14	DJF	Massachusetts Ave			MS4	Rain event inspection. Check roadside drainage.	
38	4/30/14	DJF	Santa Maria Ave			MS4	Rain event inspection. Check roadside drainage.	
39	4/30/14	DJF	Schuykill Ave			MS4	Rain event inspection. Check roadside drainage.	
40	4/30/14	DJF	Nina Alley			MS4	Rain event inspection. Check roadside drainage.	
41	4/30/14	DJF	Lebanon Ave			MS4	Rain event inspection. Check roadside drainage.	
42	4/30/14	DJF	New York Ave			MS4	Rain event inspection. Check roadside and low point/potential crosspipe drainage.	
43	5/5/14	DJF	1719 Olmsted Way			MS4	Phone: pool service contractor re: requirements for pool water discharge	
44	5/6/14	DJF	Highpoint – 1445 Arcona Road		2014-01		Phone: Jim Shultz. SWM and EandS criteria for temp. office trailer.	
45	5/6/14	RJA	5017 Hart Crossing					
46	5/7/14	DJF	LAT			MS4	Phone: Jeremy Miller, HT, re: rain garden design.	
47	5/13/14	RJA	3506 Hartzdale Dr	20140174			Conditions for parking lot carnival. One call marking.	
48	5/13/14	RJA	3400 Hartzdale Dr		2012-07		Confirmed with Britt that CCCP approved plant species @ riparian buffer	
49	5/14/14	RJA	850 Lisburn Rd.	20140069			E and S and safety barrier at sidewalk	
50	5/16/14	DJF	4641 Westport Drive – MEPS			MS4	Contact: Kelly Hollinger re: rock channel maintenance needed.	
51	5/21/14	RJA	1445 Arcona Rd	20140051	2014-01	MS4	Site inspection.	
52	5/27/14	DJF	4641 Westport Drive – MEPS			MS4	Phone: Kelly Hollinger re: runoff/erosion to MEPS from Lena Drive site.	

	A	B	C	D	E	F	G	H
53	5/28/14	DJF	LAT			MS4	Phone: Rick Fraven, Carlisle Borough, re: MS4 permitting requirements.	
54	5/28/14	DJF	4641 Westport Drive – MEPS			MS4	Phone: Kelly Hollinger re: runoff/erosion to MEPS from Lena Drive site.	
55	5/28/14	DJF	850 Lisburn Rd: Brooks Edge		2013-07		Field meeting with Supt. See NOV . Advised to Stop Work until sediment on road corrected.	
56	5/30/14	DJF	3130 Morningside Drive			MS4	Phone/e-mail: Rick Castranio re: potential revisions to site, SWM.	
57	6/2/14	DJF	Highpoint – 1445 Arcona Road		2014-01		Site meeting re: SWM and EandS controls	
58	6/4/14	DJF	3130 Morningside Drive			MS4	Field meeting with Rick Castranio re: potential revisions to site, SWM.	
59	6/6/14	dJF	2233 Gettysburg Rd.			MS4	Site tour of BMPs at LAT Building with environmental group with CAPCOG.	
60	6/10/14	DJF	LAT			MS4	Phone: Jeremy Miller, HT, re: CBPRP requirements	
61	6/11/14	DJF	1711 Cedar Cliff Drive			MS4	Field view to investigate sinkhole.	
62	6/11/14	RJA, DJF	Meridian				Progress inspection pre-final site conditions	
63	6/11/14	DJF	3506 Capital City Mall Drive			MS4	Field view to investigate potential sinkhole; storm sewer system damage.	
64	6/12/14	DJF	LAT			MS4	Meeting, County MS4 municipal working group	
65	6/13/14	DJF	Seneca Road			MS4	Field view to check operation of SW pump.	
66	6/16/14	DJF	3500 Capital City Mall Drive		2014-09		Phone: Tim Diehl re: SWM requirements for Field and Stream LD plan.	
67	6/16/14	DJF	4732 Gettysburg Rd		2014-02		Phone: Frank Lentz re: BMP OandM notes.	
68	6/16/14	JME	254 Ewe Road	20140153			contractor dumped wastewater into curb inlet-contractor notified	
69	6/18/14	RJA	1418 Carlisle Rd.	20140247			Impervious coverage calc. For driveway and slab permit.	
70	6/18/14	DJF	4732 Gettysburg Rd		2014-02		Phone: Frank Lentz re: SWM/Eand S controls	
71	6/26/14	RJA	Brooks Edge				E and S controls at neighbor's corner pin. Yarnall e-mailed.	
72	6/27/14	DJF	Locust Street System			MS4	Field inspection.	
73	6/27/14	DJF	4641 Westport Drive – MEPS			MS4	Field meeting with Jake from JVH re: channel repairs.	
74	6/30/14	DJF	400 Block Deerfield Rd.			MS4	Site inspection: sinkhole mitigation and repair.	
75	7/1/14	DJF	4641 Westport Drive – MEPS			MS4	Phone and field meeting with Jim Hoffman re: channel repairs.	
76	7/1/14	DJF	1215 Manor Drive		2007-12		Phone: Brad Bock re: construction starting; E and S controls.	
77	7/1/14	RJA	1656 Lowell Ln	20130562			Site grading inspection requested by neighbor.	
78	7/2/14	DJF	2015 Streets for paving			MS4	Field view of project sites re: drainage improvements needed.	
79	7/3/14	DJF	400 Block Deerfield Rd.			MS4	Site inspection: sinkhole mitigation and repair.	

	A	B	C	D	E	F	G	H
	7/3/14	DJF	5024 Simpson Ferry Rd - MSWD parking lot		DP 2014-01		Phone: Scott Akens re: SWM	
80	7/9/14	DJF	4532 Gettysburg Rd		2013-01		Phone: Kim Lenker re: SWM items constructed.	
81	7/11/14	DJF	115 Creek Rd.		2014-10		Meeting: design engineer for Land Development Plan	
82	7/11/14	DJF	4641 Westport Drive - MEPS			MS4	Field view drainage channel.	
83	7/14/14	RJA, DJF	Walmart		2012-07		Site inspection. Grading.	
84	7/14/14	RJA, DJF	Windsor PL Parking lot		2013-01		Site final	
85	7/14/14	RJA, DJF	Magnolia Cafe				Site inspection.	
86	7/14/14	DJF	St. Johns Rd. near Cherokee			MS4	Storm system inspection with camera.	
87	7/14/14	DJF	Yellow Breches Creek at PA			MS4	Phone: Scott Miller, reporting water withdrawal from creek by a truck. Advised that is not prohibited, no permit needed.	
88	7/14/14	DJF	114.				Basin status	
89	7/15/14	RJA	Yellow Breches Farm		2004-07		MS4 webinar	
90	7/16/14	DJF	PSATS			MS4	MS4 webinar	
91	7/16/14	DJF	15 th /State/Hummel			MS4	Phone: Brian Propper, CH Borough re: drainage problem in CH.	
92	7/25/14	RJA	1445 Arcona Rd		2014-01		E and S failure. Per DJF CCCD visited the site for corrections.	
93	7/28/14	DJF	200 Belaire Drive			MS4	Phone and field meeting with Rich Benner re: street flooding/MS4 system capacity.	
94	7/28/14	DJF	Highpoint		2014-01		Phone: Vince McCollum re: site controls.	
95	7/30/14	DJF	Highpoint		2014-01		Phone: Vince McCollum re: site controls.	
96	8/01/14	DJF	1504 Woodcreek Dr.		DP 2006-01		Phone: John Madden re: Drainage Plan requirements	
97	8/04/14	RJA	5024 Simposn Ferry Rd	20140147			E and S and BMP infiltration trench inspection	
98	8/5/14	DJF	2015 Streets for paving			MS4	Field view of project sites re: drainage improvements needed.	
99	8/05/14	DJF	Beacon Hill, Phase 3		2005-22		Site inspection.	
100	8/06/14	DJF	LAT			MS4	Phone: Kirk Stoner, CCPD, re: TMDL	
	8/6/14	RJA	1445 Arcona Rd		2014-01		Site meeting w/ CH&N Verify clay used at basin floor and in center of berm. Contractor stated CCCD corrections from 7/25/14 E and S failures are under way. 24 inch silt sock seen at the street.	
101							Phone: Tim Diehl re: SWM requirements for Field and Stream LD plan.	
102	8/11/14	DJF	3500 Capital City Mall Drive		2014-09		Phone: Tim Diehl re: SWM requirements for Field and Stream LD plan.	
103	8/12/14	DJF	3500 Capital City Mall Drive		2014-09		Phone: Tim Diehl re: SWM requirements for Field and Stream LD plan.	
104	8/13/14	DJF	LAT			MS4	Phone: Mike Hickman, DEP, re: LAT inspection by DEP	
105	8/13/14	DJF	4722 Gettysburg Road		2005-01		Tressler/Ex. Park West 4: Site inspection, all site items complete.	
106	8/13/14	DJF	2015 Streets for paving			MS4	Field view project sites re: needed drainage improvements	

	A	B	C	D	E	F	G	H
107	8/19/14	DJF	2750 Yetter Court		DP 2014-02		Phone: Tim DeWire re: NPDES permit for Compost Pad.	
108	8/19/14	DJF	Highpoint		2014-01		Phone: Kenny Flugga re: SW and Eands controls construction.	
109	8/19/14	DJF	Wesley Drive/SR 2021			MS4	Phone: Frank Williamson re: concrete sawing slurry flowing to storm inlet by PennDOT contractor. Field inspection to verify.	
	8/20/14	DJF	Wesley Drive/SR 2021			MS4	Phone: Chris Kohan, PennDOT re: concrete sawing slurry flowing to storm inlet by PennDOT contractor. Chris to follow up and correct.	
110								
111	8/20/14	DJF	Wesley Drive/SR 2021			MS4	Phone/e-mail with photo: Vince McCollum re: concrete sawing slurry flowing to storm inlet by PennDOT contractor.	
112	8/21/14	RJA	1445 Arcona Rd		2014-01		Mtg. W/Kenny seep collar revised design to DJF	
113	8/22/14	DJF	Deerfield Rd.			MS4	Storm sewer system inspection	
114	8/22/14	DJF	Locust Street System			MS4	Storm sewer system inspection	
	8/25/14	RJA/ DJF	1445 Arcona Rd		2014-01		Mtg w/DJF CCCD/CH&N. CH&N to get DJF redlined as approved by CCCD plan, construct temporary swale to pipe under Arcona w/sizing to DJF prior	
115							Phone: Scott Akens re: SWM for UMHG basketball court	
	8/25/14	DJF	5120 Simpson Ferry Road		DP 2014-03			
116								
117	8/25/14	DJF	1504 Woodcreek Dr.		DP 2006-01		Phone: Ken Vandenburgh re: Drainage Plan requirements	
	8/25/14	DJF	Lena Drive, WP Lot 15		Future LD plan		Phone: Greg Schwartz, Dawood, re: lot clearing; Eands controls	
118							Witnessed BMP pipe connection to SW inlet box in Arthur Ave.	
119	08/26/14	RJA	5024 Simposn Ferry Rd		20140147			
	08/27/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Phone: Eric Mountz, TPD, re: agreement for SW facility maintenance in PennDOT RW.	
120								
121	8/27/14	DJF	LAT			MS4	Phone: Mike Hickman, DEP, re: LAT inspection by DEP	
	8/29/14	DJF	Lena Drive, WP Lot 15		Future LD plan		Phone: Greg Schwartz, Dawood, re: lot clearing; Eands controls	
122								
123	08/29/14	RJA	Highpoint	201400051	2014-01		Wetlands protection plan review. Agreement review.	
124	09/03/14	DJF	2237 Gettysburg Rd.			MS4	Site meeting with CCCD, pre-construction	
125	09/02/14	RJA	4915 Ritter Rd				E and S status. OK	
126	9/4/14	DJF	1504 Woodcreek Dr.		DP 2006-01		Phone: Ken Vandenburgh re: Drainage Plan requirements	
127	09/09/14	RJA	910 Century Dr.				Trench drain proposed. Plan pending.	
128	9/9/14	RJA	429 Deerfield Rd.				Drainage standing in side yard.	
	09/09/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Phone: Eric Mountz, TPD, re: agreement for SW facility maintenance in PennDOT RW.	
129							E and S check. Fiber sock to be staked @ 10' o.c.? Kirby to confirm.	
130	9/9/14	RJA	Cedar Springs Run Park					
131	9/10/14	DJF	LAT			MS4	PWEA Workshop: SW authorities and partners	
132	9/10/14	DJF	1504 Woodcreek Dr.		DP 2006-01		Phone: Ken Vandenburgh re: Drainage Plan requirements	

	A	B	C	D	E	F	G	H
	09/11/14	RJA	910 Century Dr.				Exempt activity. Connecting yd drain to bldg leader/drain pipe system.	
133	09/12/14	DJF	2500 Lisburn Rd.			MS4	Phone: Carol Piontkowski, DOC, re: MS4 reporting requirements.	
134	09/15/14	RJA	LAT storm drains				Pipe assessment @ Deerfield, Belaire Ave, Slate Hill.	
135	09/15/14	RJA	233 Creekwood Dr				Sump pump drainage swale repaired by Sheffer.	
136	09/16/14	DJF	LAT			MS4	SWM/MS4 workshop: CAPCOG	
137	09/17/14	JME	NA		NA	MS4	Participated in YBWA BOD mtg. To help plan annual meeting with MS 4 program at LACP: "Taking Care of Stormwater: Creek Friendly Ideas for Homeowners"	
138				NA			Site final inspection w/John Ortenzio	
139	09/19/14	DJF	Windsor PL Parking lot		2013-01		Phone/e-mail: Eric Mountz, TPD, re: agreement for SW facility maintenance in PennDOT RW.	
140	09/19/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Distributed YBWA MS4 program flier (see entry above) at BOC mtg and announced event during mtg.	
141	09/22/14	JME	NA	NA	NA	MS4	Site inspection re: potential Small Flow Treatment Facility discharge to MS4.	
142	09/23/14	DJF	1852 Sheepford Rd.			MS4	Requested posting of YBWA MS4 program flier on various web sites (YBWA, WAY, DEP, LAT)	
143	9/23/14	JME	NA	NA	NA	MS4	Phone: Vince McCollum, CCCD, re: revisions to Eands Plan.	
144	9/25/14	DJF	1215 Manor Drive		2007-12		E and S in place. Storm drain inlets set.	
145	9/25/14	RJA	Highpoint 1445 Arcona Rd		2014-01		Retaining wall installed without permit. Contractor's truck leaked oil in the roadway.	
146	9/29/14	RJA	4000 Ashburn Rd.	N/A			Phone: Eric Mountz, TPD, re: agreement for SW facility maintenance in PennDOT RW.	
147	09/29/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Site inspection.	
148	9/29/14	RJA	Highpoint 1445 Arcona Rd		2014-01		Storm drain inlets and under drain locations set.	
149	#N/A	RJA	Highpoint 1445 Arcona Rd		2014-01		SLD site stabilization & controls in place	
150	9/30/14	REL	3255 Harrison Rd	20140346			SLD site stabilization & controls in place	
151	10/1/14	REL	3259 Harrison Rd	20140354			E and S in place. No RCE but ok per DJF	
152	10/03/14	RJA	Compost Site-2750 Yetter Court		DP 2014-02		Phone: Corey, Alpha Engineers, re: revisions to Eands Plan.	
153	10/6/14	DJF	1215 Manor Drive		2007-12		SLD site stabilization & controls in place	
154	10/6/14	REL	1446 Mollys Run	20140382		MS4	E-mailed Kenny to make Delaware use concrete washout.	
155	10/06/14	RJA	Highpoint 1445 Arcona Rd		2014-01		E and S in place.	
156	10/06/14	RJA	Compost Site-2750 Yetter Court		DP 2014-02		SLD site stabilization & controls in place	
157	10/07/14	REL	3255 Harrison Rd	20140346		MS4	SLD site stabilization & controls in place	
158	10/08/14	REL	1446 Mollys Run	20140382			NOV pending. E-mailed Delaware Concrete -- washing out on the gro	
159	10/09/14	RJA	Highpoint 1445 Arcona Rd	20140051	2014-01			

	A	B	C	D	E	F	G	H
	10/09/14	JME	NA		NA	MS4	Helped set up and conduct YBWA meeting at which members and guests received MS4 information during presentation of the program noted in 09/17/14 entry above.	
160	10/14/14	REL	1446 Mollys Run	NA		MS4	SLD site stabilization & controls in place	
161				20140382				
162	10/20/14	RJA	Highpoint 1445 Arcona Rd	20140051	2014-01		Wetlands E and S okay. Monitor RCE as utilities are installed.	
163	10/20/14	JME	2901 Lisburn Rd.	20140383	NA	NA	Observed lack of RCE at construction entrance along Slate Hill Road. Directed CD staff response.	
164	10/20/14	DJF	1504 Woodcreek Dr.		DP 2006-01	NA	Phone: Ken Vandenburgh re: Drainage Plan requirements	
	10/20/14	JME	850 Lisburn Rd.		NA	NA	Responded to LAPD incident report dated 10-17-14 regarding debris tracked onto Lisburn Road from construction site—apparent problem with RCE. Directed staff response and initiated follow-up with permittee.	
165				20140288			Final BMP remodel inspection.	
166	10/21/14	RJA	1730 Liberty Cove	20130173			Phone: Bill Vail, Deacon Industrial, re: outdoor storage expansion, stone, clearing, Drainage Plan requirements.	
167	10/21/14	DJF	2410 Gettysburg Rd.		DP 2014-05		Attended PAWC source water protection meeting with other stakeholders to provide input for their SWP plan update.	
168	10/23/14	JME	NA	NA	NA	MS4	SLD site stabilization & controls in place	
169	10/28/14	REL	1448 Mollys Run	20140406		MS4	Site inspection, BMP controls in place	
170	10/28/14	REL	1504 Woodcreek Dr.	20140513		MS4	Phone: Carol Pionkowski, DOC, re: MS4 reporting requirements.	
171	10/28/14	DJF	2500 Lisburn Rd.			MS4	Forwarded incident report to property owner re: mud & debris tracked onto roadway and no E & S controls in place for renovations at SFD. Requested assistance with compliance.	
	10/28/14	JME	1852 Sheepford Rd.		NA			
172				20140419				
173	10/28-29/14	DJF	LAT			MS4	Dirt and Gravel Road Training and certification	
174	10/29/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Field inspection: Eands site controls.	
175	10/29/14	REL	1448 Mollys Run	20140406		MS4	SLD site stabilization controls in place	
176	10/29/14	DJF	1852 Sheepford Rd.			MS4	Phone: Mike Hickman, DEP, re: potential Small Flow treatment Facility discharge to MS4.	
177	10/30/14	DJF	1504 Woodcreek Dr.		DP 2006-01		Phone: Jeff Kelly, CCPD re: Drainage Plan review	
178	10/30/14	DJF	1852 Sheepford Rd.			MS4	Phone: Mike Hickman, DEP, re: potential Small Flow treatment Facility discharge to MS4.	
179	10/31/14	DJF	4545 Westport Drive		2005-25		Phone: Sandy re: BMP inspection reporting.	
180	10/31/14	DJF	1595 Thompson Lane		DP 2011-01		Phone: Jon Ruel re: BMP inspection reporting.	
181	10/31/14	DJF	3599 Gettysburg Rd.		2006-02		Phone: Bill Kollas re: BMP inspection reporting.	
182	10/31/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Field inspection: Eands site controls.	

	A	B	C	D	E	F	G	H
183	10/31/14 DJF	Compost Site-2750 Yetter Court	DP 2014-02	Field inspection: Eands site controls.				
184	11/03/14 REL	3255 Harrison Rd	20140346	SLD site stabilization controls in place				
	11/3/14 RJA	Highpoint 1445 Arcona Rd	2014-01	Cautioned a driver from Zeigler Concrete to use the concrete wash pit behind the job site trailer. That will be their only warning. Told KF the same thing. CH&N will be cited next time. Base paving inspected.				
185			DP 2007-01	Phone: Chris Fedoriv re: BMP inspection reporting.				
186	11/3/14 DJF	1403 Wellgate Ln.	2014-01	Field inspection: Eands site controls.				
187	11/3/14 DJF	Highpoint 1445 Arcona Rd.	DP 2014-02	Field inspection: Eands site controls.				
188	11/3/14 DJF	Compost Site-2750 Yetter Court		Field inspection: Eands site controls.				
189	11/3/14 DJF	2237 Gettysburg Rd.		Field inspection: Eands site controls.				
190	11/4/14 REL	1504 Woodcreek Dr.	20140513	E&S Controls BMP inspection				
191	11/4/14 DJF	3950 Hartdale Drive	2005-21	Phone: Bob Patching, Progressive Ins. Re: BMP inspection reporting.				
192	11/4/14 RJA	Highpoint 1445 Arcona Rd	2014-01	Told Kenny to clean out the concrete washout area. 1" wearing inspected.				
193	11/5/14 REL	3255 Longview Rd	20140381	SLD site stabilization controls in place				
194	11/5/14 DJF	3702 Gettysburg Rd.	2011-02	Phone: Joe Giovagnoli, Juice and Java, re: BMP inspection reporting				
195	11/5/14 DJF	Liberty Point	2005-24	Phone: Rosalie Roland, Roland Builder, re: BMP inspection reporting				
196	11/5/14 DJF	1215 Manor Drive	2007-12	Phone: Lowell Gates re: BMP inspection reporting				
197	11/6/14 DJF	Liberty Point	2005-24	Phone: Roland Builder office representative re: BMP inspection reporting				
198	11/6/14 DJF	1215 Manor Drive	2007-12	Phone: Lowell Gates re: BMP inspection reporting				
199	11/7/14 DJF	LAT		Harrisburg Sinkhole Summit				
200	11/7/14 REL	3255 Longview Rd	20140381	SLD site stabilization controls in place				
	11/7/14 JME	850 Lisburn Road	NA	While at meeting with LATA and TCC, requested that Tim Spangler have the RCE maintained—mud tracked onto Lisburn Road with thin film all the way to Carlisle Rd.				
201			20140419	SLD site stabilization controls in place				
	11/10/14 REL	1448 Mollys Run						
202			20140406					
	11/12/14 REL	1446 Mollys Run		SLD site stabilization controls in place				
203			20140382					
204	11/13/14 REL	3259 Harrison Rd	20140354	SLD site stabilization controls in place				
205	11/14/14 DJF	1718 Liberty Cove	2005-24	Phone: Harold Duffy re: BMP inspection reporting				
206	11/17/14 REL	3255 Harrison Rd.	20140346	SLD site stabilization controls in place				
207	11/18/14 DJF	Compost Site-2750 Yetter Court	DP 2014-02	Field inspection: Eands site controls.				

	A	B	C	D	E	F	G	H
	11/18/14	REL	1446 Mollys Run	20140382		MS4	SLD site stabilization controls in place	
208	11/19/14	REL	3259 Harrison Rd	20140354			SLD site stabilization controls in place	
209	11/20/14	RJA	4510, 4514 and 4518 Woods Way	20140519, 527 aand 733			Check BMP swale at Shed.	
210								
211	11/21/14	DJF	2237 Gettysburg Rd.			MS4	Field inspection: Eands site controls.	
212	11/21/14	DJF	Ravenwood Road – vacant lot		2003-06		Phone: Bob Fisher, RJ Fisher Associates, re: SWM issues with development of vacant lot.	
213	11/21/14	DJF	Moreland Court – vacant lot		2003-06		Phone: Bob Fisher, RJ Fisher Associates, re: SWM issues with development of vacant lot.	
214	11/21/14	RJA	Cedar Springs Run Park				Storm Water manhole installed near ped. Bridge.	
215	11/24/14	DJF	5120 Simpson Ferry Rd. - UMHG			MS4	Phone: Rich Chubb, UMHG, re: BMP inspection reporting	
216	11/24/14	DJF	5026 Arthur Ave.		2010-04		Phone: Tracy Etter, re: BMP inspection reporting	
217	11/24/14	DJF	4712 Gettysburg Rd., EPW4		2005-01		Phone: Molly Fidler, select Capital, re: BMP inspection reporting	
218	11/24/14	REL	1446 Mollys Run	20140382		MS4	SLD site stabilization controls in place	
219	11/24/14	DJF	1706 Wyncham Rd.		DP 2012-02		Phone: Brian Rhykerd, re: BMP inspection reporting	
220	11/25/14	REL	3259 Harrison Rd	20140354		MS4	SLD site stabilization controls in place	
221	11/25/14	REL	1454 Mollys Run	20140384		MS4	SLD site stabilization controls in place	
222	11/25/14	REL	1504 Woodcreek Dr.	20140513		MS4	BMP controls in place	
223	11/26/14	REL	1448 Mollys Run	20140406		MS4	SLD site stabilization & controls in place	
224	12/3/14	DJF	LAT			MS4	CAPCOG MS4 Workshop (Lemoyne)	
	12/3/14	JME	NA		NA	MS4	Attended YBWA meeting. Discussion included several community outreach programs that will encourage and train property owners to utilize conservation planting and SWM practices.	
225				NA				
	12/3/14	REL	1454 Mollys Run			MS4	SLD site stabilization controls in place	
226				20140384				
	12/3/14	REL	1454 Mollys Run			MS4	SLD site stabilization controls in place	
227				20140384				
	12/3/14	REL	1431-1431 Keegan Lane			MS4	SLD site stabilization controls in place	
228				20140569-573				
229	12/4/14	RJA	2750 Yetter Court		20140290		Final site inspection w/CCCD. Re-check in spring.	

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230	12/4/14	RJA	2410 Gettysburg Rd.		Pending		Site inspection. Wood chip berm OK.	
231	12/5/14	RJA	1656 Lowell Ln		20130562		Site final grading.	
232	12/5/14	REL	1448 Mollys Run		20140406		SLD site stabilization controls in place	
233	12/5/14	REL	1431-1439 Keegan Lane		20140569-573		SLD site stabilization controls in place	
234	12/8/14	DJF	880 Century Drive		2007-09		Phone: Frank Lentz, K and W Engineers, re: BMP inspection reporting	
235	12/08/14	DJF	2410 Gettysburg Rd.		DP 2014-05		Phone: Dave Weihbrecht, Advantage Engineers, re: SWM, Drainage Plan requirements.	
236	12/10/14	RJA	2239 Gettysburg Rd	20140438			E and S controls.	
237	12/11/14	REL	1431-39 Keegan Lane	20140569-73		MS4	SLD site stabilization controls in place	
238	12/11/14	DJF	2410 Massachusetts Ave.		2010-01		Phone: Dillon Shannon re: BMP inspection reporting	
239	12/12/14	DJF/ RJA	New York Ave./Lebanon Ave.			MS4	Field survey for 2015 drainage improvement project with street paving	
240	12/15/14	RJA	4114 Willow Bend			MS4	Basin status.	
241	12/12/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Field inspection: Eands site controls.	
242	12/15/14	DJF	5035 Ritter Rd.		DP 2010-02		Phone: Bill Hollenbaugh re: BMP inspection reporting	
243	12/15/14	DJF	2404 Gettysburg Rd.		2015-01		Meeting with design engineer, K and W	
244	12/15/14	DJF	880 Century Drive		2007-09		Phone: Frank Lentz, K and W Engineers, re: BMP inspection reporting	
245	12/16/14	REL	3255 Longview Rd	20140381			SLD site stabilization & controls in place	
246	12/16/14	DJF	4732 Gettysburg Rd		2014-02		Phone: Frank Lentz re: SWM basin criteria	
247	12/18/14	DJF	Highpoint 1445 Arcona Rd.		2014-01		Field inspection: Eands site controls.	
248	12/18/14	DJF	850 Lisburn Rd: Brooks Edge		2013-07		Field inspection: Eands site controls.	
249	12/19/14	REL	3255 Longview Rd	20140381		MS4	SLD site stabilization & controls in place	
250	12/23/14	REL	1504 Woodcreek Dr.	20140513			Site inspectin E&S controls in place	
251	12/30/14	DJF	2237 Gettysburg Rd.			MS4	Field inspection: Eands site controls.	
252	12/31/14	REL	3257 Harrison Rd	20140618		MS4	SLD site stabilization & controls in place	
253	01/05/15	DJF	2410 Gettysburg Rd.		DP 2014-05		Phone: Dave Weihbrecht, Advantage Engineers, re: SWM, Drainage Plan requirements.	
254	01/06/15	DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave., New York Ave.			MS4	Drainage system improvement design.	
255	01/07/14	REL	1454 Mollys Run	20140384		MS4	SLD site stabilization & controls in place	

	A	B	C	D	E	F	G	H
	01/07/15	REL	1454 Mollys Run			MS4	SLD site stabilization & controls in place	
256				20140384				
257	01/08/15	DJF	2500 Lisburn Rd.			MS4	Phone: Carol Piontkowski, DOC, re: MS4 reporting requirements.	
258	01/08/15	DJF	LAT			MS4	MS4 database/spreadsheet update	
259	01/09/15	DJF	LAT			MS4	MS4 database/spreadsheet update	
260	01/12/15	DJF	2404 Gettysburg Rd.		2015-01		SWM Design plan review.	
261	01/12/15	DJF	LAT			MS4	MS4 database/spreadsheet update	
262	01/12/15	DJF	1000 Block St. Johns Rd.			MS4	Phone: Harry Riley re: potential improvements to storm drainage system.	
263	01/12/15	REL	1454 Mollys Run	20140384		MS4	SLD site stabilization & controls in place	
264	01/14/15	DJF	2700 Yetter Ct.		2012-01		Phone: Brett McGowan, Vantage Foods, re: BMP inspection reporting requirements	
265	01/14/15	RJA	Highpoint 1445 Arcona Rd		2014-01		Right-of-way inspection. Checked E and S	
	01/15/15	DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Drainage system improvement design.	
266								
	01/15/15	REL	1635 Lowell Lane			MS4	E&S Controls BMP inspection	
267				20140544				
	01/16/15	DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Drainage system improvement design.	
268								
	01/16/15	REL	1633 Lowell Lane			MS4	E&S Controls BMP inspection	
269				20140543				
	01/20/15	REL	1635 Lowell Lane			MS4	E&S Controls BMP inspection	
270				20140544				
	01/20/15	REL	1633 Lowell Lane			MS4	E&S Controls BMP inspection	
271				20140543				
	01/20/15	RJA	Highpoint 1445 Arcona Rd		2014-01		Concrete clean out. Continue to monitor and maintain as needed.	
272								

	A	B	C	D	E	F	G	H
273	01/20/15 DJF	2404 Gettysburg Rd.		2015-01		Phone: Adam Davis, K and W Engineers, re: SWM design		
	01/20/15 DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Field investigation for drainage system improvement design.		
274								
275	01/20/15 DJF	Highpoint 1445 Arcona Rd.		2014-01		Phone/email: Steve Fulton, ARM re: revised soil amendment design for BMPs.		
276	01/20/15 DJF	3601 Simpson Ferry Road		Future DP		Phone: Mark Shrift, K and W Engineers, re: SWM for upgrades to stadium area.		
277	01/20/15 REL	1633 Lowell Lane	20140543		MS4	E&S Controls BMP inspection		
278	01/21/15 REL	1329 Yarmouth Lane	20140619		MS4	SLD site stabilization & controls in place		
279	01/22/15 DJF	2121 Cedar Run Dr.		2005-02		Phone: Buck Bigler re: BMP reporting requirements.		
280	01/22/15 RJA	1841 Brookview Dr.	20140167			BMP trench inspected.		
281	01/23/15 REL	3255 Harrison Rd	20140346			SLD site stabilization & controls in place		
	1/23/15 DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Drainage system improvement design.		
282								
283	1/23/15 DJF	2404 Gettysburg Rd.		2015-01		Phone: Frank Lentz, K and W Engineers, re: SWM design		
	1/26/15 DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Drainage system improvement design.		
284								
285	1/27/15 DJF	3601 Simpson Ferry Road		Future DP		Meeting: Mark Shrift, K and W Engineers, re: SWM for upgrades to stadium area.		
286	1/28/15 DJF	LAT			MS4	CAPCOG MS4 workshop (Lemoyne)		
287	1/29/15 DJF	3601 Simpson Ferry Road		2012-03		Phone: Pete Joyce, re: BMP inspection reporting requirements.		
288	1/29/15 DJF	LAT			MS4	County meeting re: GIS mapping of stormwater facilities/vector control.		
289	1/29/15 REL	3257 Harrison Rd	20140618		MS4	SLD site stabilization & controls in place		
290	1/29/15 REL	1635 Lowell Lane	20140544		MS4	E&S Controls BMP inspection		
291	1/29/14 REL	1633 Lowell Lane	20140543		MS4	E&S Controls BMP inspection		
	1/30/15 DJF	2015 Street Paving/Drainage: Slate Hill Rd.; Rosement Ave.; New York Ave.			MS4	Phone: Mike Manning, Slate Hill Rd., re: potential to modify rock lined channel to grass lined swale.		
292								
293	2/2/15 DJF	4530 Lena Drive		2015-04		Designer re: sketch plan		
294	2/2/15 DJF	2015 Street Paving Project			MS4	Drainage improvements design		
295	2/2/15 DJF	LAT			MS4	MCM 6 documentation		

	A	B	C	D	E	F	G	H
296	2/2/15 DJF		5024 Simpson Ferry Rd		2012-02		Phone; Iorlando, West Shore Window and Door, re: BMP reporting requirements.	
297	2/3/15 DJF		2015 Street Paving Project			MS4	Drainage improvements design	
298	2/3/15 DJF		LAT			MS4	MCM 6 documentation	
299	2/4/15 DJF		2015 Street Paving Project			MS4	Drainage improvements design, field work	
300	2/4/15 REL		1403 - 1415 Benton Way			MS4	SLD site stabilization controls in place	
301			1400-1410 Saxton Way				SLD site stabilization controls in place	
302	2/4/15 REL		1448 Mollys Run	20140406		MS4	SLD site stabilization controls in place	
303	2/5/15 REL		3257 Harrison Rd	20140618		MS4	SLD site stabilization controls in place	
304	2/5/15 REL		1400-1410 Saxton Way			MS4	SLD site stabilization controls in place	
305			14003-1415 Benton Way				SLD site stabilization controls in place	
306	2/6/15 DJF		5120 Simpson Ferry Rd. -				Phone: Rich Chubb re: BMP reporting requirements.	
307	2/9/15 REL		3257 Harrison Rd	20140618		MS4	SLD site stabilization controls in place	
308	2/9/15 REL		1400-1410 Saxton Way			MS4	SLD site stabilization controls in place	
309			1403-1415 Benton Way					
310	2/9/15 DJF		325 Wesley Drive		2015-02		BV Auditorium LD Plan review	
311	2/9/15 DJF		2404 Gettysburg Rd.		2015-01		LD Plan review	
312	2/10/15 DJF		LAT			MS4	PADEP MS4 Permit Compliance Workshop	
313	2/11/15 REL		3257 Harrison Rd	20140618		MS4	SLD site stabilization controls in place	
314	2/11/15 DJF		LAT			MS4	System mapping updates	
315	2/11/15 DJF		2404 Gettysburg Rd.		2015-01		LD Plan review	
316	2/12/15 DJF		LAT			MS4	System mapping updates; program planning	
317	2/12/15 REL		1423-1429 Keegan Lane	20150011-14		MS4	SLD site stabilization controls in place	
318	2/12/15 DJF		325 Wesley Drive		2015-02		BV Auditorium LD Plan review	
319	2/13/15 REL		1400-1410 Saxton Way			MS4	SLD site stabilization controls in place	
320			1403-1415 Benton Way					
321	2/13/15 REL		1423-29 Keegan Lane	20150011-14		MS4	SLD site stabilization controls in place	
322	2/13/15 REL		1431-4139 Keegan Lane	20140569-73		MS4	SLD site stabilization controls in place	
323	2/17/15 DJF		325 Wesley Drive		2015-02		BV Auditorium LD Plan review	
324	2/17/15 DJF		2404 Gettysburg Rd.		2015-01		LD Plan review	
325	2/17/15 REL		1400-1410 Saxton Way			MS4	SLD site stabilization controls in place	
326			1403-1415 Benton Way					
327	2/18/15 DJF		LAT			MS4	Inspection forms; mapping updates; program planning	
328	2/18/15 DJF		LAT			MS4	PADEP MS4 webinar	
329	2/18/15 DJF		2015 Street Paving Project			MS4	Drainage improvements design	
330	2/18/15 DJF		LAT			MS4	MS4 database update	
331	2/18/15 RJA		4530 Lena Dr.			MS4	Timber cleared from vacant field. Mulch to be placed at	
332	2/19/15 DJF		2404 Gettysburg Rd.		2015-01		LD Plan review	
333	2/19/15 DJF		LAT			MS4	Township facilities inventory	

	A	B	C	D	E	F	G	H
334	2/19/15	DJF	LAT			MS4	Annual MCM6 training materials preparation	
335	02/20/15	REL	1431-1439 Keegan Lane	20140569-73		MS4	SLD site stabilization controls in place	
336	02/19/15	DJF	2015 Street Paving Project			MS4	Drainage improvements design	
337	02/19/15		4530 Lena Drive	2015-04			Designer re: sketch plan	
338	02/23/15	RJA	1406 Chatham Rd.	Pending			E-mailed PAWC. SWM violation warning pumping dirty water in the street from excavation.	
339	02/23/15	DJF	LAT			MS4	Annual training preparation; PPC update	
340	02/23/15	DJF	LAT			MS4	Jim Fair, Lemoyne Borough, re: joint annual MCM6 training	
341	02/23/15	DJF	2404 Gettysburg Rd.	2015-01			Designer re: SWM requirements	
342	02/24/15	DJF	LAT			MS4	Annual training preparation; program planning	
343	02/24/15	REL	1423-29 Keegan Lane	20150011-14		MS4	SLD site stabilization controls in place	
344	02/24/15	REL	1431-1439 Keegan Lane	20140569-573		MS4	SLD site stabilization controls in place	
345	02/25/15	DJF	2404 Gettysburg Rd.	2015-01			LD Plan review	
346	02/26/15	DJF	LAT			MS\$	Center for Watershed Protection MS4 webinar	
347	02/26/15	REL	1431-1439 Keegan Lane	20140569-573		MS4	SLD site stabilization controls in place	
348	03/02/15	REL	3255 Longview Rd	20140381		MS4	SLD site stabilization controls in place	
349	03/03/15	RJA	LAT			MS4	MS4 GIS mapping	
350	03/06/15	ALL	LAT			MS4	MS4 Training Meeting	
351	3/9/15	REL	5043 Ravenwood Rd	20150025		MS4	Site stabilization controls in place	
352	3/11/15	RJA		20150025		MS4	Delivered Stop Work. Gave OK to continue setting forms	
353	3/12/15	REL	5043 Ravenwood Rd	20150025		MS4	All site control items in place	
354	03/16/15	REL	5043 Ravenwood Rd	20150025		MS4	All site control items in place	
355	03/16/15	REL	1421-1433 Benton Way &	20150009		MS4	SLD site stabilization controls in place	
356	01/29/15	jme	1520 Slate Hill Road	NA		MS4	referred resident phone call to DJF about roadside drainage	
357	01/29/15	jme	NA	NA		MS4	Planning for YBWA sponsored MS4 training available to LAT	
358	02/18/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
359	2/20/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
360	02/22/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
361	02/23/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	

	A	B	C	D	E	F	G	H
362	02/24/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
363	02/25/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
364	02/26/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
365	2/27/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
366	3/2/15	jme	NA	NA		MS4	Promotional efforts for YBWA sponsored MS4 training	
367	3/18/15	jme	NA	NA		MS4	Reviewed public outreach calendar of events with YBWA	
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Lower Allen Township
2233 Gettysburg Road
Camp Hill, Pa. 17011
Complaints Report

From: 04/01/2014

To: 03/31/2015

Comp #	Date	Type	Tax Id	Legal Address	Inspector	Status
14-50343	4/14/2014	Stormwater Mgmt.	13-24-0799-143	131 LIMESTONE DRIVE		
Desc: allegedly dumping wood, railings etc into creek						Closed
14-50346	4/15/2014	Stormwater Mgmt.	13-24-0799-142	129 LIMESTONE DRIVE		
Desc: dumped his wooden jungle gym along Ward trucking fence						Closed
14-50366	4/30/2014	Stormwater Mgmt.	13-24-0795-004	4700 GETTYSBURG ROAD		
Desc: concerned about amount of runoff from parking lot area onto the roadway						Closed
14-50387	5/1/2014	Stormwater Mgmt.	13-10-0256-011	1445 ARCONA ROAD		
Desc: work done on construction site for job trailer prior to obtaining permit E&S controls not in place						Closed
14-50383	5/9/2014	Stormwater Mgmt.	13-25-0010-260	95 DEERFIELD ROAD		
Desc: concerned about dirt pile(in right rear corner of property from 105 Deerfield) blocking natural drainage and creating stagnant water bamboo growing in yard....						Closed
14-50419	5/30/2014	Stormwater Mgmt.	13-24-0799-175A	1200 SAINT JOHNS ROAD		
Desc: a white substance flowing into Cedar Run from the terminal's parking lot.						Closed
14-50446	6/11/2014	Stormwater Mgmt.	48-24-0795-072	200 SOMERSET DRIVE		
Desc: mowing grass into the street						Closed
14-50459	6/17/2014	Stormwater Mgmt.	48-24-0795-045	313 SOMERSET DRIVE		
Desc: blowing grass into street						Closed

BMP #2: Require the implementation of a combination of structural and/or non-structural BMPs that are appropriate to the local community, that minimize water quality impacts, and that are designed to maintain pre-development runoff conditions. This requirement can be met by ensuring that the selected BMPs comply with the municipal Stormwater Management Ordinance that meets the requirements of the permit.

Measurable Goal: All qualifying development or redevelopment projects shall be reviewed to ensure that their post-construction stormwater management plans and selected BMPs conform to the applicable requirements. A tracking system (e.g., database, spreadsheet, or written list) shall be maintained to record qualifying projects and their associated BMPs. In your records, you shall note if there are no qualifying projects in a calendar year.

1. Number of development or redevelopment projects in urbanized area during reporting period: Four (4)
2. Describe the tracking system in place: Spreadsheet to document site inspections
3. Describe the structural and/or non-structural BMPs that were required for these projects:

Data included in page 15 of this report

BMP #3: Ensure that controls are installed that shall prevent or minimize water quality impacts.

Measurable Goal: All qualifying development or redevelopment projects shall be inspected during the construction phase to ensure proper installation of the approved structural PCSM BMPs. A tracking system (e.g., database, spreadsheet, or written list) shall be implemented to track the inspections conducted and to track the results of the inspections (e.g., BMPs were, or were not, installed properly). Permittees not relying on DEP's statewide QLP to satisfy requirements under this BMP shall summarize construction inspections and results in periodic reports. See BMP #6 for requirements related to post-construction inspection and tracking of PCSM BMPs to ensure that the operation and maintenance plan is being implemented.

If there were development or redevelopment projects during the reporting period, attach documentation of inspections of PCSM BMPs to this report.

Attached

BMP #4: The permittee shall enact, implement, and enforce an ordinance (municipal) or SOP or other regulatory mechanism (non-municipal) to address post-construction stormwater runoff from new development and redevelopment projects, as well as sanctions and penalties associated with non-compliance, to the extent allowable under State or local law.

Measurable Goal: Within the first year of coverage under this permit, new permittees shall enact and implement a stormwater management ordinance (municipal) or SOP (non-municipal) that meets the requirements of this General Permit.

Measurable Goal: All permittees shall submit a letter signed by a municipal official, municipal engineer or the municipal solicitor as an attachment to their first periodic report certifying the enactment of a stormwater management ordinance that meets the requirements of this General Permit.

1. Do you have an ordinance (or SOP) to address post-construction stormwater runoff from new and redevelopment projects and does it include sanctions? ☒ Yes ☐ No
If Yes, indicate the date of the ordinance or SOP: Adopted 3/8/04, amended 2/14/11
For new permittees only, attach a copy of the ordinance or SOP.
2. If you are not a new permittee, has the ordinance (or SOP) been submitted to DEP with a letter from an official, engineer or solicitor that certifies the enactment of an ordinance or SOP for PCSM activities? ☒ Yes ☐ No
3. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☒ Yes ☐ No

SAMPLE

	A	B	C	D	E	F	G	H
	Lower Allen Township Stormwater Lower Allen Township							
1								
2								
3								
4								
	Identifier			Permit #	SLD or DP #	Other	Description of Actions	
5	Date	Empl oyee	Location					
6	03/04/14	RJA	1302 Slate Hill Rd.	Pending			Meeting w/ Hartman and Assoc.	
7	04/01/14	RJA	4915 Ritter Rd		2013-03		Checked concrete washout and E and S measures – ok	
8	04/03/14	RJA	3400 Hartzdale Dr		2012-07		Walmart E and S – ok	
9	04/03/14	RJA	LAT Park				Inspected grass parking area. Grid reported exposed.	
10	04/08/14	RJA	5017 Hart Crossing	20130535			Site inspection. Grading.	
11	4/14/14	RJA	850 Lisburn Rd.	20140069			E and S email sent to Triple Crown	
12	4/28/14	JME	Lisburn Rd between Spangler Mill Rd and west end of SCIC property				Observed top-dressing, final grading and seeding of earth disturbance from UGI pipeline project	
13	4/29/14	JME	Lisburn Rd between Spangler Mill Rd and west end of SCIC property	MS4			Reported observations from May 28 to CCCC (McCollum)	
14	4/29/14	RJA	1525 Slate Hill Rd.	20130363			Site and BMP inspection. Level spreader needed at the BMP	
15	4/30/14	DJF	Chatham Rd/Elmhurst Rd			MS4	Rain event inspection. New catch basin working properly.	
16	4/30/14	DJF	1301 Carlisle Rd – CCHS		2008-11		Rain event inspection. Rain garden with minimal storage, performing ok.	
17	4/30/14	DJF	Deerfield Rd at Allendale Way			MS4	Rain event inspection. Repaired pipe section draining.	
18	4/30/14	DJF	Edgar Lane Channel			MS4	Rain event inspection. Moderate channel flow. New gabion wall extension performing ok.	
19	4/30/14	DJF	St Johns Rd – Gettysburg Rd to US 15			MS4	Rain event inspection. System ok, no excessive flow in street.	
20	4/30/14	DJF	4641 Westport Drive – MEPS			MS4	Rain event inspection. Second channel cut has been re-established. Follow up with upstream property owner.	
21	4/30/14	DJF	Gettysburg Rd at Audobon Rd			MS4	Rain event inspection. Roadside swales filling, no flow on roadway.	
22	4/30/14	DJF	4713 Gettysburg Rd – Bortek			MS4	Rain event inspection. Upstream flowing ok, not near top of bank. Downstream, starting to pond at outlet.	
23	4/30/14	DJF	4732 Gettysburg Rd		2013-01		Rain event inspection. Minimal basin storage, basin not yet seeded/planted.	

Chapter 184. Stormwater Management

Article VII. Prohibited Acts

§ 184-37. Prohibited discharges and connections.

- A. Any drain or conveyance, whether on the surface or subsurface, which allows any nonstormwater discharge, including, but not limited to, sewage, process wastewater, wash water, ammonia, chlorine, petroleum products (gasoline, fuel oil, etc.) pesticides, pollutants and other hazardous materials to enter the municipality's separate storm sewer system or to enter the waters of the commonwealth is prohibited. Handling and disposal of all materials and wastes shall comply with all federal and state requirements. Structural and nonstructural BMPs, in accordance with Chapters 5 and 6 of the most current version of the SWM Manual, shall be implemented where necessary to preserve the quality of stormwater runoff.
- B. Discharges to the municipality's separate storm sewer system or to waters of the commonwealth which are not composed entirely of stormwater shall be prohibited, except as provided in Subsection C below, and discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution to the waters of this commonwealth:
 - (1) Discharges from fire-fighting activities, including training.
 - (2) Potable water sources, including dechlorinated waterline and fire hydrant flushing.
 - (3) Irrigation drainage.
 - (4) Air-conditioning condensate.
 - (5) Springs.
 - (6) Water from crawl space or basement sump pumps.
 - (7) Flows from riparian habitats and wetlands.
 - (8) Uncontaminated water from foundations or from footing drains.
 - (9) Lawn watering.
 - (10) Dechlorinated swimming pool discharges.
 - (11) Uncontaminated groundwater.
 - (12) Water from individual residential car washing.
 - (13) Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.

- (14) Routine external building wash down (which does not use detergents or other compounds).
- D. In the event that the municipality or DEP determines that any of the discharges identified in Subsection **C** significantly contribute to pollution of the waters of this commonwealth, the municipality or DEP will notify the responsible person(s) to cease the discharge.
 - E. Nothing in this section shall affect a discharger's responsibilities under state or federal law.

BMP #5: Develop and implement measures to encourage and expand the use of Low Impact Development (LID) in new and redevelopment. Measures also should be included to encourage retrofitting LID into existing development. DEP's Pennsylvania Stormwater Best Management Practices Manual provides guidance on implementing LID practices.

Measurable Goal: In your inventory of development and redevelopment projects authorized for construction since March 10, 2003, that discharge stormwater to your regulated MS4s, indicate which projects incorporated LID practices and for each project list and track the BMPs that were used.

Measurable Goal: Enact ordinances consistent with LID practices and repeal sections of ordinances that conflict with LID practices. Progress with enacting and updating your ordinances to enable the use of LID practices shall be summarized in the periodic reports.

1. Identify ordinances enacted or updated during the reporting period to ensure consistency with LID practices:

N/A

BMP 6: Ensure adequate operation and maintenance of all post-construction stormwater management BMPs installed at all qualifying development or redevelopment projects (including those owned or operated by the permittee).

Measurable Goal: Within the first year of coverage under this permit, new permittees shall develop and implement a written inspection program to ensure that stormwater BMPs are properly operated and maintained. The program shall include sanctions and penalties for non-compliance. All permittees shall review and update the inspection program annually and shall continue to implement this BMP.

Measurable Goal: An inventory of PCSM BMPs shall be developed by permittees and shall be continually updated during the term of coverage under the permit as development projects are reviewed, approved, and constructed. This inventory shall include all PCSM BMPs installed since March 10, 2003 that discharge directly or indirectly to your regulated small MS4s. The inventory also should include PCSM BMPs discharging to the regulated small MS4 system that may cause or contribute to violation of water quality standard. The inventory shall include:

- all PCSM BMPs that were installed to meet requirements in NPDES Permits for Stormwater Discharges Associated with Construction Activities approved since March 10, 2003;
- the exact location of the PCSM BMP (e.g., street address);
- information (e.g., name, address, phone number(s)) for BMP owner and entity responsible for BMP Operation and Maintenance (O&M), if different from BMP owner;
- the type of BMP and the year it was installed;
- maintenance required for the BMP type according to the Pennsylvania Stormwater BMP Manual or other manuals and resources;
- the actual inspection/maintenance activities for each BMP;
- an assessment by the permittee if proper operation and maintenance occurred during the year and if not, what actions the permittee has taken, or shall take, to address compliance with O&M requirements.

1. For new permittees only, attach the written inspection program to ensure that stormwater BMPs are properly operated and maintained.

2. If you are not a new permittee, did you complete and submit your written inspection program to ensure that stormwater BMPs are properly operated and maintained to DEP? ☐ Yes ☒ No

If Yes, provide the latest submission date:

3. How do you ensure that stormwater BMPs are properly operated and maintained? Explain if you rely on means other than municipal inspections to ensure adequate O&M (consistent with your stormwater ordinance).

Agreements w/inspections by owners or his engineer, twp. when requested by owner

4. Date that inspection program was last reviewed or updated:

3/31/15

5. Total number of sites with PCSM BMPs installed as of the date of this report: 102

6. Total number of sites inspected during this reporting period: 28

7. Number of sites found to have PCSM BMP deficiencies: 0

8. Number of enforcement actions taken during this reporting period: 0

2014 -2015 Lower Allen Township

Site Inspections Following Rain Events

A	B	C	D	E	F	G
12/3/14	REL	1454 Mollys Run	20140384		MS4	Rain event inspection. Check roadside drainage.
12/3/14	REL	1431-1431 Keegan	573		MS4	Rain event inspection. Check roadside and crosspipe drain.
12/4/14	RJA	2750 Yetter Court		20140290		Rain event inspection. Check roadside and low point drain.
12/4/14	RJA	2410 Gettysburg Rd.		Pending		Rain event inspection. Check roadside and low point drain.
12/5/14	RJA	1656 Lowell Ln		20130562		Rain event inspection. Check roadside and low point/poten
12/5/14	REL	1448 Mollys Run		20140406		Rain event inspection. Check roadside and low point/poten
12/5/14	REL	1431-1439 Keegan		20140569-		Rain event inspection. Check roadside drainage.
12/8/14	DJF	880 Century Drive		2007-09		Rain event inspection. Check roadside drainage.
12/08/14	DJF	2410 Gettysburg Rd.		DP 2014-		Rain event inspection. Check roadside drainage.
12/10/14	RJA	2239 Gettysburg Rd	20140438			Rain event inspection. Check roadside drainage.
12/11/14	REL	1431-39 Keegan Lane	20140569-73		MS4	Rain event inspection. Check roadside drainage.
12/11/14	DJF	2410 Massachusetts		2010-01		Rain event inspection. Check roadside drainage.
12/12/14	DJF/RJA	New York			MS4	Rain event inspection. Check roadside drainage.
12/15/14	RJA	4114 Willow Bend			MS4	Rain event inspection. Check roadside drainage.
12/12/14	DJF	Highpoint 1445		2014-01		Rain event inspection. Check roadside drainage.
12/15/14	DJF	5035 Ritter Rd.		DP 2010-		Rain event inspection. Check roadside drainage.
12/15/14	DJF	2404 Gettysburg Rd		2015-01		Rain event inspection. Check roadside drainage.
12/15/14	DJF	880 Century Drive		2007-09		Rain event inspection. Clear, no ponding.
12/16/14	REL	3255 Longview Rd	20140381			Rain event inspection. Discharge from basin properly contr
12/16/14	DJF	4732 Gettysburg Rd		2014-02		Rain event inspection. Minimal basin storage, basin not ye
12/18/14	DJF	Highpoint 1445		2014-01		Rain event inspection. Moderate channel flow. New gabion
12/18/14	DJF	850 Lisburn Rd.		2013-07		Rain event inspection. New catch basin working properly.
12/19/14	REL	3255 Longview Rd	20140381		MS4	Rain event inspection. Pump not running, not needed.
12/23/14	REL	1504 Woodcreek Dr.	20140513			Rain event inspection. Rain garden with minimal storage, p
12/30/14	DJF	2237 Gettysburg Rd.			MS4	Rain event inspection. Repaired pipe section draining.
12/31/14	REL	3257 Harrison Rd	20140618		MS4	Rain event inspection. Roadside swales filling, no flow on r
01/05/15	DJF	2410 Gettysburg Rd		DP 2014-		Rain event inspection. Second channel cut has been re-es
01/06/15	DJF	2015 Street			MS4	Rain event inspection. System ok, no excessive flow in str
						Rain event inspection. Upstream flowing ok, not near top o











2014 -2015 Lower Allen Township

Site Inspections Following Rain Events

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12/3/14	REL	1431-1431 Keegan	573		MS4	Rain event inspection. Check roadside and crosspipe drain
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12/5/14	RJA	1656 Lowell Ln		20130562		Rain event inspection. Check roadside and low point/poten
12/5/14	REL	1448 Mollys Run		20140406		Rain event inspection. Check roadside and low point/poten
12/5/14	REL	1431-1439 Keegan		20140569-		Rain event inspection. Check roadside drainage.
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12/08/14	DJF	2410 Gettysburg Rd.		DP 2014-		Rain event inspection. Check roadside drainage.
12/10/14	RJA	2239 Gettysburg Rd	20140438			Rain event inspection. Check roadside drainage.
12/11/14	REL	1431-39 Keegan Lane	20140569-73		MS4	Rain event inspection. Check roadside drainage.
12/11/14	DJF	2410 Massachusetts		2010-01		Rain event inspection. Check roadside drainage.
12/12/14	DJF/RJA	New York			MS4	Rain event inspection. Check roadside drainage.
12/15/14	RJA	4114 Willow Bend			MS4	Rain event inspection. Check roadside drainage.
12/12/14	DJF	Highpoint 1445		2014-01		Rain event inspection. Check roadside drainage.
12/15/14	DJF	5035 Ritter Rd.		DP 2010-		Rain event inspection. Check roadside drainage.
12/15/14	DJF	2404 Gettysburg Rd		2015-01		Rain event inspection. Check roadside drainage.
12/15/14	DJF	880 Century Drive		2007-09		Rain event inspection. Clear, no ponding.
12/16/14	REL	3255 Longview Rd	20140381			Rain event inspection. Discharge from basin properly contr
12/16/14	DJF	4732 Gettysburg Rd		2014-02		Rain event inspection. Minimal basin storage, basin not ye
12/18/14	DJF	Highpoint 1445		2014-01		Rain event inspection. Moderate channel flow. New gabion
12/18/14	DJF	850 Lisburn Rd.		2013-07		Rain event inspection. New catch basin working properly.
12/19/14	REL	3255 Longview Rd	20140381		MS4	Rain event inspection. Pump not running, not needed.
12/23/14	REL	1504 Woodcreek Dr.	20140513			Rain event inspection. Rain garden with minimal storage, f
12/30/14	DJF	2237 Gettysburg Rd.			MS4	Rain event inspection. Repaired pipe section draining.
12/31/14	REL	3257 Harrison Rd	20140618		MS4	Rain event inspection. Roadside swales filling, no flow on r
01/05/15	DJF	2410 Gettysburg Rd		DP 2014-		Rain event inspection. Second channel cut has been re-es
01/06/15	DJF	2015 Street			MS4	Rain event inspection. System ok, no excessive flow in str
						Rain event inspection. Upstream flowing ok, not near top o

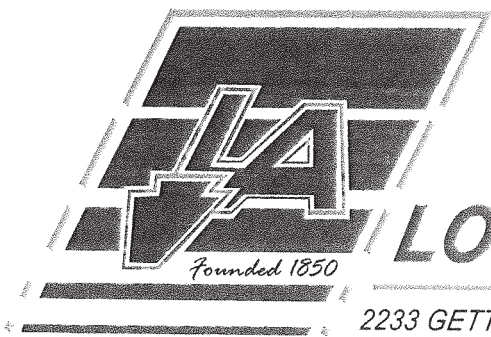
BMP Number	Number	Street	City	Parcel	Zip	Plan Number	Year	BMP Descripto
38	335	Wesley Dr.	Mechanicsburg	13-09-0545-005A	17055	SLD-2001-01		Det. Basin
1	5225	Wilson Lane	Mechanicsburg	13-09-0545-006	17055	SLD-2006-17		
96	325	Wesley Dr. Suite 20	Mechanicsburg	13-09-0545-006	17055		2007	
49	2500	Lisburn Rd.	Camp Hill	13-09-0547-007	17011	SLD-2005-12	2006	Underground Detention
79	2500	Lisburn Rd.	Camp Hill	13-09-0547-007	17011		2009	
82	2500	Lisburn Rd.	Camp Hill	13-09-0547-007	17011		2005	
39	5225	Wilson Ln.	Mechanicsburg	13-09-0545-006	17055	SLD-2001-14		Det. Basin
36	4700	Westport Dr.	Mechanicsburg	13-10-0256-004	17055	SLD-2002-04	2003	Detention Basin
42	4925	Ritter Rd.	Mechanicsburg	13-10-0256-015C	17055	SLD-2001-11		Det. Basin
89	4925	Ritter Rd.	Mechanicsburg	13-10-0256-015C	17055		2007	
48	5040	Ritter Rd.	Mechanicsburg	13-10-0256-018	17055	SLD-1998-09		Det. Basin
37	4500	Westport Drive	Mechanicsburg	13-10-0256-024	17055	SLD-2002-05	2003	2 Det. Basin
2	4510	Westport Drive	Mechanicsburg	13-10-0256-030	17055	SLD-2006-12		
47	1215	Manor Dr.	Mechanicsburg	13-10-0256-037	17055	SLD-1998-04		Det. Basin
85	1215	Manor Dr.	Mechanicsburg	13-10-0256-037	17055		2008	
91	4545	Westport Dr.	Mechanicsburg	13-10-0256-039	17055		2006	
45	4550	Lena Dr.	Mechanicsburg	13-10-0256-041	17055	SLD-1999-03		Det. Basin
46	4751	Westport Drive	Mechanicsburg	13-10-0256-043	17055	SLD-1999-06		2 Swales, 1 Detention
29	4557	Manor Dr.	Mechanicsburg	13-10-0256-055	17055	SLD-200402	2005	and 1 (2 Det. Basin; 2 WQ Ba
29	4513	Woods Way	Mechanicsburg	13-10-0256-058	17055	SLD-200402	2005	and 2 (2 Det. Basin; 2 WQ Ba
29	4518	Woods Way	Mechanicsburg	13-10-0256-066	17055	SLD-200402	2005	and 3 (2 Det. Basin; 2 WQ Ba
29	4526	Woods Way	Mechanicsburg	13-10-0256-068	17055	SLD-200402	2005	and 4 (2 Det. Basin; 2 WQ Ba
95	2960	Meridian Way	Mechanicsburg	13-10-0256-087	17055		2012	
24	1352	Slate Hill Rd.	Camp Hill	13-10-0258-004	17011	SLD-2004-11	2006	Det. Basin; Bio Ret.
32	2715	Yetter Ct.	Camp Hill	13-10-0258-007A	17011	SLD-2003-03	2004	Paved Flow Channel/
80	2700	Yetter Ct.	Camp Hill	13-10-0258-012	17011		2012	
71	2645	Lisburn Rd.	Camp Hill	13-10-0258-015	17011		2010	
8	1510	Thompson Ln.	Mechanicsburg	13-10-0258-034	17055	DP-2006-05	2006	Infiltration Trench
93	1510	Thompson Ln.	Mechanicsburg	13-10-0258-034	17055		2006	
67	1595	Thompson Ln.	Mechanicsburg	13-10-0258-063	17055		2011	
73	1425	Spanglers Mill Rd.	Camp Hill	13-10-0260-005	17011		2009	
66	1841	Brookview Drive	New Cumberland	13-10-0260-010	17070		2011	
10	4545	Westport Drive	Mechanicsburg	13-10-0256-039	17055	SLD-2005-25	2006	2 Water Quality Inlets/Dete
44	3940	Lisburn Rd.	Mechanicsburg	13-11-0270-042	17055	SLD-2001-18		Cross Pipe to Cre
59	3804	Lisburn Rd.	Mechanicsburg	13-11-0270-042	17055		2003	
92	1403	Wellgate Ln.	Mechanicsburg	13-11-0270-073	17055		2007	
69	1718	Liberty Cove	Mechanicsburg	13-11-0270-098	17055		2011	
86	1724	Liberty Cove	Mechanicsburg	13-11-0270-099	17055		2008	
72	1730	Liberty Cove	Mechanicsburg	13-11-0270-101	17055		2010	
11	1705	Liberty Cove	Mechanicsburg	13-11-0270-109	17055	SLD-2005-24	2006	Roadside Swells/ 2 Det
75	1712	Liberty Cove	Mechanicsburg	13-11-0270-097	17055	SLD-1992-05	2009	
41	2645	Lisburn Rd.	Camp Hill	13-10-0258-015	17011	SLD-2001-10		2 Detention Basins (Mair
17	1850	State Rd.	Camp Hill	13-22-0536-057	17011	SLD-2005-11		Detention Basin
51	1400	Hummel Ave.	Camp Hill	13-22-0826-013	17011	SLD-1997-08		Det. Basin
33	1301	Carlisle Rd.	Camp Hill	13-23-0545-416	17011	DP-2003-04		5 Pipes to Detention
52	2404	Gettysburg Rd.	Camp Hill	13-23-0549-003	17011	SLD-1992-05		Det. Basin
4	2233	Gettysburg Rd.	Camp Hill	13-23-0549-018A	17011	SLD-2006-05		
63	2420	Massachusetts Ave.	Camp Hill	13-23-0549-107	17011		2012	
65	2414	Massachusetts Ave.	Camp Hill	13-23-0549-109	17011		2011	
64	2410	Massachusetts Ave.	Camp Hill	13-23-0549-242	17011		2011	
5	3130	Morningside Dr.	Camp Hill	13-23-0551-028	17011	SLD-2006-04		Basin Rocks
25	3300	Hartzdale Dr.	Camp Hill	13-23-0551-114A	17011	SLD-2004-10	2006	Infiltration
68	21	Santa Maria Ave.	Camp Hill	13-23-0551-153	17011		2011	
56	3601	Simpson Ferry Rd.	Camp Hill	13-23-0553-013	17011		2013	
61	3702	Gettysburg Rd.	Camp Hill	13-23-0553-026	17011		2012	
6	3599	Gettysburg Rd.	Camp Hill	13-23-0553-060	17011	SLD-2006-02	2006	SW Quality Inlet w/ S
90	3599	Gettysburg Rd.	Camp Hill	13-23-0553-060	17011		2006	
70	75	Zimmerman Dr.	Camp Hill	13-23-0553-064	17011		2011	
62	145	Locust St.	Camp Hill	13-23-0555-083	17011		2012	
74	5022	Arthur Ave.	Mechanicsburg	13-23-0559-088	17050		2009	
87	5030	Arthur Ave.	Mechanicsburg	13-23-0559-087	17050		2008	
57	5024	Simpson Ferry Rd.	Mechanicsburg	13-23-0559-090	17011		2012	
40	216	Wesley Dr.	Mechanicsburg	13-24-0793-161	17055	SLD-2001-03		2 Detention Basin
19	960	Century Dr.	Mechanicsburg	13-24-0795-001A	17055	SLD-2005-01		
77	4712	Gettysburg Rd.	Mechanicsburg	13-24-0795-003	17055		2005	
21	758	Upland St.	Mechanicsburg	13-24-0795-014	17055	DP-2005-06	2006	Underground Storage
20	812	Belmont St.	Mechanicsburg	13-24-0795-047	17055	DP-2005-07	2006	Underground Storage
28	910	Century Dr.	Mechanicsburg	13-24-0795-165	17055	SLD-2004-05	2005	Det. Basin; WQ Fore
9	950	Woodland St.	Mechanicsburg	13-24-0795-170	17055	DP-2006-04	2006	Detention Basin
60	950	Woodland St.	Mechanicsburg	13-24-0795-170	17055		2006	
88	880	Century Dr.	Mechanicsburg	13-24-0795-174A	17055		2008	

Legend

-  Drainage Lines
-  Roads
-  HEADWALL
-  Outfall
-  Stormwater Dr
-  Stormwater Pi
-  Hydro
-  Water ways
-  BMPS
-  Parcels



**Mailings to property owners in Lower Allen Township with Stormwater
Management BMP's installed on their property**



LOWER ALLEN TOWNSHIP

2233 GETTYSBURG ROAD • CAMP HILL, PENNSYLVANIA 17011

October 27, 2014

RE: National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMPs)
Maintenance and Monitoring Agreement
Operation and Maintenance Inspection Requirements

Dear Property Owner:

This letter is being sent to property owners in Lower Allen Township where Stormwater Management BMPs have been installed on the property. This is a reminder of the inspection and reporting requirements contained within the Stormwater Management Plan and the Maintenance and Monitoring Agreement. A copy of the Agreement for your property is enclosed for reference.

A blank copy of an Inspection Report template that can be used to fulfill these requirements is enclosed for your use. Please return the completed form by February 1, 2015 to:

Lower Allen Township
Attention: Community Development Department
2233 Gettysburg Road
Camp Hill, Pa. 17011

The requirements of this program are mandates from the U.S. Environmental Protection Agency and the Pa. Department of Environmental Protection that the Township is required to enforce.

Any questions regarding the Township's MS4 program can be directed to Daniel J. Flint, P.E., Township Engineer, at dflint@latwp.org or 975-7575 ext. 1101.

Lower Allen Township
National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u>	<u>Property Address</u>
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances		
Stability of embankments and other soil areas		
Integrity and condition of vegetation		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities		
Stability of soil over and adjacent to the facility		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Submitted by: _____

Name (print)

Signature

Date

13-09-0545-005A	BETHANY DEVELOPMENT	335 WESLEY DRIVE
13-09-0545-006	ASBURY ATLANTIC INC	5225 WILSON LANE
13-09-0545-006	ASBURY ATLANTIC INC	5225 WILSON LANE
13-09-0547-007	PA INDUSTRIAL SCHOOL	2500 LISBURN ROAD
13-09-0547-007	PA INDUSTRIAL SCHOOL	2500 LISBURN ROAD
13-09-0547-007	PA INDUSTRIAL SCHOOL	2500 LISBURN ROAD
13-09-0545-006	ASBURY ATLANTIC INC	5225 WILSON LANE
13-10-0256-004	LOWER ALLEN BUS CNTR LP	4700 WESTPORT DRIVE
13-10-0256-015C	HIGH PROPERTIES, HIGH GEN CORP	RITTER ROAD
13-10-0256-015C	HIGH PROPERTIES, HIGH GEN CORP	RITTER ROAD
13-10-0256-018	5040 RITTER ROAD LLC	5040 RITTER ROAD
13-10-0256-024	MP PENNSYLVANIA BP PORTFOLIO	4500 WESTPORT DRIVE
13-10-0256-030	YELLDAN LIMITED A PENNSYLVANIA	4510 WESTPORT DRIVE
13-10-0256-037	LINLO PROPERTIES III LP	1215 MANOR DRIVE
13-10-0256-037	LINLO PROPERTIES III LP	1215 MANOR DRIVE
13-10-0256-039	VFW POST 7530	4545 WESTPORT DRIVE
13-10-0256-041	4550 LENA DRIVE LP	4550 LENA DRIVE
13-10-0256-043	STORING CREW	4751 WESTPORT DRIVE
13-10-0256-055	CHEREWKA, MICHAEL C	4557 MANOR DRIVE
13-10-0256-058	WALTERS-POFF, DUSTIN	4513 WOODS WAY
13-10-0256-066	MILLER, DAVID E & RACHAEL L	4518 WOODS WAY
13-10-0256-068	PRICE, DEREK D & CHRISTINA M	4526 WOODS WAY
13-10-0256-087	LISBURN DEVCO I LP	LISBURN ROAD
13-10-0258-004	SLATE HL MENNONITE CHURCH ETAL	1352 SLATE HILL ROAD
13-10-0258-007A	LOWER ALLEN TYP DEV AUTHORITY	GETTYBURG ROAD
13-10-0258-012	YETTER COURT ENTERPRISES LLC	2700 YETTER COURT
13-10-0258-015	CHRISTIAN LIFE ASSEMBLY OF GOD	2645 LISBURN ROAD
13-10-0258-034	MILLER, ALISON M	1510 THOMPSON LANE
13-10-0258-034	MILLER, ALISON M	1510 THOMPSON LANE
13-10-0258-063	RUEL, JONATHAN R & JADE Z	1595 THOMPSON LANE
13-10-0260-005	EWING, CHARLES D	1425 SPANGLERS MILL ROAD
13-10-0260-010	PEIFFER, DAVID H	BROOK VIEW DRIVE
13-10-0256-039	VFW POST 7530	4545 WESTPORT DRIVE
13-11-0270-042	LFGC, INCORPORATED	3804 LISBURN ROAD
13-11-0270-042	LFGC, INCORPORATED	3804 LISBURN ROAD
13-11-0270-073	FEDORIW, CHRISTOPHER M	1403 WELLGATE LANE
13-11-0270-098	DUFFEY, HAROLD E II	1718 LIBERTY COVE
13-11-0270-099	WRAY, WILLIAM A JR	1724 LIBERTY COVE
13-11-0270-101	SOURBEER, CHARLES HOYER	1730 LIBERTY COVE
13-11-0270-109	ROLAND, ROSALIE H	LIBERTY COVE
13-11-0270-097	GASSNER, RUDOLF & GERTRUDE V	1712 LIBERTY COVE
13-10-0258-015	CHRISTIAN LIFE ASSEMBLY OF GOD	2645 LISBURN ROAD
13-22-0536-057	GRACE, WILLIAM R	1850 STATE ROAD
13-22-0826-013	GRACE, ELIZABETH A LIVING TRUST	1400 HUMMEL AVENUE
13-23-0545-416	WEST SHORE AREA SCHOOL	1301 CARLISLE ROAD
13-23-0549-003	KEYSTONE OPERATING PARTNERSHIP	2404 GETTYSBURG ROAD
13-23-0549-018A	LOWER ALLEN TOWNSHIP	2233 GETTYSBURG ROAD

13-31-2134-059	GINDER, ERIC S	1712 MAIN STREET
13-31-2136-001A	SHEAFFER, BILLY B	1435 MAIN STREET
13-31-2136-026	BOOHER, STEVEN R & BARBARA A	1504 MAIN STREET
13-31-2136-113	PEIFER, KEITH E & SAUNDRA M	4122 WILLOW BEND ROAD
13-31-2136-113	PEIFER, KEITH E & SAUNDRA M	4122 WILLOW BEND ROAD
13-31-2136-114	BARTLETT, THOMAS R & TIFFANY M	4118 WILLOW BEND ROAD
13-31-2136-132	GEARHART, ANDREW M & ABBEY R	4165 BIRCHWOOD LANE
13-25-0020-052B	PROGRESSIVE CASUALTY INS CO	3950 HARTZDALE DRIVE

Lower Allen Township MS4 2014-2015

Completed Stormwater Maintenance and Monitoring Agreement

21151

4



**STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING AGREEMENT**

THIS AGREEMENT, made and entered into this 8th day of SEPTEMBER, 2014, by and between Lower Allen Township (hereinafter the "Owner"), and Lower Allen Township, Cumberland County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 2750 Yetter Court Tax Parcel Number 13-09-0547-009, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Municipality shall give the Owner, successors, heirs and assigns, copies of

the inspection report with findings and evaluations. At a minimum, maintenance inspections shall be performed in accordance with the schedule specified in the BMP Operations and Maintenance Plan.

4. All reasonable costs for said inspections shall be borne by the Owner, successors, heirs and assigns, and payable to the Municipality.
5. The owner shall convey to the Municipality easements and/or rights-of-way to assure access for periodic inspections by the municipality and maintenance, if required.
6. In the event the Owner, successors, heirs and assigns, fail to maintain the stormwater management facilities and BMPs in good working condition acceptable to the Municipality, the Municipality shall give proper notice to Owner setting forth the specifics of such failure to maintain, the remediation required, and deadline to complete such action. After failure by the Owner to remedy within the specified time limit, the Municipality may enter upon the Property and take such necessary and prudent action to maintain said stormwater management facilities and BMPs and to charge the costs of the maintenance and/or repairs to the Owner, successors, heirs and assigns. This provision shall not be construed as to allow the Municipality to erect any structure of a permanent nature on the land of the Owner, outside of any easement rights that the Municipality may have. It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Municipality.
7. The Owner, successors, heirs and assigns, will perform operation, maintenance and inspections in accordance with the BMP Operations and Maintenance Plan for the stormwater management facilities and BMPs including sediment removal as outlined on the approved Drainage Plan.
8. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like on account of the Owner's, successors', heirs' or assigns' failure to perform such work, the Owner, successors, heirs and assigns, shall reimburse the Municipality upon demand, within 30 days of receipt of invoice thereof, for all costs incurred by the Municipality hereunder. If not paid within said 30-day period, the Municipality may enter a lien against the property, including any and all properties when the Owner is a Homeowners Association, in the amount of such costs, or may proceed to recover his costs through proceedings in equity or at law as authorized by law.
9. The Owner, successors, heirs and assigns, shall indemnify the Municipality and its agents and employees against any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the Municipality for the construction, presence, existence or maintenance of the stormwater management facilities and BMPs by the Owner, successors, heirs and assigns.
10. In the event a claim is asserted against the Municipality, its agents or employees, the Municipality shall promptly notify the Owner, successors, heirs or assigns, and they shall

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

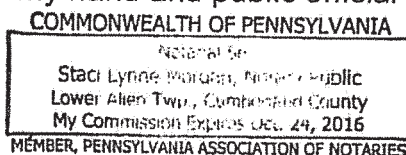
This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND

On this the 17th day of September 2014, before me, the undersigned officer, personally appeared H. Edward Black, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and public official seal.

Staci Lynne Morgan
Notary Public



ATTEST:
(CORPORATE SEAL)

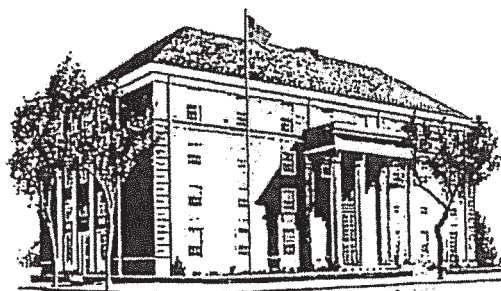
MUNICIPALITY: LOWER ALLEN TOWNSHIP

[Signature]
ASSISTANT Secretary

By [Signature]
(Vice) President

BOARD OF COMMISSIONERS
(Municipal Governing Body)

**TAMMY SHEARER
RECORDER OF DEEDS
CUMBERLAND COUNTY
1 COURTHOUSE SQUARE
CARLISLE, PA 17013
717-240-6370**



Instrument Number - 201421151
Recorded On 9/18/2014 At 12:43:42 PM

* Total Pages - 5

* Instrument Type - AGREEMENT

Invoice Number - 168674 User ID - SW

* Grantor - LOWER ALLEN TWP

* Grantee - LOWER ALLEN TWP

* Customer - LOWER ALLEN TWP

* FEES

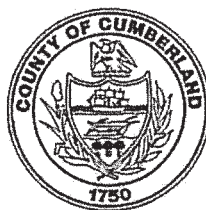
STATE WRIT TAX	\$0.50
RECORDING FEES -	\$11.50
RECORDER OF DEEDS	
PARCEL CERTIFICATION	\$15.00
FEES	
COUNTY ARCHIVES FEE	\$2.00
ROD ARCHIVES FEE	\$3.00
TOTAL PAID	\$32.00

Certification Page

DO NOT DETACH

**This page is now part
of this legal document.**

**I Certify this to be recorded
in Cumberland County PA**



A stylized handwritten signature in black ink.

RECORDER OF DEEDS

* - Information denoted by an asterisk may change during
the verification process and may not be reflected on this page.

0043RR



2014-2015 MS4

Operation and Maintenance Inspection Reports

RECEIVED

MAR 11 2015

Lower Allen Township
 National Pollutant Discharge Elimination System (NPDES) **LOWER ALLEN TWP.**
 Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Asbury Atlantic	<u>Property Address</u> 5225 Wilson Lane 325 Wesley Drive Suite 200 Media PA.
<u>Tax Parcel ID No.</u> 13-09-0545-006	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11/26/14
Inspection of Open Basins:

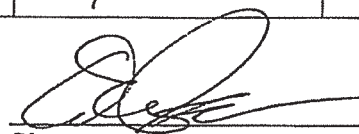
	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

DAVE INIOW
 Name (print)


 Signature

11/26/14
 Date

RECEIVED

FEB 06 2015

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

Property Owner Name(s) UNITED METHODIST HOME FOR CHILDREN, INC.	Property Address 5120 SIMPSON FERRY RD MECHANICSBURG PA 17050
Tax Parcel ID No. 13-09-0545-002-EX	Subdivision/Land Development/Drainage Plan No. (if known)

Date of Inspection: _____

Inspection of Open Basins:

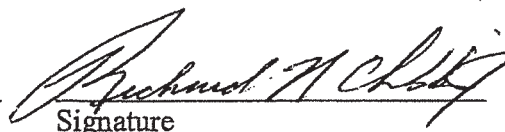
	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities		
Stability of soil over and adjacent to the facility		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Submitted by:

RICHARD N. CHUBB JR
Name (print)


Signature

2-6-2015
Date

RECEIVED

FEB 05 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> David Pfeiffer	<u>Property Address</u> 1841 Brookview Rd
<u>Tax Parcel ID No.</u> 13-10-0260-006	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: JAN 5, 2015

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	- NONE -
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	NONE
Safety	Y	

Submitted by:

David Pfeiffer

Name (print)

Signature

Date

JAN 31, 2015

RECEIVED

FEB 02 2015

LOWER ALLEN TWP.

Lower Allen Township
National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> William W. Werzyn Jr.	<u>Property Address</u> 5024 Simpson Ferry Rd Mechanicsburg, PA 17050
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 2/1/15

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Orlando Cleaves
Name (print)

[Signature]
Signature

2/1/15
Date

RECEIVED

JAN 30 2015

LOWER ALLEN TWP.

Lower Allen Township
 National Pollutant Discharge Elimination System (NPDES)
 Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Harold E Duffey Jr Constance M Duffey	<u>Property Address</u> 1718 Liberty Cove Mechanicsburg PA 17055
<u>Tax Parcel ID No.</u> 13-11-0270-098	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/22/2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	N/A
Stability of embankments and other soil areas	Y	N/A
Integrity and condition of vegetation	Y	N/A
Collection, storage and release of stormwater in accordance with the facility design	Y	N/A
Sediment accumulation	Y	N/A
Safety	Y	N/A

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	N/A
Stability of soil over and adjacent to the facility	Y	N/A
Collection, storage and release of stormwater in accordance with the facility design	Y	N/A
Sediment accumulation	Y	N/A N/A
Safety	Y	N/A

Submitted by:

H Duffey Jr
 Name (print)

H E Duffey Jr
 Signature

12/22/2014
 Date

(717) 504-3072

RECEIVED

JAN 29 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

~~LOWER ALLEN TWP.~~

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> CROSS ROADS HOUSING LP	<u>Property Address</u> 2121 + 2141 CEDAR RUN DRIVE, CAMP HILL PA 17011
<u>Tax Parcel ID No.</u> 13-23-0549-235	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 1-20-15

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

BUCK BIGLER -

Name (print) MAINTENANCE/CONSTRUCTION Signature [Signature]
Director

1-20-15
Date

RECEIVED

JAN 26 2015

Lower Allen TownshipNational Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit**LOWER ALLEN TWP.**Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Dylan J. Shannon	<u>Property Address</u> 2410 Massachusetts Ave Camp Hill PA 17011
<u>Tax Parcel ID No.</u> 13-23-0549-242	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 1/9/15**Inspection of Open Basins:**

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y/N/A	
Stability of embankments and other soil areas	Y/N/A	
Integrity and condition of vegetation	X	
Collection, storage and release of stormwater in accordance with the facility design	X	
Sediment accumulation	X	
Safety	X	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	No	
Safety	Y	

Submitted by:

Dylan Shannon
Name (print)[Signature]
Signature1/9/15
Date

RECEIVED

JAN 21 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> LFGC INC	<u>Property Address</u> 3804 LISBURN RD MECHANICSBURG PA 17055
<u>Tax Parcel ID No.</u> 13-11-270-042	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection:

1/16/15

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	N/A	
Stability of soil over and adjacent to the facility	N/A	
Collection, storage and release of stormwater in accordance with the facility design	N/A	
Sediment accumulation	N/A	
Safety	N/A	

Submitted by:

LFGC INC

LUKE A V GRUMBINE

Name (print)

Signature

Date

1/16/15

RECEIVED

JAN 15 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Vantage Foods PA/HP	<u>Property Address</u> 2700 Yetter Court. Camp Hill, PA, 17011
<u>Tax Parcel ID No.</u> 13-10-0258-012	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: January 13/2015.

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	(Y)	
Stability of embankments and other soil areas	(Y)	
Integrity and condition of vegetation	(Y)	
Collection, storage and release of stormwater in accordance with the facility design	(Y)	
Sediment accumulation	(Y)	
Safety	(Y)	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	(Y)	
Stability of soil over and adjacent to the facility	(Y)	
Collection, storage and release of stormwater in accordance with the facility design	(Y)	
Sediment accumulation	(Y)	
Safety	(Y)	

Submitted by:

Brett McGowan
Name (print)

B. McGowan
Signature

Jan. 13/2015.
Date

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JAN 12 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Michelle Meiser	<u>Property Address</u> 2420 Massachusetts Avenue Camp Hill PA 17011
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 1/4/2015

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	yes	
Stability of embankments and other soil areas	yes	
Integrity and condition of vegetation	no	
Collection, storage and release of stormwater in accordance with the facility design	yes	
Sediment accumulation	no	
Safety	yes	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	yes	
Stability of soil over and adjacent to the facility	yes	
Collection, storage and release of stormwater in accordance with the facility design	yes	
Sediment accumulation	no	
Safety	yes	

Submitted by:

Michelle Meiser

Name (print)

Michelle Meiser

Signature

717-571-2313

1/4/2015

Date

RECEIVED

JAN 08 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> DEPARTMENT OF CORRECTIONS SCI - CAMP HILL	<u>Property Address</u> 2500 LISBURN RD CAMP HILL, PA
<u>Tax Parcel ID No.</u> 13-09-0547-007-EX	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> D.G.S. PROJECT NO. 573-25

Date of Inspection: DECEMBER 31, 2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances		
Stability of embankments and other soil areas		
Integrity and condition of vegetation		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	INTEGRITY AND OPERATION MAINTAINED
Stability of soil over and adjacent to the facility	Y	EMBANKMENTS AND VEGETATION MAINTAINED
Collection, storage and release of stormwater in accordance with the facility design	Y	OPERATION MAINTAINED ACCORDING TO DESIGN.
Sediment accumulation	Y	NONE OBSERVED.
Safety	Y	NO ISSUES NOTED

Submitted by:

CAROL A. PRONTKOWSKI, P.E. Carol A. Prontkowski 12/31/14
Name (print) Signature Date

RECEIVED

JAN 08 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> DEPARTMENT OF CORRECTIONS SCI- CAMP HILL	<u>Property Address</u> 2500 LISBURN ROAD CAMP HILL, PA 17001
<u>Tax Parcel ID No.</u> 13-09-0547-007-EX	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> D.G.S. PROJECT No. 573-28

Date of Inspection: DECEMBER 31, 2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances		
Stability of embankments and other soil areas		
Integrity and condition of vegetation		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	INTEGRITY AND OPERATION OF STRUCTURES MAINTAINED
Stability of soil over and adjacent to the facility	Y	EMBANKMENTS MAINTAINED AND GRASS COVERAGE COMPLETE
Collection, storage and release of stormwater in accordance with the facility design	Y	STORMWATER STRUCTURES OPERATING ACCORDING TO DESIGN - NO STANDING WATER
Sediment accumulation	Y	NO OBSERVED SEDIMENT
Safety	Y	NO ISSUES NOTED

TYPED INLET GRATES INCLUDED IN CLOSURE FOR CBR EMBOSSE

Submitted by:

CAROL A. PIONTKOWSKI, P.E. Carol A. Piontkowski 12/31/14
Name (print) Signature Date



January 5, 2015

Lower Allen Township
Attention: Community Development Department
2233 Gettysburg Road
Camp Hill, PA 17011

Re: PA Department of Corrections (DOC) - SCI-Camp Hill
NPDES No. PAG133717-MS4 –Stormwater BMPs
Operation and Maintenance Inspection Report -2014

To Whom It May Concern:

On behalf of SCI-Camp Hill, the DOC is submitting the Operation and Maintenance Inspection Reports-2014 for the NPDES Municipal Separate Storm Sewer Systems (MS4s) General Permit. Coverage for the General NPDES permit (PAG-13) commenced on August 1, 2013. The inspection reports are for the two underground stormwater management facilities and best management practices (BMPs), according to their Maintenance and Monitoring Agreements.

If you have any questions or need additional information, please contact me at (717) 728-0372.

Sincerely,

A handwritten signature in black ink, reading "Carol A. Piontkowski". The signature is fluid and cursive, with the first name "Carol" and last name "Piontkowski" clearly legible.

Carol A. Piontkowski P.E.
Environmental Engineer Consultant
Bureau of Operations

xc: Laurel Harry , Superintendent, SCI-Camp Hill
Howard Gouse, Facility Maintenance Manager 3, SCI-Camp Hill
File

Enclosures

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JAN 07 2015

Lower Allen TownshipNational Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

ALLEN TWP

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> KOSKAP PARTNERS	<u>Property Address</u> 2500 GETTYSBURG
<u>Tax Parcel ID No.</u> 13-23-0549-003A	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> DB 266, Pg 4,059 ??

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities		
Stability of soil over and adjacent to the facility		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Submitted by:

MARTIN R. KAPPELL

Name (print)

Martin R. Kappel

Signature

1/3/15

Date

RECEIVED

JAN 07 2015

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

~~LOWER ALLEN TWP~~

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> <i>Chris Fedorin</i>	<u>Property Address</u> <i>1403 Wellgate Lane Mechanicsburg, Pa 17055</i>
<u>Tax Parcel ID No.</u> <i>13-11-0270-073</i>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> <i>Allen Estates</i>

Date of Inspection: 1/4/15
Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Chris Fedorin
Name (print)

Chris Fedorin
Signature

1/4/15
Date

RECEIVED

DEC 30 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

5225 Wilson Lane

LOWER ALLEN TWP. Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Asbury Atlantic	<u>Property Address</u> 325 Wesley Drive Suite 200 Media PA.
<u>Tax Parcel ID No.</u> 13-09-0545-006	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

DAVE IRWIN

Name (print)



Signature

11/26/14

Date

11 37907
2

STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING
AGREEMENT

THIS AGREEMENT, made and entered into this 2nd day of February, 2007, by and between Asbury Atlantic, Inc., (hereinafter the "Owner"), and Lower Allen Township, Cumberland County; Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 325 Wesley Drive, Suite 200 Mechanicsburg, PA 17055, Tax Parcel Number 13-09-0545-006, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

ATTEST:
(CORPORATE SEAL)


Anna Lutes
Secretary

MUNICIPALITY: Lower Allen Township

By John T. Tefel
(Vice) President

(Municipal Governing Body)

OWNER

(Individual)

Signature of Individual

Trading and Doing Business as

Witness:

RECEIVED

DEC 15 2014

LOWER ALLEN TWP

Lower Allen TownshipNational Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) PermitStormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u>	<u>Property Address</u> 950 Woodland St, Mechanicsburg, PA
<u>Tax Parcel ID No.</u> 13-24-0795-170	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/3/2014Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	X	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	X	
Safety	Y	

Submitted by:

John Orlando
Name (print)

[Signature]
Signature

12-4-14
Date

42960

STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)

MAINTENANCE AND MONITORING

AGREEMENT

THIS AGREEMENT, made and entered into this 24th day of July, 2006 by and between CHRISTOPHER CAMPAGNA, (hereinafter the "Owner"), and Lower Allen Twp., Cumberland County; Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 950 Woodland ST. Mercu PA 17055, Tax Parcel Number 13-24-0795-170, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property: and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

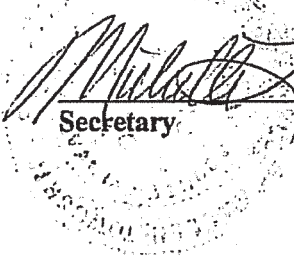
1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

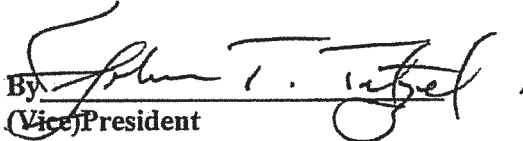
11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

ATTEST:
(CORPORATE SEAL)


Secretary

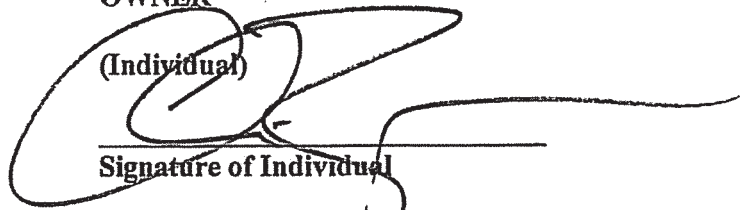
MUNICIPALITY: Lower Allen Township

By 
(Vice) President

(Municipal Governing Body)

OWNER

(Individual)


Signature of Individual

Witness:

Trading and Doing Business as



**STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING AGREEMENT**

THIS AGREEMENT, made and entered into this 6th day of December, 2012 by and between 950 Woodland Investments, LLC (hereinafter the "Owner"), and Lower Allen Township, Cumberland County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 950 Woodland Street, Mechanicsburg, PA 17055, Tax Parcel Number 13-24-0795-170, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Municipality shall give the Owner, successors, heirs and assigns, copies of

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

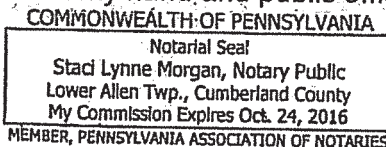
This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND

On this the 13th day of March, 2014, before me, the undersigned officer, personally appeared Deedrick M. Young Sr., known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and public official seal.

Staci Lynne Morgan
Notary Public



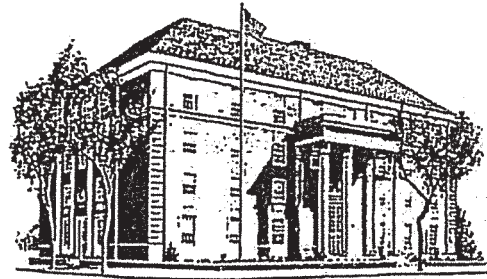
ATTEST:
(CORPORATE SEAL)

MUNICIPALITY: Lower Allen Township

Kanna Roberts
Secretary (Vice) President

By Deedrick M. Young Sr.
Board of Commissioners
(Municipal Governing Body)

ROBERT P. ZIEGLER
RECORDER OF DEEDS
CUMBERLAND COUNTY
1 COURTHOUSE SQUARE
CARLISLE, PA 17013
717-240-6370



Instrument Number - 201308298

Recorded On 3/14/2013 At 11:30:10 AM

* Total Pages - 5

* Instrument Type - AGREEMENT

Invoice Number - 131639

User ID - KW

* Grantor - 950 WOODLAND INVESTMENTS LLC

* Grantee - LOWER ALLEN TWP

* Customer - LOWER ALLEN TWP

* FEES

STATE WRIT TAX	\$0.50
RECORDING FEES -	\$11.50
RECORDER OF DEEDS	
PARCEL CERTIFICATION	\$10.00
FEES	
COUNTY ARCHIVES FEE	\$2.00
ROD ARCHIVES FEE	\$3.00
TOTAL PAID	\$27.00

Certification Page

DO NOT DETACH

This page is now part
of this legal document.

I Certify this to be recorded
in Cumberland County PA



Robert P. Ziegler
RECORDER OF DEEDS

* - Information denoted by an asterisk may change during
the verification process and may not be reflected on this page.

002X0X



RECEIVED

DEC 15 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

**Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report**

<u>Property Owner Name(s)</u>	<u>Property Address</u> 4532 Gettysburg Rd, Mechanicsburg, PA
<u>Tax Parcel ID No.</u> 13-24-0795-137	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12-2-2014

Inspection of Open Basins:

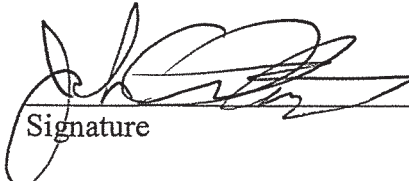
	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

John Ottensmire
Name (print)


Signature

12-4-14
Date

5. 29059 e



00320B

**STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING AGREEMENT**

THIS AGREEMENT, made and entered into this 23 day of August, 2013, by and between Old Gettysburg Associates VI, LP (hereinafter the "Owner"), and Lower Allen Township, Cumberland County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as 4532 Gettysburg Road, Mechanicsburg, Pa., Tax Parcel Number 13-24-0795-137, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property: and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, (Lower Allen Township Act 167), that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Municipality shall give the Owner, successors, heirs and assigns, copies of

submitted by the Owner and mandated by the Municipality to secure the Municipality's approval of the stormwater facility plan or to any directives which the Municipality and its agents and employees issue to the Owner regarding the maintenance of the Plan and its related stormwater facilities which are not part of the approved Plan, the Owner's compliance with the terms of such directive(s) results in the damages as set forth in the claim.

10. In the event a claim is asserted against the Municipality, its agents or employees, the Municipality shall promptly notify the Owner, successors, heirs or assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith. The provisions of this Paragraph 10 are subject to exception(s) set forth in Paragraph 9 above.
11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs. The provisions of Paragraphs 9 and 10 above shall not apply in the event a claim is filed and it is determined that the basis for the damages set forth in the claim arose and were the result of the negligence or willful misconduct of the Municipality, its agents or employees in responding to the special or unusual circumstances or situations.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

ATTEST:

(Corporation)

(Assistant) Secretary

(Name of Corporation)

(CORPORATE SEAL)

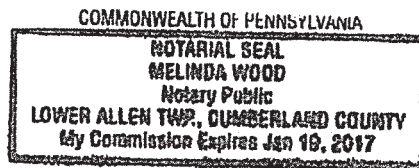
By _____
(Vice) President

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND

On this the 23rd day of August 20 13, before me, the undersigned officer, personally appeared John Ortenzio, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/~~she~~/they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and public official seal.

Melinda Wood
Notary Public



RECEIVED

DEC 15 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Select Capital Commercial Properties	<u>Property Address</u> 4712 4718 Gettysburg Rd Mechanicsburg, PA.
<u>Tax Parcel ID No.</u> 13-24-0795-003	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/2/2014

Inspection of Open Basins:

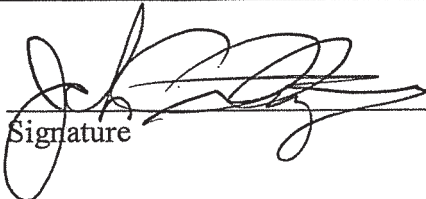
	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

John Orlandino
Name (print)


Signature

12-4-14
Date

**STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES
(BMP) MAINTENANCE AND MONITORING**

AGREEMENT

THIS AGREEMENT, made and entered into this 21st day of July, 2005, by and between Select Capital Commercial Properties, (hereinafter the "Owner"), and Lower Allen Township, Cumberland County; Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) Old Mechanicsburg Road, Tax Parcel Number 13-24-0795-003, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of the Lower Allen Township Act 167 Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper

occurrences or claims which might arise or be asserted against the Municipality for the construction, presence, existence or maintenance of the stormwater management facilities and BMP's by the Owner, successors, heirs and assigns.

10. In the event a claim is asserted against the Municipality, its agents or employees, the Municipality shall promptly notify the Owner, successors, heirs or assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.
11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.

This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

**ATTEST:
(CORPORATE SEAL)**


Secretary

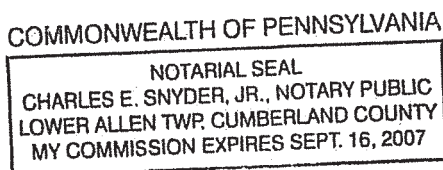
LOWER ALLEN TOWNSHIP

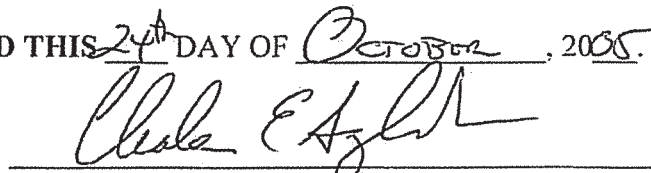
By 
President, Board of Commissioners

County of Cumberland, Pennsylvania

I, Charles E. Snyder, Jr., a Notary Public in and for the County and State aforesaid, whose commission expires on the 24th day of OCTOBER, 2005, do hereby certify that Peddrick M. Young and Michelle L. Chestnut, whose name(s) is/are signed to the foregoing Agreement bearing the date of the 21st day of July, 2005, has acknowledged the same before me in my said County and State.

GIVEN UNDER MY HAND THIS 24th DAY OF OCTOBER, 2005.




NOTARY PUBLIC (SEAL)

RECEIVED

DEC 11 2014

Lower Allen Township

LOWER ALLEN TWP. National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> CAPITAL AREA RT ASSOCIATES	<u>Property Address</u> 880 CENTURY DRIVE, MECHANICSBURG PA.
<u>Tax Parcel ID No.</u> 13-24-0795-174A 13-24-0795-174B	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/5/2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	TWO SMALL AREAS WITHIN BMP THAT HAVE DEVELOPED
Integrity and condition of vegetation	Y	MINOR RUTTING - RE GRADE TO SURROUNDIN SURFACE
Collection, storage and release of stormwater in accordance with the facility design	Y	RE-SEED AS NEEDED.
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities		
Stability of soil over and adjacent to the facility		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		

Submitted by:

FRANK KENTZ
Name (print)

[Signature]
Signature

12/5/14
Date



Kurowski & Wilson, LLC
470 Friendship Road, Suite 100
Harrisburg, PA 17111
P: 717-635-2835 F: 717-635-2836

LETTER OF TRANSMITTAL

TO: Dan Flint	FROM: Frank W. Lentz, EIT
Lower Allen Township	PROJECT NAME: Wendy's
Attn: Community Development Department	K&W PROJECT # 2031.013
2233 Gettysburg Road	RE: BMP Inspection Report
Camp Hill, Pa. 17011	DATE: December 9, 2014

WE ARE SENDING YOU: ☒ Attached ☐ Under separate cover via _____ the following items:

COPIES	DATE	NO.	DESCRIPTION
1	12/09/2014		NPDES Inspection Report

These Are Transmitted as Checked Below:

- | | | |
|--|---|---|
| <input type="checkbox"/> For approval | <input type="checkbox"/> Approved as submitted | <input type="checkbox"/> Resubmit _____ copies for approval |
| <input checked="" type="checkbox"/> For your use | <input type="checkbox"/> Approved as noted | <input type="checkbox"/> Submit _____ copies for distribution |
| <input type="checkbox"/> As requested | <input type="checkbox"/> Returned for corrections | <input type="checkbox"/> Return _____ corrected prints |
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> _____ | |
| <input type="checkbox"/> FOR BIDS DUE _____ 20 _____ | <input type="checkbox"/> PRINTS RETURNED AFTER LOAN TO US | |

REMARKS:

Enclosed please find our Application for the E&S Control Plan Review and all necessary documents. Please call us if you have any questions – thanks!

CC: William B Gruber Jr.

Signed: _____

If enclosures are not as noted, kindly notify us at once.

RECEIVED

DEC 10 2014

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Hassan Ada / Laura Yohe-Ada	<u>Property Address</u> 2414 Massachusetts Ave Camp Hill, PA 17011
<u>Tax Parcel ID No.</u> 13-23-0549-109	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/1/2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Hassan Ada
Name (print)


Signature

12/1/2014
Date

RECEIVED

DEC 10 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Rudolf GASSNER	<u>Property Address</u> 1712 LIBERTY CV, MECHANICSBURG, PA
<u>Tax Parcel ID No.</u> 13-11-0270-097	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 12/9/2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

RUDOLF GASSNER
Name (print)

Rudolf Gassner
Signature

12-9-2014
Date

RECEIVED

DEC 08 2014

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

Property Owner Name(s) L. Lance Bonsall	Property Address 5030 Arthur Avenue Mechanicburg, PA 17055
Tax Parcel ID No. 13-23-0559-084EX	Subdivision/Land Development/Drainage Plan No. (if known)

Date of Inspection: DEC 3, 2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	yes	
Stability of embankments and other soil areas	y	
Integrity and condition of vegetation	y	
Collection, storage and release of stormwater in accordance with the facility design	y	
Sediment accumulation	y	
Safety	y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	y	
Stability of soil over and adjacent to the facility	y	
Collection, storage and release of stormwater in accordance with the facility design	y	
Sediment accumulation	y	
Safety	y	

Submitted by:

Shanna Gleim
Name (print)

Shanna Gleim
Signature

12/3/2014
Date

RECEIVED

DEC 02 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Brian Rhykerd & Amy Rhykerd	<u>Property Address</u> 1706 Wyndham Rd Camp Hill, PA 17011
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Brian Rhykerd
Name (print)

B. Rhykerd
Signature

11-30-14
Date

RECEIVED

NOV 25 2014

ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

Property Owner Name(s)	Property Address
	4921 Gettysburg Rd
Tax Parcel ID No.	Subdivision/Land Development/Drainage Plan No. (if known)
13-25-0024-006	

Date of Inspection: 11/22/14

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Bob Christ CE
Name (print)

Bob Christ
Signature

11/25/14
Date

RECEIVED

NOV 25 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

~~LOWER ALLEN TWP~~

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

Property Owner Name(s) <u>Etter Investments, LLC</u>	Property Address <u>5026 ARTHUR Ave</u> <u>MECHANICSBURG, PA 17050</u>
Tax Parcel ID No. <u>13-23-0559-089</u>	Subdivision/Land Development/Drainage Plan No. (if known) <u>SLD 2010-04</u>

Date of Inspection: NOV. 24, 2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

TRACY D. ETTER
Name (print)

[Signature]
Signature

Nov. 24, 2014
Date

Please note:

Etter Investments, LLC has a new mailing address.
Please update your records accordingly. Thank you.

Old address:

800 Clubhouse Drive
Mechanicsburg, PA 17050

NEW address:

4 Notting Hill Estates Lane
Enola, PA 17025

CHANGED
11-25-14

RECEIVED

NOV 25 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

~~LOWER ALLEN TWP.~~

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> ELIZABETH A. GRACE	<u>Property Address</u> 3608 HARTZDALE DRIVE
<u>Tax Parcel ID No.</u> 13-24-0799-236	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> SLD 2010-02

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by: _____

Name (print)

Signature

Date





11/24/14



33857 ~~4~~ e

STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING

AGREEMENT

THIS AGREEMENT, made and entered into this 20th day of AUGUST, 2010, by and between ELIZABETH A. GRACE, (hereinafter the "Owner"), and LOWER ALLEN TOWNSHIP, Cumberland County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 3608 HARTZDALE DRIVE, Tax Parcel Number 13-24-0799-236, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidation of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

ATTEST:
(CORPORATE SEAL)


Danuta Lutz
Secretary

MUNICIPALITY: Lower Allen Township

By John T. Zup
(Vice) President

Board of Commissioners
(Municipal Governing Body)

OWNER

(Individual)

Elizabeth A. Allen
Signature of Individual

Witness:

Deborah A. Nichols

Trading and Doing Business as

**ROBERT P. ZIEGLER
RECORDER OF DEEDS
CUMBERLAND COUNTY
1 COURTHOUSE SQUARE
CARLISLE, PA 17013
717-240-6370**



Instrument Number - 201033857
Recorded On 11/19/2010 At 10:26:37 AM

* Total Pages - 5

* Instrument Type - AGREEMENT

Invoice Number - 77017 User ID - MSW

* Grantor - GRACE, ELIZABETH A

* Grantee - LOWER ALLEN TWP

* Customer - LOWER ALLEN TWP

* FEES

STATE WRIT TAX	\$0.50
RECORDING FEES -	\$11.50
RECORDER OF DEEDS	
PARCEL CERTIFICATION	\$10.00
FEES	
COUNTY ARCHIVES FEE	\$2.00
ROD ARCHIVES FEE	\$3.00
TOTAL PAID	\$27.00

Certification Page

DO NOT DETACH

**This page is now part
of this legal document.**

**I Certify this to be recorded
in Cumberland County PA**



Robert P. Ziegler
RECORDER OF DEEDS

* - Information denoted by an asterisk may change during
the verification process and may not be reflected on this page.

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NOV 25 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> WILLIAM GRACE	<u>Property Address</u> 145 LOCUST STREET
<u>Tax Parcel ID No.</u> 13-23-0555-082	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> SLO 2012-04

Date of Inspection: _____

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	RAW HAND Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	RAW HAND Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

WILLIAM GRACE
Name (print)

[Signature]
Signature

11/24/14
Date

11.6.13

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STANDARD STORMWATER FACILITIES AND BEST MANAGEMENT PRACTICES (BMP)
MAINTENANCE AND MONITORING AGREEMENT

THIS AGREEMENT, made and entered into this 5th day of October, 2014, by and between ~~B.H. Grace~~ William Grace (hereinafter the "Owner"), and Lower Allen Township, Cumberland County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Owner is the owner of certain real property identified as (address) 145 Locust Street, Tax Parcel Number 13-23-0555-083, (hereinafter "Property").

WHEREAS, the Owner is proposing to make improvements to the Property; and

WHEREAS, the Drainage Plan (hereinafter "Plan") for the Property which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention, retention, infiltration and/or treatment of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Owner, successors, heirs and assigns agree that the health, safety, and welfare of the public require that on-site stormwater management facilities and BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of its Stormwater Management Ordinance, that stormwater management facilities and BMPs as shown on the Plan be constructed and adequately maintained by the Owner, successors, heirs and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities and BMPs shall be constructed by the Owner, successors, heirs and assigns, in accordance with the terms, conditions, details and specifications identified in the Plan.
2. The Owner, successors, heirs and assigns, shall maintain the stormwater management facilities and BMPs in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Owner, successors, heirs and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities and BMPs whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Municipality shall give the Owner, successors, heirs and assigns, copies of

defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Owner, successors, heirs and assigns shall pay all costs and expenses in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Owner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Owner of any inspection, maintenance, or repair undertaken within five days of the activity. The Owner shall reimburse the Municipality for its costs.
12. It is agreed between the two entities known as Owner that they shall be bound jointly and severally by the terms, covenants and agreements herein.
13. Invalidity of any one of these provisions by judgement or Court Order shall in no wise affect any other provisions that shall remain in full force and effect.

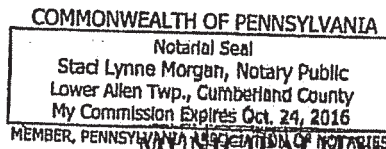
This Agreement shall be recorded at the Recorder of Deeds Office in Cumberland County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Owner, administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND

On this the 14th day of January 2017, before me, the undersigned officer, personally appeared H. Edward Black, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that he/she/they executed the same for the purposes therein contained.

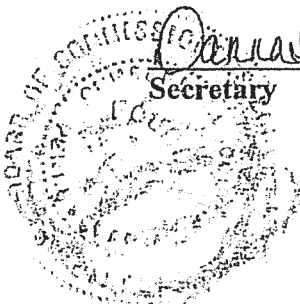
IN WITNESS WHEREOF, I hereunto set my hand and public official seal.

Staci Lynne Morgan
Notary Public



ATTEST:
(CORPORATE SEAL)

MUNICIPALITY: Lower Allen Township



Dennis Rutes
Secretary (Vice) President

By [Signature]

Board of Commissioners
(Municipal Governing Body)

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Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Linlo Properties III, LP	<u>Property Address</u> 1215 Manor Drive, Upper Allen Township, Mechanicsburg
<u>Tax Parcel ID No.</u> 13-10-0256-037	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: November 20, 2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Yes	
Stability of embankments and other soil areas	Yes	
Integrity and condition of vegetation	Yes	
Collection, storage and release of stormwater in accordance with the facility design	Yes	
Sediment accumulation	Yes	
Safety	Yes	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	N/A	
Stability of soil over and adjacent to the facility	N/A	
Collection, storage and release of stormwater in accordance with the facility design	N/A	
Sediment accumulation	N/A	
Safety	N/A	

Submitted by:

Lowell R. GATES
Name (print)

Lowell R. Gates
Signature

11/21/2014
Date

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NOV 20 2014

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> BILLY B SHEAFFER III KELLY L SHEAFFER	<u>Property Address</u> 1435 MAIN ST. MECH. PA 17055
<u>Tax Parcel ID No.</u> 13-31-2136-001A	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11-03-2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

BILLY B SHEAFFER III
Name (print)

Billy B Sheaffer III
Signature

11-03-2014
Date

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NOV 10 2014

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Alison Miller	<u>Property Address</u> 1570 Thompson Ln, Mechanicsburg 17055
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11-10-14

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

Alison Miller
Name (print)

Alison Miller
Signature

11-10-14
Date

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NOV 10 2014

LOWER ALLEN TWP.

Lower Allen Township
National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> WA Wray Jr Kay G. Wray	<u>Property Address</u> 1724 Liberty Cv. Mech, PA 17055
<u>Tax Parcel ID No.</u> 13-11-0270-099	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u> Liberty Point

Date of Inspection: 10/30/14

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:
WA Wray Jr
Name (print)

[Signature]
Signature

10/30/14
Date

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NOV 06 2014

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

LOWER ALLEN TWP.

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> VFW Post 7530	<u>Property Address</u> 4545 WESTPORT DRIVE
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11-4-14

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Y	
Stability of embankments and other soil areas	Y	
Integrity and condition of vegetation	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	Y	
Safety	Y	

Submitted by:

ROBERT D. KEEFER SR.
Name (print)

Robert D. Keefe Sr.
Signature

11/4/14
Date

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NOV 05 2014

LOWER ALLEN TWP.

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)

Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)

Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Jonathan & Jade Ruel	<u>Property Address</u> 1595 Thompson Lane Mechanicsburg, PA 17055
<u>Tax Parcel ID No.</u> 13-10-0258-063	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11-3-14

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	y	
Stability of embankments and other soil areas	y	
Integrity and condition of vegetation	y	
Collection, storage and release of stormwater in accordance with the facility design	y	
Sediment accumulation	y	
Safety	y	

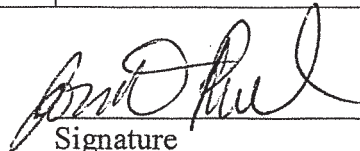
Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	y	
Stability of soil over and adjacent to the facility	y	
Collection, storage and release of stormwater in accordance with the facility design	y	
Sediment accumulation	y	
Safety	y	

Submitted by:

Jonathan Ruel

Name (print)



Signature

11-3-14

Date

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NOV 04 2014

LOWER ALLEN TWP

Lower Allen Township

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u> Joe Giovagnoli	<u>Property Address</u> 3702 Gettysburg Road Camp Hill PA
<u>Tax Parcel ID No.</u> 13-23-0553-026	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 11-4-14
Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances	Yes	
Stability of embankments and other soil areas	Yes	
Integrity and condition of vegetation	Yes	
Collection, storage and release of stormwater in accordance with the facility design	Yes	
Sediment accumulation	Yes	
Safety	Yes	

Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Yes	
Stability of soil over and adjacent to the facility	Yes	
Collection, storage and release of stormwater in accordance with the facility design	Yes	
Sediment accumulation	Yes	
Safety	Yes	

Submitted by:

Joe Giovagnoli
Name (print)

Signature

Date

11-4-14

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NOV 03 2014

LOWER ALLEN TWP.

Lower Allen Township
 National Pollutant Discharge Elimination System (NPDES)
 Municipal Separate Storm Sewer System (MS4) Permit

Stormwater Management Facilities and Best Management Practices (BMP)
 Operation and Maintenance Inspection Report

<u>Property Owner Name(s)</u>	<u>Property Address</u>
SHEKER FAMILY L.P.	75 ZIMMERMAN DR., CAMP HILL, PA 17011
<u>Tax Parcel ID No.</u>	<u>Subdivision/Land Development/Drainage Plan No. (if known)</u>

Date of Inspection: 10/31/2014

Inspection of Open Basins:

	Satisfactory (Y/N)	Repairs needed (list repairs, if any)
Structural integrity and operation of outlet structures and appurtenances		
Stability of embankments and other soil areas		
Integrity and condition of vegetation		
Collection, storage and release of stormwater in accordance with the facility design		
Sediment accumulation		
Safety		


Inspection of Subsurface Storage/Infiltration Facilities:

	Satisfactory (Y/N)	Repairs needed (list repairs)
Structural integrity and operation of outlet structures and related facilities	Y	
Stability of soil over and adjacent to the facility	Y	
Collection, storage and release of stormwater in accordance with the facility design	Y	
Sediment accumulation	N	
Safety	Y	

Submitted by:

LAURENCE T. SHEKER, P.E.

Name (print)



Signature

10/31/2014

Date

MCM #6 – POLLUTION PREVENTION / GOOD HOUSEKEEPING

BMP #1: Identify and document all facilities and activities that are owned or operated by the permittee and have the potential for generating stormwater runoff to the regulated small MS4. This includes activities conducted by contractors for the permittee. Activities may include the following: street sweeping; snow removal/deicing; inlet/outfall cleaning; lawn/grounds care; general storm sewer system inspections and maintenance/repairs; park and open space maintenance; municipal building maintenance; new construction and land disturbances; right-of-way maintenance; vehicle operation, fueling, washing and maintenance; and material transfer operations, including leaf/yard debris pickup and disposal procedures. Facilities can include streets; roads; highways; parking lots and other large paved surfaces; maintenance and storage yards; waste transfer stations; parks; fleet or maintenance shops; wastewater treatment plants; stormwater conveyances (open and closed pipe); riparian buffers; and stormwater storage or treatment units (e.g., basins, infiltration/filtering structures, constructed wetlands, etc.).

Measurable Goal: By the end of the first year of permit coverage, new permittees shall identify and document all types of municipal operations, facilities and activities and land uses that may contribute to stormwater runoff within areas of municipal operations that discharge to the regulated small MS4. Renewal permittees should have completed this list during the previous permit term. For all permittees, this information shall be reviewed and updated each year of permit coverage, as needed. Part of this effort shall include maintaining a basic inventory of various municipal operations and facilities.

1. Have you identified all facilities and activities owned and operated by the permittee that have the potential to generate stormwater runoff into the MS4? ☒ Yes ☐ No
2. When was the inventory last reviewed? 3/31/15
3. When was it last updated? 3/9/15
4. How many new facilities and/or activities were added to this inventory during this reporting period? One

BMP #2: Develop, implement and maintain a written operation and maintenance (O&M) program for all municipal operations and facilities that could contribute to the discharge of pollutants from the regulated small MS4s, as identified under BMP #1. This program (or programs) shall address municipally owned stormwater collection or conveyance systems, but could include other areas (as identified under BMP #1). The O&M program(s) should stress pollution prevention and good housekeeping measures, contain site-specific information, and address the following areas:

- Management practices, policies, procedures, etc. shall be developed and implemented to reduce or prevent the discharge of pollutants to your regulated small MS4s. You should consider eliminating maintenance-area discharges from floor drains and other drains if they have the potential to discharge to storm sewers.
- Maintenance activities, maintenance schedules, and inspection procedures to reduce the potential for pollutants to reach your regulated small MS4s. You also should review your procedures for maintaining your stormwater BMPs.
- Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt / sand (anti-skid) storage locations and snow disposal areas.
- Procedures for the proper disposal of waste removed from your regulated small MS4s and your municipal operations, including dredge spoil, accumulated sediments, trash, household hazardous waste, used motor oil, and other debris.

Measurable Goal: During the first year of permit coverage, new permittees shall develop and implement a written O&M program that complies with BMPs #1 and #2. Renewal permittees shall continue to implement their existing program. All permittees shall review the O&M program annually, edit as necessary, and continue to implement during every year of permit coverage.

1. For new permittees only, attach the written O&M program to the first Annual Report.
2. If you are not a new permittee, did you complete and submit your written O&M program to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:

**LOWER ALLEN TOWNSHIP
INVENTORY OF FACILITIES AND ACTIVITIES WITH POTENTIAL TO GENERATE STORMWATER RUNOFF**

	Name	Location	Description	Acres	Facilities	Uses/ Activities	Township Operations	Potential Pollutants	BMPs
1	Beacon Hill	1525 Capitol View Drive	Neighborhood park	3.4	Play structure; Pavilion	Recreation	Maintenance	Trash	Grass lined swale
2	Radar Site	1612 Lowell Lane	Passive park	8.1	Open space; parking area	Passive recreation	Maintenance	Trash; vehicle drippings	Grass lined swale
3	Beacon Hill Land	Beacon Hill Blvd. At Poplar Avenue	Open field, wooded floodplain	9.7	Open space	Passive recreation	Maintenance	Trash	Riparian buffer
4	Creekwood	150 Creekwood Drive	Neighborhood park	5.6	Picnic tables; trail	Passive recreation; hiking; fishing; parking area	Maintenance	Trash; vehicle drippings	Porous asphalt trail; riparian buffer
5	Allendale	221 Deerfield Road	Neighborhood park	1.2	Pavilion; swing set; play structure; merry-go-round, basketball court	Recreation	Maintenance	Trash	None
6	Highland Park Playground	1301 Chatham Road	Neighborhood park	2.0	Pavilion; picnic tables; tennis court; basketball court; shuffleboard court; play structure; swing set	Recreation	Maintenance	Trash	None

	Name	Location	Description	Acres	Facilities	Uses/ Activities	Township Operations	Potential Pollutants	BMPs
7	Highland Estates Playground	1914 Letchworth Drive	Neighborhood park	0.5	Pavilion; picnic tables; play structure; swing set	Recreation	Maintenance	Trash	None
8	Peters Field	3811 Gettysburg Road	Neighborhood park; regional athletic fields	3.0	Baseball fields; tennis court; basketball court; swing set; slide; pavilion; concession stand; restroom; parking lot	Recreation; youth sports	Maintenance	Trash; vehicles drippings	None
9	Vernon C. Wass Park	301 Wesley Drive	Regional park	10.0	Pavilion; restrooms; play structure; swing set; sand box; picnic tables; softball fields; volleyball court; lighted basketball and tennis courts; walking path; parking lot	Recreation; youth sports	Maintenance	Trash; vehicle drippings	None
10	Sheepford Crossing.	16 Argali Lane	Neighborhood park	1.5	Pavilion; picnic tables; basketball court; swing set; play structure	Recreation	Maintenance	Trash	None
11	Yellow Breeches Park	2050 Sheepford Road	Passive recreation	14.0	Hiking trail; picnic tables; creek access; water trail; community gardens	Recreation; gardening; fishing	Maintenance	Trash	None

Name	Location	Description	Acres	Facilities	Uses/ Activities	Township Operations	Potential Pollutants	BMPs
12 Lower Allen Community Park (LACP)	4075 Lisburn Road	Regional park; regional sports activities	110.0	Pavilions, play structures, Fun Fort, swing sets; volleyball courts; basketball courts; tennis courts; camp sites; boat ramp; nature trail; fishing pond; soccer fields; softball fields; golf driving range; community “barn” building; parking lots; dog park	Recreation; team athletic functions; group rentals at “barn” and pavilions	Maintenance; community events	Trash; vehicle drippings; pet waste	Stormwater basin; grass- lined swale
13 Windsor Park Triangle	5200 Block Oxford Drive	Neighborhood passive recreation	1.0	None	Recreation	Maintenance	Trash	None
14 Moreland Basin	5400 Block Oxford Drive	Stormwater detention basin	1.0	Basin with outlet structure	None	Maintenance	Trash; vehicle drippings; other material in street runoff	SWM basin; rock filter at outlet structure
15 Sheepford Crossing Basin 1	Sheepford Road at Lisburn Road	Stormwater detention basin	0.5	Basin with outlet structure	None	Maintenance	Trash; vehicle drippings; other material in street runoff	SWM basin; rock filter at outlet structure

	Name	Location	Description	Acres	Facilities	Uses/ Activities	Township Operations	Potential Pollutants	BMPs
16	Sheepford Crossing Basin 2	Ewe Road	Stormwater detention basin	1.0	Basin with outlet structure	None	Maintenance	Trash; vehicle drippings; other material in street runoff	SWM basin; rock filter at outlet structure
17	Public Works Shop	1400 St. Johns Road	Public Works Department Facility	16.2	Office, storage and maintenance building; storage sheds; asphalt pads; parking area; stormwater basins	Vehicle storage and maintenance; material storage; yard waste processing and storage	Building and site maintenance, vehicle storage and maintenance; material storage; yard waste processing and storage	Trash; vehicle drippings; road salt; vehicle maintenance materials	SWM basins; oil/water separator; salt settling basins
18	Leaf Composting Facility	2750 Yetter Court	Leaf composting facility	4.9	Asphalt pad	Composting leaves collected from throughout the Township	Composting leaves collected from throughout the Township	Trash; vehicle drippings; nutrients from leaf compost	SWM basin
19	LA Fire Station 2	800 Rupp Avenue	Fire station	0.7	Building, parking lot	Office; vehicle and equipment storage	Maintenance	Trash; vehicle drippings	None

	Name	Location	Description	Acres	Facilities	Uses/ Activities	Township Operations	Potential Pollutants	BMPs
20	Spring Lake Colony Lots	Between Orchard Road and Shetter Lane	Vacant wooded lots	1.6	None	None	None	None	None
21	Former Township Building	1993 Hummel Avenue	Former Township office	1.0	Office building; parking lot; stormwater pond and pump	Rented space	Building and site maintenance	Trash; vehicle drippings	SWM basin
22	Municipal Services Center	2233 Gettysburg Road	Township office	6.7	Office; vehicle storage; parking lots	Office; police, fire and EMS operations	Office building; parking lot; building and site maintenance	Trash, vehicle drippings	Rain gardens; porous asphalt parking lot; infiltration trench
23	Cedar Spring Run Park	2239 Gettysburg Road	Play area; walking path; restrooms; pedestrian bridge	2.5	Restroom; parking area; walking path; seating area	Recreation	Maintenance	Trash; vehicle drippings	Rain gardens; porous concrete parking area; riparian buffer

**Lower Allen Township
Stormwater Management Plan
Pollution Prevention/Good Housekeeping
Operations and Maintenance Program
March 2014-March 2015**

Stormwater inlets cleaned:

Lower Allen Township: None

PennDot: 106

Total: 106

Loads:

Debris Collected:

Loads: 3

Pounds per load: 4100

Total pounds: 12,300

Total tons: 6.15

Days to complete project: 3

Street Sweeping:

Loads:

113

Pounds Per Load

8340

Total Pounds:

942,420

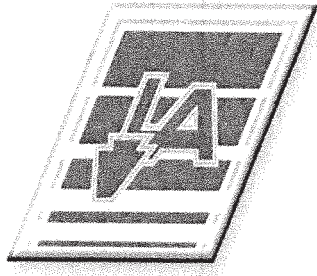
Total Tonnage

421.17

Curb miles of street cleaned annually by street sweeping operations: 625

Loads of sweepings collected annually by street sweeping operations: 113

Loads of leaves removed from streets annually by leaf recycling operations: 271



LOWER ALLEN TOWNSHIP

1400 ST. JOHNS ROAD * CAMP HILL, PENNSYLVANIA 17011-8033

PUBLIC WORKS DEPARTMENT 2014 YEAR END REPORT

The Public Works Department has come full circle, completing another year of service to the Lower Allen Township residents. We pride ourselves in the work we do and strive to serve the Township residents in the most cost efficient and convenient ways possible under all circumstances. We wish everyone a very happy, healthy and prosperous New Year!

Crews spent the beginning of December wrapping up leaf collection which was completed the week of the 8th. Many residents were able to track the daily progress of leaf collection on the Township's website, which was updated daily. Residents who do not participate in computer technology, were able to call in as needed to find out information on when crews would be in their neighborhoods. The 8 week leaf collection was for the most part, a smooth process. The street sweeper was sent out after the collection to clean up the road debris. Street sweeping will resume in the Spring as needed.

Snow fall came on December 11th. Crews were called out during the early morning hours, to treat the roads. 4 inches of wet snow accumulated during that storm. 54 tons of salt was used on Lower Allen roads, during December. Salt use for the season has been minimal, compared to the 477 tons expended last year at this time.

There were 103 loads of brush and 79 loads of bulk items brought in by residents, for the month. Three bulk dumpsters were ordered and filled for December. Christmas tree pickup is scheduled for January 5th – January 16th. Residents are welcome to drop off their brush or Christmas tree's after January 16th, at Public Works, Monday through Friday between the hours of 7:00am – 2:30pm. The curbside brush pickup, by Penn Waste Services, will be resumed in April 2015.

The following is a listing of the Township recycling totals and revenue generated through the Public Works facility and Parks fields and facility rentals.

Recycling 2014

Christmas trees collected: January 2014	970 Trees (64 cubic yards) (16 tons)
Brush dropped off at The Public Works Facility	3231 loads
Bulk items dropped off at The Public Works Facility – Dumpsters filled.	1409 loads (57 dumpsters filled for 2014)
Brush/Wood chips (ground at facility)	7360 cubic yards (1,840 tons)
Leaf compost (made at facility)	1955 cubic yards (1319.63 tons)
Leaf Collection LAT: Fall 2014	1,104.70 tons (5523.5 cubic yards)
Street sweeping of Lower Allen Roads 2014	20.7 tons of collected debris (103.5 Cubic yards)
Wood chip/Leaf compost deliveries	\$7,200.00
Leaf compost self loaded by residents	\$521.00
Recycling Revenue:	<u>\$7,721.00</u>
Yard waste permits issued to contractors :	6 permits + <u>\$3,900.00</u>
Total:	\$11,621.00

Snow Report 2014

2014 Weather related events:	30 call outs and follow ups
Salt used in 2014 :	1243 tons
Salt brine used in 2014:	3672 gallons

Facilities Rental for 2014

Barn Facility LACP:	Pavilions LACP:
Lower Floor: (27) resident (6) non-resident	Tot Lot Pavilion: (2) Resident (1) Non-res
Upper Floor: (20) resident (9) non-resident	Keystone Pavilion: (2) Resident (0) Non-res
Both Floors: (17) resident (11) non-resident	Upper Pavilion: (18) Resident (14) Non-res
	Lower Pavilion: (33) Resident (22) Non-res
Campsites LACP:(5) Resident (11) non-resident	Fernlawn Pavilion: (13) Resident (7) Non-res
Barn rental revenue:	\$21,302.00
Pavilion revenue:	\$8,460.00
Campsite revenue:	\$290.00
Total of revenue collected for facilities rentals:	\$30,052.00

Additional jobs completed during the month of December:

- Maintenance to the LACP picnic tables
- Organized cold storage building at PW
- Cleaned up mowing equipment for the winter
- Repaired 4 bleachers from Wass Park
- Stone put down at the school bus turnaround on Sheepford Road
- Stone put down at the turn around at the end of Orchard Road
- Sign work (4 PA-One calls)
- MSC building maintenance
- Park play equipment maintenance
- Cleaned leaf pickers for the season

Meetings: Safety Committee Meeting – (Bob Nailor)
 Department Head Meeting (2) – (Bob Nailor)
 APWA Seminar – (Bob Nailor, Jim Chianos, Bryan Harshbarger)
 PW Monthly Department Meeting – (All PW employees)

Respectfully submitted,

Bob Nailor
Public Works Coordinator

3. Date of last review or update to O&M program: March 06, 2015

BMP #3: Develop and implement an employee training program that addresses appropriate topics to further the goal of preventing or reducing the discharge of pollutants from municipal operations to your regulated small MS4s. The program may be developed and implemented using guidance and training materials that are available from federal, state or local agencies, or other organizations. Any municipal employee or contractor shall receive training. This could include public works staff, building / zoning / code enforcement staff, engineering staff (on-site and contracted), administrative staff, elected officials, police and fire responders, volunteers, and contracted personnel. Training topics should include operation, inspection, maintenance and repair activities associated with any of the municipal operations / facilities identified under BMP #1. Training should cover all relevant parts of the permittee's overall stormwater management program that could affect municipal operations, such as illicit discharge detection and elimination, construction sites, and ordinance requirements.

Measurable Goal: During the first year of permit coverage, new permittees shall develop and implement a training program that identifies the training topics that will be covered, and what training methods and materials will be used. Renewal permittees shall continue to operate under their existing program. All permittees shall review the training program annually, edit it as necessary, and continue to implement it during every year of permit coverage.

Measurable Goal: Your employee training shall occur at least annually (i.e., during each permit coverage year) and shall be fully documented in writing and reported in your periodic reports. Documentation shall include the date(s) of the training, the names of attendees, the topics covered, and the training presenter(s).

1. For new permittees only, attach the written training program to the first Annual Report. N/A
2. If you are not a new permittee, did you complete and submit your written training program to DEP? ☐ Yes ☒ No
If Yes, provide the latest submission date:

3. Date of last review or update to training program: March 06, 2015

4. Identify the date(s) of employee training, the names of attendees, the topics covered, and the training presenters:

List of attendees and training information attached

LOWER ALLEN TOWNSHIP
PUBLIC WORKS, FLEET MANAGEMENT and
COMMUNITY DEVELOPMENT DEPARTMENTS

TRAINING PROGRAMS

NPDES Phase 2 MS4 Permit Good Housekeeping/Pollution Prevention Training
NPDES PAG-3 Permit Preparedness, Prevention and Contingency (PPC) Plan Training
March 6, 2015 1:00 PM

NPDES Phase 2 MS4 Permit Good Housekeeping/Pollution Prevention Training

1. Background information on MS4 Program
 1. Six Minimum Control Measures
 1. Public Education and Outreach
 2. Public Participation/Involvement
 3. Illicit Discharge Detection and Elimination
 4. Construction Site Runoff Control
 5. Post-Construction Runoff Control
 6. **Pollution Prevention/Good Housekeeping**
2. Status of MS4 Permits
3. Center for Watershed Protection, Manual 9, Municipal Pollution Prevention/Good Housekeeping Practices
 1. Training Focus from previous years:
 1. 2011 MO-1: Hotspot Facility Management
 2. 2012 MO-3: Street Repair and Maintenance
 3. 2013 MO-4: Street Sweeping
 4. 2014 MO-5: Storm Drain Maintenance
 5. 2015 Training Focus: Municipal Operation Profile Sheet MO-7: Park and Landscape Maintenance
 6. Identify existing municipal operations
 7. Collect information about each operation
 8. Complete the Municipal Operations Analysis (MOA)
 9. Focus Pollution Prevention/Good Housekeeping (PP/GH) Efforts
 10. Investigate Municipal Operations and Select PP/GH Practices
 11. Implement PP/GH Practices
 12. Evaluate Progress in Implementation
4. Construction Site Operations
 1. Concrete Washout Procedures

NPDES PAG-3 Permit Preparedness, Prevention and Contingency (PPC) Plan Training

1. **Spill Leak Prevention and Response**
 1. Pre-Release Planning - Potential sources for accidental spills, leaks or leaching are described as follows:
 1. Vehicle fueling facility. All fuel is stored in permitted underground tanks. Vehicles are fueled at a covered facility. This facility is in an area that drains to the stormwater detention basin. Any spill in this area would flow into the basin.
 2. Waste oil. Waste oil is stored in an underground waste oil tank adjacent to the maintenance building, until it is recycled in the waste oil furnace inside the building.

that may be needed in the event of an incident at the facility.

2. Communications and Alarm Systems

1. Employees maintain contact through the use of mobile and portable two-way radios. Notification of an emergency can be made to all employees using these radios.

3. Evacuation Plan

1. Emergency exit plans are posted throughout the maintenance building in accordance with the International Fire Code.

4. Emergency Equipment Available for Response

1. Portable fire extinguishers are located throughout the maintenance building, in accordance with the International Fire Code.
2. Additional response equipment is available from the Public Safety Department, upon notification that such services are required.

Step 2: Collect Information About Each Operation

Once you have determined that your community does conduct park and landscape maintenance, the next step in the process is to collect some basic information about how those activities. Basic information to collect about the park and landscape maintenance activities conducted in your community includes:

- Narrative description of park and landscape maintenance activities
- Locations of park and landscape maintenance activities
 - Name
 - Street address
 - Watershed and subwatershed address
 - Geospatial coordinates (e.g. latitude, longitude)
 - Parcel size
- Map showing locations of park and landscape maintenance activities
- Operation manager name
- Operation manager contact information

This information should be added to the simple database or binder that contains the information about all of the municipal operations conducted in your community.

As you collect some basic information about the park and landscape maintenance activities conducted within your community, you should begin communicating with the individuals who oversee or manage those activities. This is an ideal time to inform these individuals about the community's pollution prevention/good housekeeping efforts and the purpose of the community's municipal pollution prevention/good housekeeping program. It is also a good time to educate them about the influence that park and landscape maintenance can have on water quality and how pollution prevention/good housekeeping practices can be used to reduce the amount of stormwater pollution that these activities create.

Step 3: Complete the Municipal Operations Analysis (MOA)

The next step in the process is to use the basic information that you have collected about the park and landscape maintenance activities conducted in your community to complete Section 7 of the MOA. This section of the MOA asks a series of questions about the nature, scope and distribution of the park and landscape maintenance activities conducted within your community. In some cases, you will be able to answer all of the questions using only the information that you have already collected about these activities. In most cases, however, answering the questions will require additional input from the individuals who manage or oversee each of the operations as well as site visits to the locations or areas where the activities are being conducted.

Once you have answered all of the questions presented within Section 7 of the MOA, you should calculate your score to determine how well your community is currently managing its park and landscape maintenance activities. When you have completed the entire MOA, you should also compare the score that you received in Section 7 with the scores you received in each of the other sections of the analysis. This will help you focus your pollution prevention/good

Table 2: Example Discussion Questions

systems?

- How are landscaping debris and grass clippings disposed of on the properties that you maintain?
- Does the list consider performance on erosion and sediment control and stormwater management?
- What additional resources would you need to improve the community's existing park and landscape maintenance program?
- Do you provide regular stormwater pollution prevention training to employees who are involved with park and landscape maintenance activities?

Begin your follow-up investigation by interviewing the community's urban forester, if one exists. Working in conjunction with the community's urban forester and other community forestry staff will be key to improving the way that park and landscape maintenance activities are conducted within your community.

When collecting addition information about the park and landscape maintenance activities conducted in your community, you should strive to identify the specific activities that are conducted, how frequently these activities are carried out and the pollution prevention/good housekeeping practices that may already be in place to control the stormwater pollution that they create. In particular, you should evaluate:

- Fertilizer application timing and rates
- Pesticide/herbicide application timing and rates
- Irrigation practices
- Turf management practices
- Native landscaping/tree planting efforts

Step 5.2: Conduct Field Investigations

The next step in the process is to investigate each publicly owned property greater than one acre in size to identify subwatershed restoration and pollution prevention/good housekeeping opportunities. These investigations can be completed using the Pervious Area Assessment (PAA) and Hotspot Site Investigation (HSI) and Unified Stream Assessment (USA).

The PAA evaluates the feasibility of conducting reforestation or other revegetation efforts on large pervious areas. The PAA can be used to identify and prioritize reforestation projects at golf courses, parks and schools that will provide significant water quality and water quantity benefits and will help address subwatershed restoration goals and objectives. Manual 11 contains additional information about conducting the PAA.

The HSI can be used to systematically evaluate six categories of pollution-generating activities that commonly contribute to stormwater quality problems:

- | | |
|------------------------------|-----------------------------|
| • Outdoor Materials Handling | • Turf/Landscape Management |
| • Physical Plant Maintenance | • Vehicle Operations |
| • Stormwater Infrastructure | • Waste Management |

Table 3: Pollution Prevention/Good Housekeeping Practices Commonly Used to Improve Park and Landscape Maintenance Operations	
Activity	Pollution Prevention/Good Housekeeping Practices
	herbicides <ul style="list-style-type: none"> Consider a low or no pesticide approach to maintaining landscaped areas
Fertilizer Application	<ul style="list-style-type: none"> Never apply fertilizers or pesticides within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a stream or water body Consider a low or no fertilizer approach to maintain turf Apply only when rain is not expected Perform a soil test to determine actual fertilization needs and application rate Calibrate fertilizer spreaders to avoid excessive application
Irrigation	<ul style="list-style-type: none"> Employ shutoff devices to prevent irrigation after precipitation or if a pressure drop occurs due to broken sprinkler heads or lines Design irrigation systems specific to each landscaped area's water requirements Select native plant species whenever possible and group together plants with similar water requirements in order to reduce excess irrigation Use soaker hoses not sprinklers and irrigate in the morning or evening to conserve water
Employee Training	<ul style="list-style-type: none"> Train employees on the use and appropriate application of pesticides, herbicides and fertilizers Ensure that designated no mow areas are well advertised Educate staff on the benefits of trees and native and naturalized species

Step 5.4: Develop Implementation Plan

The next step in the process is to develop a brief implementation plan. The implementation plan should summarize the results of assessment and field investigations, the specific pollution-generating activities associated with each publicly-owned property and the pollution prevention/good housekeeping practices that will be used to address each of these activities. Implementation plans should also include a schedule that describes some implementation milestones for the prescribed pollution prevention/good housekeeping practices. The contents of each implementation plan should be developed in cooperation with the individuals responsible for managing or overseeing each of the park and landscape maintenance activities.

A key element of each implementation plan is an estimate of the budget required to implement the recommended pollution prevention/good housekeeping practices. Although providing detailed cost information about all of the pollution prevention/good housekeeping practices that can be used to address the specific pollution-generating activities associated with municipal park and landscape maintenance activities is beyond the scope of this manual, there are some useful resources that can be used to gather this information, including Manual 8 and U.S. EPA's *National Menu of Stormwater Management Best Management Practices*, which is available online at: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>.

Step 6: Implement Pollution Prevention/Good Housekeeping Practices

Once your existing park and landscaping activities have been investigated and assessed, the next step in the process is implementing the prescribed pollution prevention/good housekeeping practices. Although it may be tempting to hand the responsibility for implementation over to the

Table 4: Measurable Goals and Implementation Milestones for Improving Municipal Park and Landscape Maintenance Operations ¹		
Example Measurable Goals	Timeframe	Priority
Evaluate progress in meeting measurable goals and implementation milestones	regularly after that	●
Evaluate progress in implementing prescribed pollution prevention/good housekeeping practices	End of Year 1 and each year after that	●
Notes 1) Assumes that park and landscape maintenance is as the top of the prioritized municipal operations list. Key ● = Essential ◎ = Optional but Recommended		

The methods used to evaluate success in meeting these measurable performance goals and implementation milestones can be as simple as semi-annual or annual inspections used to identify the pollution prevention/good housekeeping practices that have been put in place and the improvements that still need to be made.

Scoping the Required Level of Effort

The level of effort required to improve the way that municipal park and landscape maintenance activities are conducted varies greatly from one community to the next. It depends on the type of landscape and maintenance activities that are conducted within the community, the frequency and scope of those activities and on the number and type of pollution prevention/good housekeeping practices that are needed to improve those activities. Basic guidance on scoping the level of effort required to improve local park and landscape maintenance operations is provided in Table 5. Communities can use this information to scope the level of effort required to improve their own park and landscape maintenance activities.

Table 5: Scoping the Level of Effort Required to Improve Municipal Park and Landscape Maintenance Operations ¹	
Step	Staff Hours
Step 1: Identify Existing Municipal Operations	4-8 ¹
Step 2: Collect Information About Park and Landscape Maintenance Activities	4-8
Step 3: Complete Section 7 of the Municipal Operations Analysis (MOA)	10-20
Step 4: Focus Pollution Prevention/Good Housekeeping Efforts	4-8 ¹
Step 5: Investigate Municipal Operations and Select Pollution Prevention/Good Housekeeping Practices	120-240
Step 5.1: Collect Additional Information About Park and Landscape Maintenance Activities	20-40
Step 5.2: Conduct Field Investigations (two staff per team)	
USA	8/stream mile
PAA	1/site
HSI	2/site
Post-Processing	40-60
Step 5.3: Prescribe Pollution Prevention/Good Housekeeping Practices	20-40
Step 5.4: Develop Implementation Plan	20-40
Step 6: Implement Pollution Prevention/Good Housekeeping Practices	Varies ²
Step 7: Evaluate Progress in Implementation	20-40/evaluation ¹

Golf Course Superintendents Association of America (GCSAA). Environmental principles for golf courses in the United States <http://www.gcsaa.org/resources/facts/principles.asp>

Seattle Parks and Recreation. Best Management Practices (BMPs) for Landscape Maintenance Operations <http://www.seattle.gov/parks/projects/bmp.htm>

Spitzer Announces Agreements with Retailers to Remove Illegal Pesticides from Shelves http://www.oag.state.ny.us/press/2002/aug/aug20a_02.html

Three Rivers Park District <http://www.threeriversparkdistrict.org/>

Best Management Practices

Follow these BMPs to control pollutant discharges. The objectives are: 1) to keep pollutants from contacting rain, and 2) to keep pollutants from being dumped or poured into the storm drains. The goal is "only rain in the storm drain."

How to properly dispose of concrete wastes:

- \$ Use a squeegee or similar tool to remove all excess concrete from the chute.
- \$ Place all excess concrete in a form, holder, box, or a designated washout area where it may be removed once it is hardened. You may need to make a number of smaller piles because solid concrete is very heavy. All concrete finishing tools and pumping hoses should also be cleaned in the washout area.
- \$ Use the minimum amount of water to wash down the chute, finishing tools, and any other equipment.
- \$ Remove the concrete sediment from the street, gutters, and area surrounding the washout area before it hardens.
- \$ Dispose of concrete wash water properly. Two examples are described below.

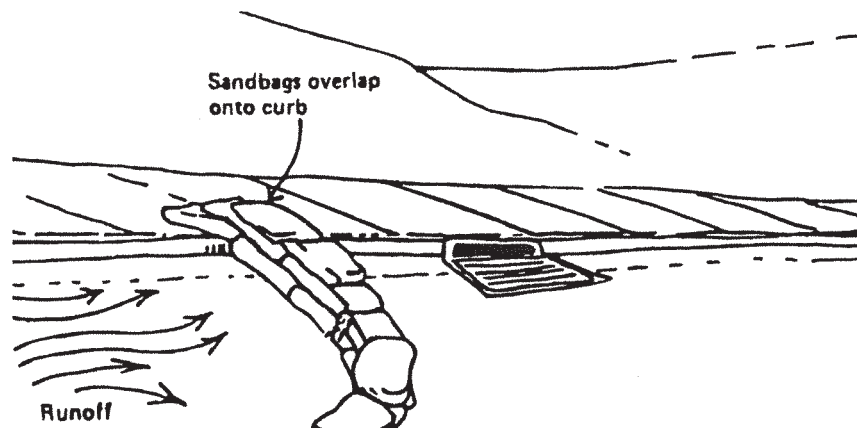
Disposing of Washwater

Preferred Practice: Contain all washwater on soil, preferably in a bowl shaped area to prevent the wash water from flowing from the washout area.

Alternate Practice:

1. Find the storm drain immediately down stream from the designated washout area. Block the storm drain and dam an area to collect the washwater. One effective control method is to use sandbags. To properly install, first wet down the sand bags, then compact them tightly to one another and to the curb so that no silty water can flow through.
2. Allow particles to settle and allow the water to evaporate.
3. Remove any remaining concrete sediment.
4. Discard the concrete particles to the trash or landfill.

Remember, it is illegal to dispose of concrete or washwater in the storm drain. Also, do not dispose of concrete in the sanitary sewer.



Minimum Measure

Construction Site Stormwater Runoff Control

Subcategory

Good Housekeeping/Materials Management

Description of Concrete Washout at Construction Sites

Concrete and its ingredients

Concrete is a mixture of cement, water, and aggregate material. Portland cement is made by heating a mixture of limestone and clay containing oxides of calcium, aluminum, silicon and other metals in a kiln and then pulverizing the resulting clinker. The fine aggregate particles are usually sand. Coarse aggregate is generally gravel or crushed stone. When cement is mixed with water, a chemical reaction called hydration occurs, which produces glue that binds the aggregates together to make concrete.

Concrete washout

After concrete is poured at a construction site, the chutes of ready mixed concrete trucks and hoppers of concrete pump trucks must be washed out to remove the remaining concrete before it hardens. Equipment such as wheelbarrows and hand tools also need to be washed down. At the end of each work day, the drums of concrete trucks must be washed out. This is customarily done at the ready mixed batch plants, which are usually off-site facilities, however large or rural construction projects may have on-site batch plants. Cementitious (having the properties of cement) washwater and solids also come from using such construction materials as mortar, plaster, stucco, and grout.

Environmental and Human Health Impacts

Concrete washout water (or washwater) is a slurry containing toxic metals. It's also caustic and corrosive, having a pH near 12. In comparison, Drano liquid drain cleaner has a pH of 13.5. Caustic washwater can harm fish gills and eyes and interfere with reproduction. The safe pH ranges for aquatic life habitats are 6.5 – 9 for freshwater and 6.5 – 8.5 for saltwater.

Construction workers should handle wet concrete and washout water with care because it may cause skin irritation and eye damage. If the washwater is dumped on the ground (Fig. 1), it can run off the construction site to adjoining roads and enter roadside storm drains, which discharge to surface waters such as rivers, lakes, or estuaries. The red arrow in Figure 2 points to a ready mixed truck chute that's being washed out into a roll-off bin, which isn't watertight. Leaking washwater, shown in the foreground, will likely follow similar

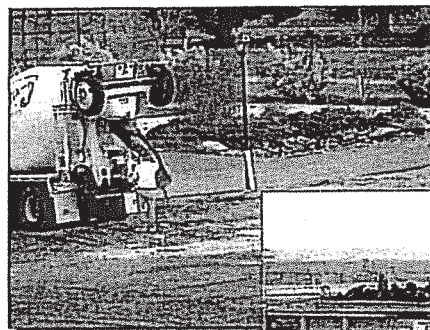


Figure 1. Chute washwater being dumped on the ground

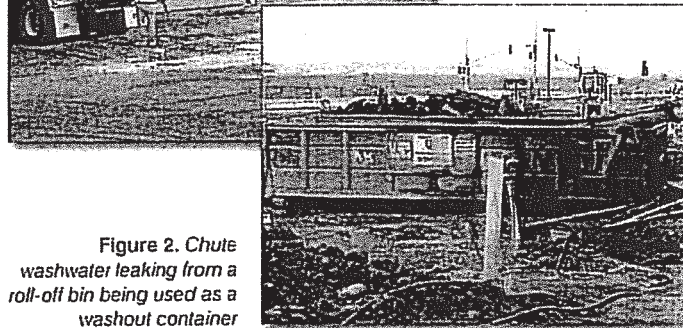


Figure 2. Chute washwater leaking from a roll-off bin being used as a washout container

paths to nearby surface waters. Rainfall may cause concrete washout containers that are uncovered to overflow and also transport the washwater to surface waters. Rainwater polluted with concrete washwater can percolate down through the soil and alter the soil chemistry, inhibit plant growth, and contaminate the groundwater. Its high pH can increase the toxicity of other substances in the surface waters and soils. Figures 1 and 2 illustrate the need for better washout management practices.

Best Management Practice Objectives

The best management practice objectives for concrete washout are to (a) collect and retain all the concrete washout water and solids in leak proof containers, so that this caustic material does not reach the soil surface and then migrate to surface waters or into the ground water, and (b) recycle 100 percent of the collected concrete washout water and solids. Another

LOWER ALLEN TOWNSHIP
PUBLIC WORKS DEPARTMENT
FLEET MANAGEMENT DEPARTMENT
COMMUNITY DEVELOPMENT DEPARTMENT




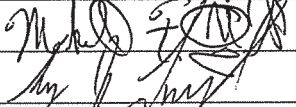
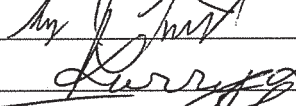

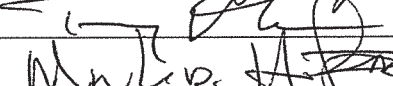
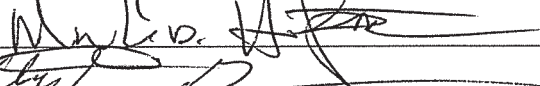

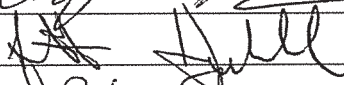
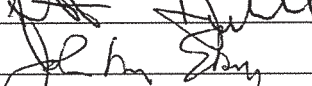

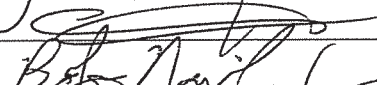
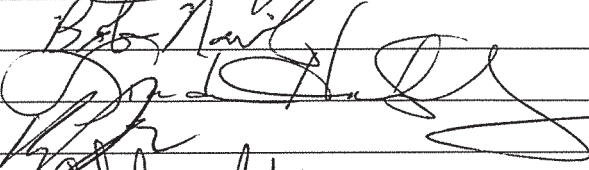

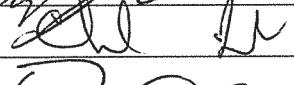
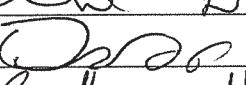
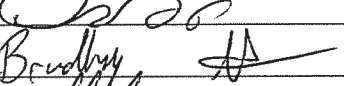
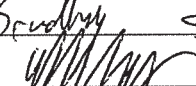

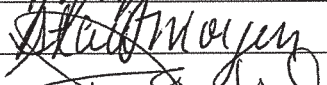
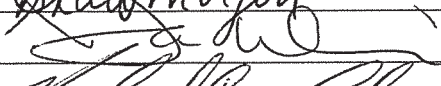
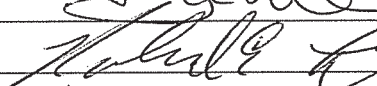
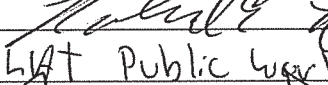
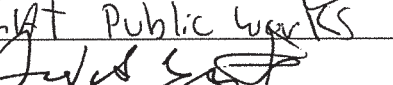
ATTENDANCE

NPDES PAG-3 Permit

Preparedness, Prevention and Contingency (PPC) Plan Training

March 6, 2015

1:00 PM

NAME (PRINT)	SIGNATURE
Greg Hetzel	
Mark D'Agostino	
Tom Stambak	
Marshall Quarson	
Glen Turpin	
Harry Leopold	
TERRY FABICK	
Mark Hoffman	
Clayton Gerner	
Scott Harbold	
JOHN EBY	
Chris Roethe	
Bob NAILOR	
Nina Hafferty	
Ken Rowse	
Charlie Reynolds	
Tim Davis	
Bradley Milk	
William J. Yeckley	
Staci Morgan	
Jim Chisner	
Richard E. Lehigh	
Barry Zook	
D. Gunt	
RAY ALLEN	

LOWER ALLEN TOWNSHIP

ATTENDANCE

NPDES MS4 Permit - Annual Training

March 6, 2015

1:00 PM

NAME (PRINT)	SIGNATURE	MUNICIPALITY/DEPARTMENT
DENNIS NAILOR	Dennis Nailor	Monroe Twp
Greg Hatcher	Greg Hatcher	monroe twp
Tom STANBACH	Tom All	LOWER ALLEN
Mark D'Agostin	Mark D'Agostin	" "
Ryan T. Vesper	Ryan T. Vesper	" "
Marshall Quinter	Marshall Quinter	" "
TERRY FASICK	Terry Fasick	BORO OF LEMBOYNE
Larry Lupold	Larry Lupold	" "
mark Hoffman	Mark Hoffman	Lower Allen
Clayton Gerner	Clayton Gerner	Lower Allen Township
Scott Harbold	Scott Harbold	Lower Allen Township
JOHN EBY	John Eby	LAT/CD
Chris Roeth	Chris Roeth	Barton + Loguidice
Bob Nailor	Bob Nailor	LAT PW
Linda Hefley	Linda Hefley	LAT
Charlie Regard	Charlie Regard	LAT
Ken Rock	Ken Rock	LAT

[illegible]

CERTIFIED STORMWATER INSPECTOR
TRAINING IN THE FOLLOWING CATEGORIES

PERMIT COMPLIANCE
INDUSTRIAL
CONSTRUCTION
MUNICIPAL

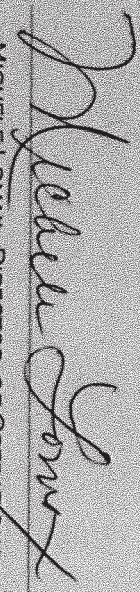


MUNICIPAL INSPECTIONS
COMMERCIAL
INDUSTRIAL
CONSTRUCTION
POLLUTION PREVENTION
ILLCIT DISCHARGE

THIS CERTIFICATE AND 1.2 CEUS(12 TRAINING HOURS) AWARDED TO

RAYMOND J. ALLEN

IN RECOGNITION OF HAVING COMPLETED ALL REQUIREMENTS OF THE CERTIFIED
STORMWATER INSPECTOR COURSE BY THE NATIONAL STORMWATER CENTER. THIS
CERTIFICATION IS EFFECTIVE FOR A PERIOD OF FIVE YEARS.


MICHELE LOMAX, DIRECTOR OF OPERATIONS

5614

CERTIFICATE NUMBER

APRIL 23, 2014

DATE

THE NATIONAL STORMWATER CENTER
A NONPROFIT FOUNDATION
WWW.NPDES.COM

The Practicing Institute of Engineering, Inc.

*This is to certify that: **Raymond Allen***

has successfully completed the Retention-Detention and Water Quality Professional training in Best Management Practices (BMP's) is provided for the purpose of designing storm sewers, stormwater detention/retention systems and water quality systems. This training workshop program is offered by Advanced Drainage Systems, Inc. to instruct Licensed Professional Engineers, Landscape Architects and land development professionals in the proper design, specification and use of storm sewers, subsurface stormwater management systems and water quality systems. This course shall also include the newest regulations and specifications from the governing state of the presentation.

This certificate was issued the 13th day of November 2013

1 Professional Development Hours*

Steven P. Johnson

Steven P. Johnson
ADS Engineered Product Manager



*To confirm the acceptance of the PDH, please consult with your state. ADS feels that this seminar maintains, improves or expands the skills and knowledge of a licensee's professional practice. In addition, the seminar held on this date included updates to current PENN DOT specs that cover 100 year pipe; AASHTO M330 specs that cover polypropylene pipe; recent acts passed by the Commonwealth of Pennsylvania that include the Stormwater Funding Act and the Municipal Stormwater Authority Act. The participants were also introduced to the latest sand filter methods of water quality manage. Additional time was spent learning the benefits of AASHTO LRFD testing of pipe and chamber products.

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BEST MANAGEMENT PRACTICES (BMPs)

Provide an assessment of the appropriateness of the BMPs implemented to date, and identify any steps that will be taken to address deficiencies in the BMPs or make changes to BMPs or other aspects of the SWMP developed by the permittee.

THE APPROPRIATENESS OF BMPs IS REVIEWED PERIODICALLY THROUGHOUT THE YEAR BY THOSE EMPLOYEES THAT ARE ENGAGED IN IMPLEMENTING THE MS4 PERMIT. DEFICIENCIES ARE NOTED AND IMPROVEMENTS MADE BASED ON THESE ASSESSMENTS. CERTAIN BMPs ARE IN A CONSTANT STATE OF ENHANCEMENT AS THE PERMIT PERIOD ADVANCES.

MS4 TMDL Plan	Chesapeake Bay Pollutant Reduction Plan (CBPRP)
<p>Is the permittee required to develop an MS4 TMDL Plan?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Is the permittee required to develop a CBPRP?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>What is the status of the TMDL Design Details (if applicable)?</p> <p><input type="checkbox"/> Under Development (Due Date:)</p> <p><input type="checkbox"/> Submitted to DEP (Submission Date:)</p> <p><input type="checkbox"/> Approved by DEP (Approval Date:)</p>	<p>What is the status of the CBPRP (if applicable)?</p> <p><input type="checkbox"/> Under Development (Due Date:)</p> <p><input checked="" type="checkbox"/> Submitted to DEP (Submission Date: 3-31-14)</p> <p><input type="checkbox"/> Approved by DEP (Approval Date:)</p>

For permittees with DEP-approved MS4 TMDL Plans and/or CBPRPs, describe progress with implementing BMPs and other activities identified in those plans:

For permittees with DEP-approved MS4 TMDL Plans and/or CBPRPs, complete the section below. Identify the required pollutant reductions (for those with MS4 TMDL Plans) or pollutant reductions committed to by the permittee (for those with CBPRPs) and the cumulative reductions achieved through implementing the BMPs, as of the end of the reporting period:

BMP INVENTORY

List all new structural BMPs installed and ongoing non-structural BMPs implemented in the urbanized area during the reporting period that are being used toward achieving load reductions in the permittee's MS4 TMDL Plan and/or CBPRP. Provide a name or description for each BMP, the area, in square feet (sf) that drains to each BMP (drainage area (DA)) (if applicable), the location of the BMP (latitude and longitude), the name of the water body that receives discharges from the BMP (if applicable), the date the BMP was installed or implemented, and whether the BMP was completed pursuant to an NPDES permit for stormwater associated with construction activities or other NPDES permit (check box if done under an NPDES permit).

BMP Name / Description	DA (sf)	Latitude	Longitude	Receiving Waters	Date Installed or Implemented	NPDES Permit?
W/MAINT / 600 SURFACE DETENTION AND INFILTRATION FACILITIES, SURFACE EXTENDED DETENTION BASIN, SLOOTS	486,129.6	40° 13' 38"	-76° 55' 41"	UNT TO CEDAR RUN	MAY 2014	<input checked="" type="checkbox"/>
W/MAINT / 600 SURFACE DETENTION AND INFILTRATION FACILITIES, SURFACE EXTENDED DETENTION BASIN, SLOOTS	85,813.2	40° 12' 49"	-76° 57' 23"	CEDAR RUN	OCTOBER 2014	<input checked="" type="checkbox"/>
POSSUMPOIS BUSINESS CENTER / DETENTION BASIN, SLOOTS	188,577.2	40° 12' 15"	-76° 57' 34"	CEDAR RUN	SEPTEMBER 2014	<input checked="" type="checkbox"/>
BECK'S ELEC / DETENTION AND INFILTRATION BASIN	734,372.4	40° 13' 27"	-76° 54' 44"	CEDAR RUN	SEPTEMBER 2014	<input checked="" type="checkbox"/>
HALLAM / DETENTION AND INFILTRATION BASIN, SLOOTS	1,381,621.32	40° 11' 34"	-76° 56' 46"	UNT TO CEDAR RUN; YELLOW BEECHER CREEK	JULY 2014	<input checked="" type="checkbox"/>
W/MAINT / 600 SURFACE DETENTION AND INFILTRATION FACILITIES, SURFACE EXTENDED DETENTION BASIN, SLOOTS	87,555.6	40° 13' 10"	-76° 58' 15"	UNT TO CEDAR RUN	AUGUST 2014	<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
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		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>
		0° 1' "	0° 1' "			<input type="checkbox"/>

OTHER REQUIRED REPORT ELEMENTS

Identify the progress towards achieving the statutory requirements of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP) and complying with water quality standards.

LOWER ALLEN TOWNSHIP HAS:

1. FOLLOWED AND ENFORCED THE ACT 167 STORMWATER MANAGEMENT ORDINANCE REQUIREMENTS.
2. CONTINUED TO COMPLETE THE REQUIREMENTS OF THE MS4 PERMIT.
3. DEVELOPED AND SUBMITTED A CHESAPEAKE BAY POLLUTION REDUCTION PLAN TO PADEP.
4. FOLLOWED THE CBPPA THAT WAS SUBMITTED TO PADEP.

Provide a summary of stormwater activities planned during the next reporting cycle (not identified previously in this report):

DURING THE NEXT REPORTING CYCLE LOWER ALLEN TOWNSHIP WILL:

1. UNDERTAKE REQUIRED ACTIVITIES IN THE MS4 PERMIT.
2. UNDERTAKE REQUIRED ACTIVITIES IN THE CBPPA.
3. DEVELOP OPERATION AND MAINTENANCE PLANS FOR TOWNSHIP FACILITIES THAT HAVE THE POTENTIAL TO GENERATE STORMWATER POLLUTION.
4. CONTINUE TO IMPROVE GIS MAPPING OF THE MS4.

Provide a summary of notices, intergovernmental agreements and other relevant documents if the permittee is relying on another governmental entity to satisfy any of its permit obligations

LOWER ALLEN TOWNSHIP HAS A MEMORANDUM OF UNDERSTANDING WITH THE CUMBERLAND COUNTY CONSERVATION DISTRICT (CCCD) WHEREBY CCCD PROVIDES SERVICES TO ASSIST WITH PERMIT OBLIGATIONS.

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