5.0 Permit Requirements

D. Management Programs

3. Illicit Discharge Detection and Elimination

Baltimore County shall continue to implement an inspection and enforcement program to ensure that all discharges to and from the MS4 that are not composed entirely of stormwater are either permitted by MDE or eliminated. Actions shall include, but not be limited to:

a. Field screening at least 150 outfalls annually. Each outfall having a discharge shall be sampled using a chemical test kit. Within one year of permit issuance, an alternative program may be submitted for MDE approval that methodically identifies, investigates, and eliminates illegal connections to the County storm drain system;

b. Conducting annual visual surveys of commercial and industrial areas as identified in PART IV.C.2 above for discovering, documenting, and eliminating pollutant sources. Areas surveyed shall be reported annually;

c. Maintaining a program to address illegal discharges and if necessary responding to dumping and spills;

d. Using appropriate enforcement procedures for investigating and eliminating illicit discharges, illegal dumping, and spills. Significant discharges shall be reported to MDE for enforcement and/or permitting; and

e. Reporting illicit discharge detection and elimination activities as specified in Part V of this permit.

5.1 Introduction

Although the separate storm sewers in Baltimore County are intended to handle only stormwater runoff and groundwater drainage, non-storm water from commercial and industrial facilities, leaks from the sanitary sewage system, and other non-stormwater sources may contribute pollutants that ultimately reach surface waters via the storm drain system. These sources of discharge not composed entirely of storm and/or ground water, which are not authorized by an NPDES permit, are termed *illicit connections*. The Baltimore County Illicit Connection Management Program was created in partial fulfillment of the requirements of the Baltimore County National Pollutant Discharge Elimination System (NPDES) - Municipal Stormwater Discharge Permit (MD0068314). The NPDES - Municipal Stormwater Discharge permit program is federally mandated with local administration by the Maryland Department of the Environment. The requirements for the illicit connection program are detailed in 40 CFR 122.26(d)(2)(iv)(B)(1 through 7).

This year's reporting period is from January 1, 2014 to December 31, 2014. The following section will cover Program Status (5.2), Analysis of Outfall Screenings (5.3), Enforcement (5.4), Illicit Connections Investigations and Corrections (5.5), Commercial/Industrial Pollution Surveys

(5.6), Outreach (5.7), IDDE Research (5.8), Illicit Discharge Elimination Program Credit (5.9) and Summary (5.10).

5.2 Program Status

During January 2014 through December 2014, the Watershed Monitoring Section of EPS staff conducted 141 routine outfall screenings in which 20 were above water quality thresholds (table 5-3). If an outfall is above the water quality threshold an investigation may be begun immediately or a return visit may be scheduled.

Our outfall screening goal according to our permit conditions is 150. Staff time was limited for outfall screenings this year due to writing 23 TMDL implementation plans that were due 12/31/14. WMM staff investigated 97 complaints, which includes reports from citizens, other agencies, outfall screenings and issues found while conducting other fieldwork. As revealed in the analysis in the following section, routine outfall screenings for detection of illicit connections appear to compliment citizen complaints of problems they observe. The routine outfall screenings catch the chronic problems that may be missed by the public, such as chlorine leaks from the municipal water supply.

Aside from the benefits of greater public involvement and the resolution of complaints, citizens provide surveillance at a level beyond that of the monitoring staff. A majority of the time citizens call while they are actually observing a problem and often can provide immediate local information that increases the chance of eliminating illicit connections. Some of the citizen complaints are a result of the Stream Watch program. This program allows citizens to adopt a stream, which includes tracking the health of the stream and reporting problems or potential projects they observe.

5.3 Analysis of Outfall Screenings

A routine outfall screening consists of:

(1) A quantitative analysis of the effluent. This includes measuring the effluent flow rate, temperature and pH, and field-testing with the LaMotte NPDES test kit (parts per million tests for copper, chlorine, ammonia and phenol).

(2) A visual inspection of the effluent, the outfall structure and the receiving channel, noting such conditions as water color, odor, vegetative condition, sedimentation, erosion, structural damage, etc.

If the problem is severe enough to warrant immediate correction, then an investigation begins immediately. Some sites are determined to have problems severe enough to warrant immediate investigation and/or corrective action after only one screening.

In Baltimore County, there are 3,256 total outfalls. The Department of Public Works is currently developing an updated storm drain GIS layer of outfalls. There are two types of outfalls: major and minor. Major outfalls are ≥36” and minor outfalls are <36”. There are 667 major outfalls in our database and 603 have been prioritized. The minor outfalls are still at the beginning of being prioritized and 650 have been completed so far. There are a greater number of them (2,589), so they will be dealt with in phases. Baltimore County will focus on the minor outfalls in the areas where the Small Watershed Action Plans (Section 10) are being focused.

Outfalls are prioritized as follows: Outfalls that have been screened three times are assigned one of three priority ratings. Outfalls with major problems that require immediate correction and/or

close monitoring, or outfalls with recurrent problems will be assigned a *Priority 1 (Critical)* rating. Outfalls with moderate to minor problems that have the potential to become severe are assigned a *Priority 2 (High)* rating. Outfalls with minor or no problems that do not require close monitoring are given a Priority 3 *(Low)* rating. Outfalls categorized as "Low Priority" are on a ten-year screening cycle, "High Priority" outfalls are screened once each year, and "Critical" outfalls are screened four times each year. Outfalls that have not yet been screened three times have not been prioritized. This system allows for a more streamlined approach in selecting outfalls to screen, and provides a more efficient use of manpower. Outfall priority may be changed if conditions improve or degrade. The small outfalls are prioritized after one screening.

Table 5-1 lists the number of outfalls by watershed and by the priority classification described above. To date, 57 of the major outfalls have not been sampled sufficiently to be prioritized. Additional screening effort will allow the County to assess and prioritize the status of these outfalls. Table 5-2 lists the non-prioritized outfalls by watershed.

Table 5-1: Major and Minor Outfalls by Watershed and Priority Classification

Watershed	Priority 1		Priority 2		Priority 3		Total
Upper Western Shore							
	Minor	**Major**	**Minor**	**Major**	**Minor**	**Major**	
Deer Creek	0	0	4	0	1	0	5
Prettyboy Reservoir	0	0	0	0	1	0	1
Loch Raven Reservoir	10	22	99	41	31	13	216
Lower Gunpowder	0	7	0	23	1	10	41
Gunpowder River	0	0	1	0	0	0	1
Little Gunpowder Falls	0	0	0	2	0	0	2
Bird River	0	4	6	8	4	27	49
Middle River	2	3	2	7	0	5	19
Total	**12**	**36**	**112**	**81**	**38**	**55**	**334**
Patapsco-Back River							
Liberty Reservoir	0	0	0	1	1	0	2
Patapsco River	2	7	13	24	0	46	92
Gwynns Falls	8	30	115	55	56	72	336
Jones Falls	7	14	42	27	19	16	125
Back River	14	38	118	28	67	39	304
Baltimore Harbor	2	14	15	15	9	5	60
Total	**33**	**103**	**303**	**150**	**152**	**178**	**919**
Grand Total	**45**	**139**	**415**	**231**	**190**	**233**	**1,253**

Table 5-2: Non-prioritized outfalls by Watershed

Watershed			
Upper Western Shore			
	Minor	**Major**	**Total**
Deer Creek	0	0	0
Prettyboy Reservoir	0	0	0
Loch Raven Reservoir	366	9	375
Lower Gunpowder	274	9	283
Gunpowder River	24	3	27
Little Gunpowder Falls	78	1	79
Bird River	191	4	195
Middle River	67	0	67
Total	**1,000**	**26**	**1,026**
Patapsco-Back River			
	Minor	**Major**	**Total**
Liberty Reservoir	29	0	29
Patapsco River	206	4	210
Gwynns Falls	361	19	380
Jones Falls	257	9	266
Back River	61	5	66
Baltimore Harbor	25	1	26
Total	**939**	**38**	**977**
Grand Total	**1,939**	**64**	**2,003**

The locations of the prioritized outfalls and those remaining to be prioritized are shown in Figure 5-1 (Figure 5-1a – Major Outfalls; Figure 5-1b – Minor Outfalls). As can be noted from the figure, the majority of the outfalls occur within the Urban-Rural Demarcation Line. There is no consistent pattern of outfall location in relation to the prioritization category.

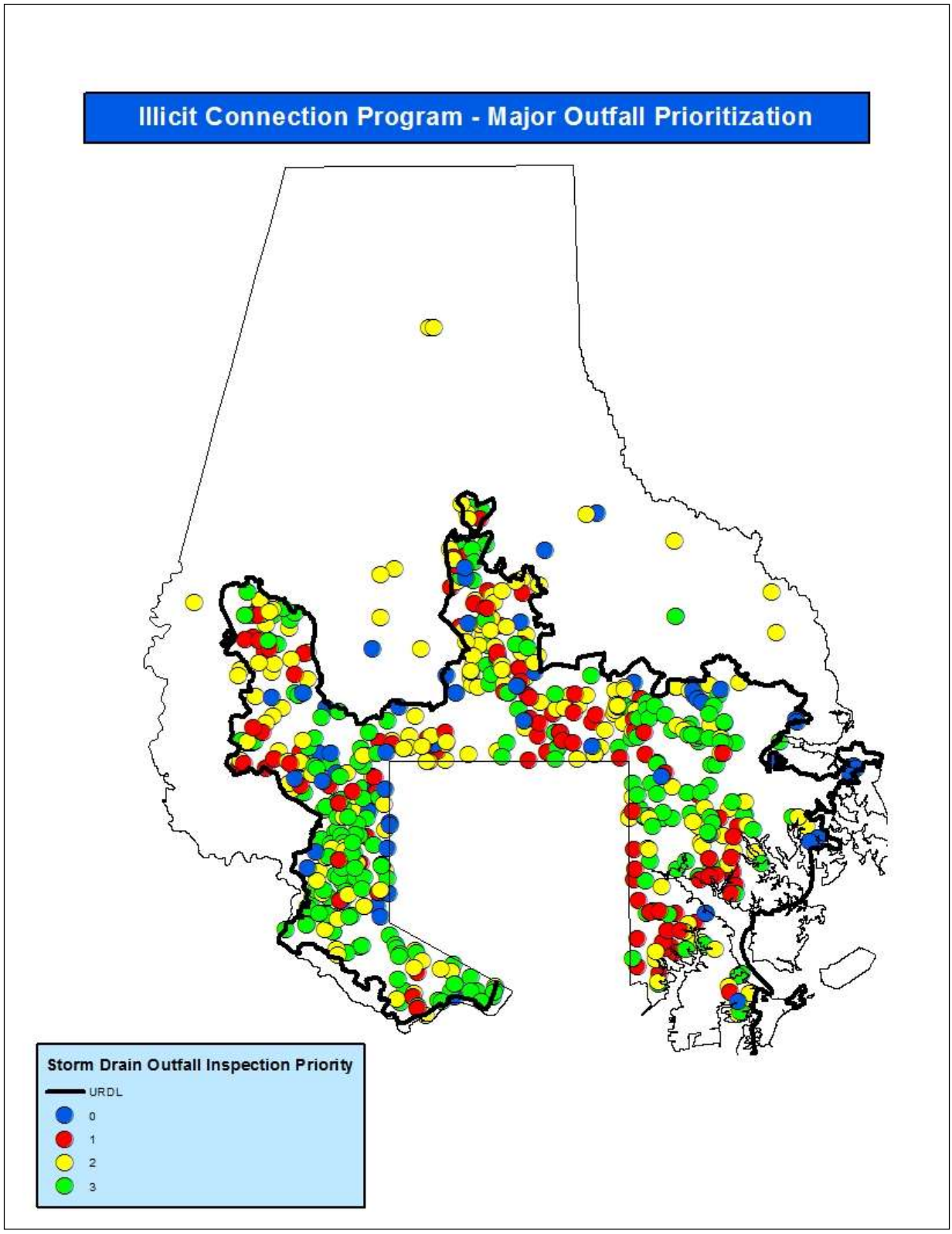

Figure 5-1a: Major Outfall Prioritization. Note most outfalls are inside the Urban-Rural Demarcation Line (URDL).

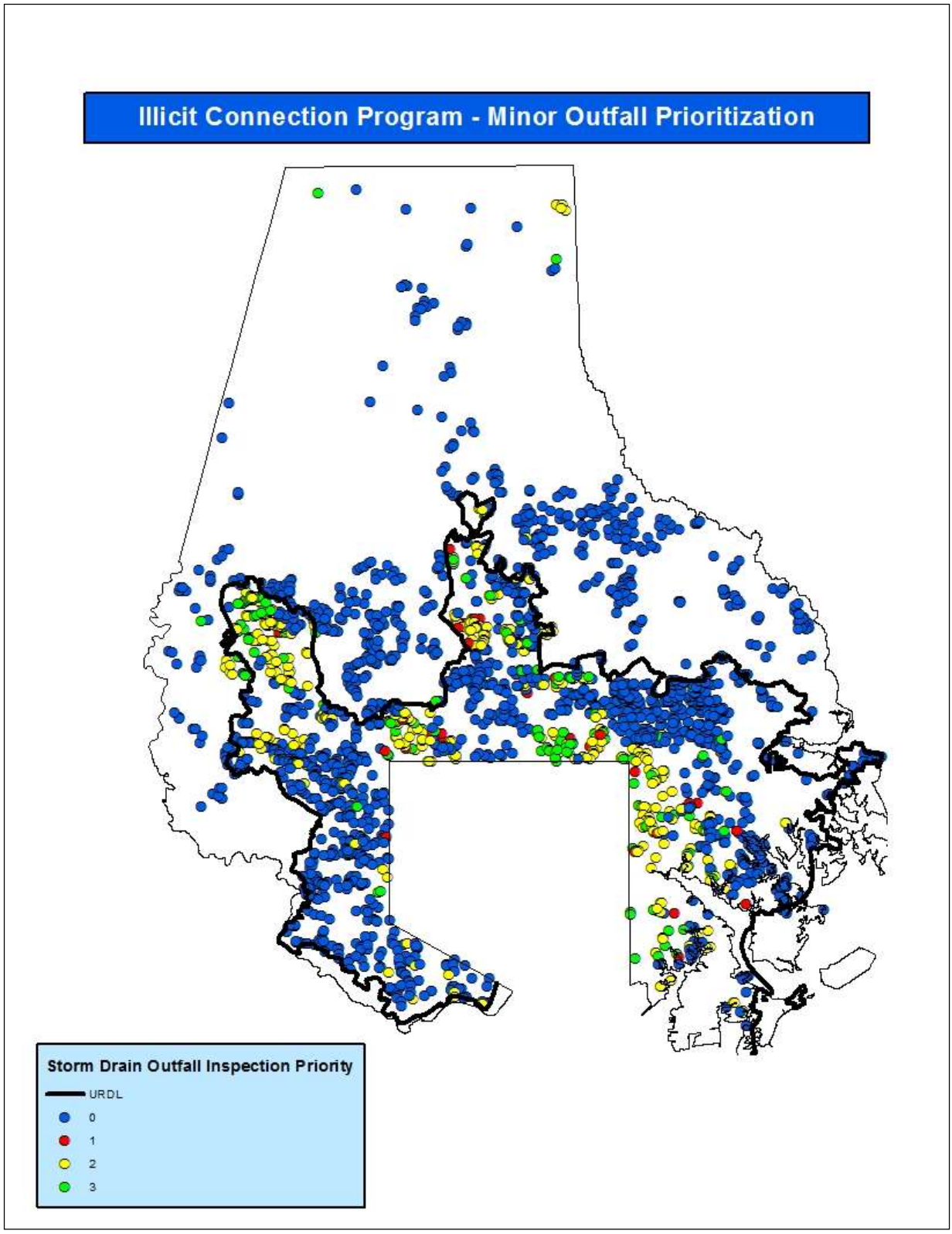

Figure 5-1b: Minor Outfall Prioritization. Note most outfalls are inside the Urban-Rural Demarcation Line (URDL).

The percentages of the 1,023 outfalls, which have been given a rating, are shown in Figures 5-2a and 5-2b.

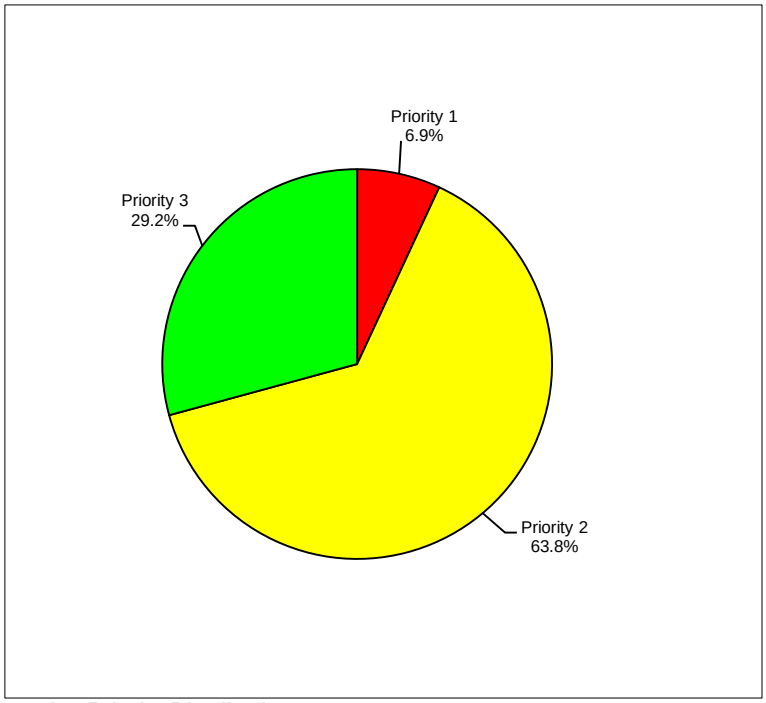

Figure 5-2a: Minor Outfall Screening Priority Distribution

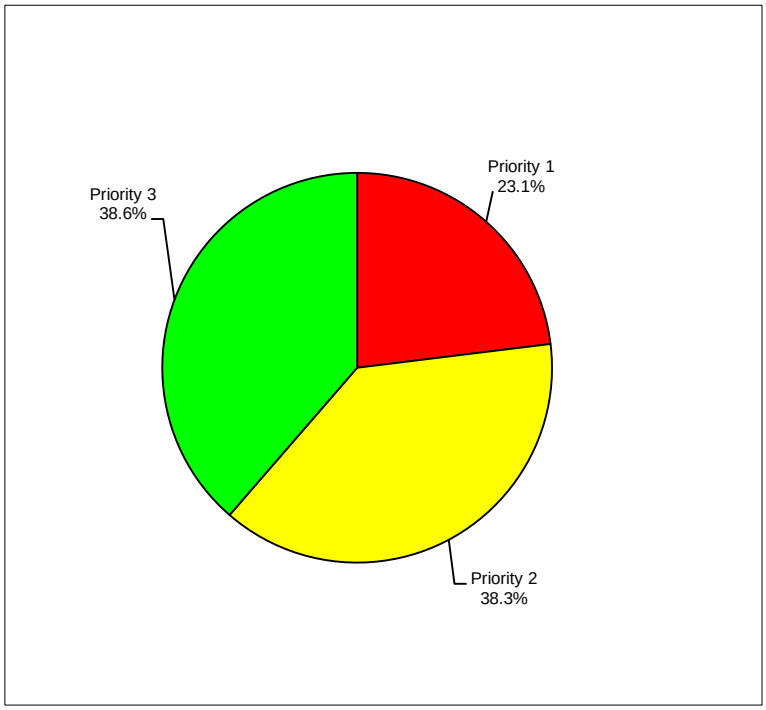

Figure 5-2b: Major Outfall Screening Priority Distribution

Of the 141 outfalls screened during January 2014 to December 2014, 36 were major outfalls and 105 were minor outfalls. They were selected from the newly prioritized database based on the following criteria:

- Citizens who called or wrote to express concern about stream water quality, but the indicated conditions did not warrant an immediate investigation; and
- Previous screenings indicated water quality problems might exist.
- Small Watershed Action Plan areas

Figures 5-3a and 5-3b shows the quantitative problems and Figures 5-4a and 5-4b shows the qualitative problems found. As indicated in Figures 5-3a and 5-3b, by the bar labeled "*none detected*", 122 out of the 141 routine outfall screenings had no detectable quantitative problems. Phenol, chlorine, copper, ammonia and boron are considered as indicators if they are above 0.17 mg/L, 0.4 mg/L, 0.21mg/L and 0.3 mg/L, 0.35 mg/L respectively. Temperature is considered a potential problem if it exceeds 75 degrees F (23.9 degrees C), which occurred in one outfall. The criteria used to determine if pH is out of range is if it is under 6.0 or above 9.0, and a problem was detected at four outfalls. Copper was detected at three outfalls and phenol was detected at 14 outfalls. Chlorine was detected at one outfalls and ammonia was detected at one. Boron was detected at one outfall. There were a total of 25 quantitative problems, table 5-3 shows which outfalls had those problems. Twenty-five percent of the major and about ten percent of the minor outfalls had a quantitative problem.

When an outfall has a quantitative problem detected, meaning the parameter was above the allowable threshold, it is automatically changed to a higher priority and investigated. The qualitative problems are more subjective and depend on the particular problem and severity.

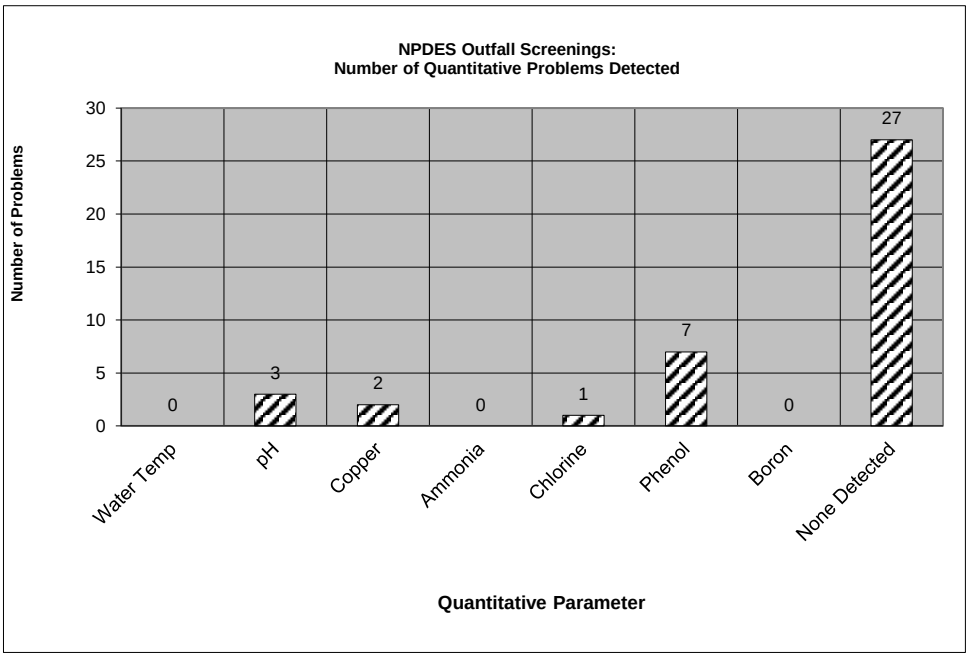

Figure 5-3a: Major Outfalls Number of *quantitative* problems detected.

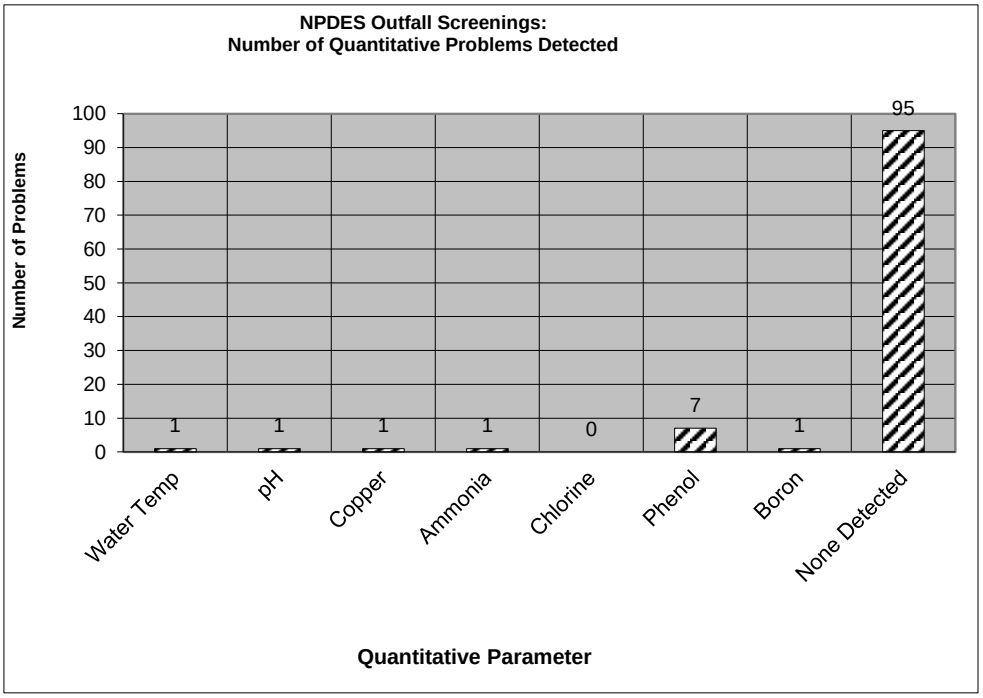

Figure 5-3b: Minor Outfalls Number of *quantitative* problems detected.

Table 5-3: Summary of 2014 Outfalls above Water Quality Threshold

Outfall	Parameter Exceeded	Source	Status
So-461	Phenols, chlorine, water temp.	Traced to water line break	14-045 on-going
So-1033	Phenols	Probably due to pool of water backed into pipe even though outfall had flow	Outfall is priority 1 to keep an eye on
So-1736	Phenols	Probably due to outfall being 90% submerged even though there was flow	Will investigate
So-2657	Phenols	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
So-2447	Phenols	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
So-1776	Ammonia	Probably due to large debris jam of leaves in pipe	Outfall is priority 1 to keep an eye on
So-3230	pH	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
So-3138	Phenols	Undetermined	To be investigated
So-1251	Phenols	Probably due to pool of water backed into pipe even though outfall had flow	Outfall is priority 1 to keep an eye on
So-312	Copper	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
So-2659	Boron	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
502	Copper	Probably due to iron bacteria interference	Outfall is priority 1 to keep an eye on
349	Phenols	Undetermined	To be investigated
329	Phenols	Could have been due to dumped mattresses	14-081, will rescreen to be sure
314	Phenols	Retested and phenols were under threshold	Outfall is priority 1 to keep an eye on

Outfall	Parameter Exceeded	Source	Status
243	Phenols, Copper, pH	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
021	Phenols	TV'ing of line showed no leaks or cross connections, may be from wildlife	14-093 Outfall is priority 1 to keep an eye on
823	Phenols, pH	Probably due to sampling plunge pool	Outfall is priority 1 to keep an eye on in case of intermittent issue
003	pH	May be due to school bus washing	15-072, will rescreen to be sure
319	Phenols	Undetermined	Investigation started

Figures 5-4a and 5-4b illustrates incidences of problems observed during *qualitative* assessments such as; visual evidence of sewage, oil, and structural problems. Qualitative and "visual problems" which were those most frequently encountered included observations regarding color, odor, clarity, and receiving water characteristics and sediment deposition immediately at and below each outfall. Trash, erosion, and sediment deposition were observed at 105, 19, and 71 outfalls, respectively. Sewage was not observed at any outfalls. Oil was found at one, structural issues at 21 and odor at two. Of the total 141 outfalls screened, there were a total of 219 qualitatively assessed problems, however, 18 had no problems. Many of the outfalls screened had more than one problem. Ninety-two percent of the major and 86% of the minor outfalls had a quantitative problem.

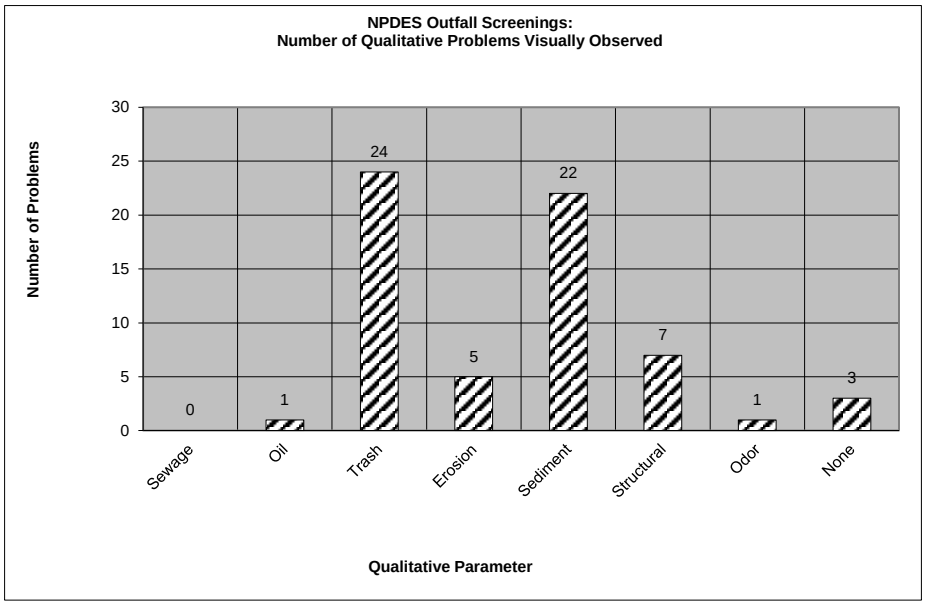

Figure 5-4a: Major Outfalls Number of *qualitative* problems visually observed.

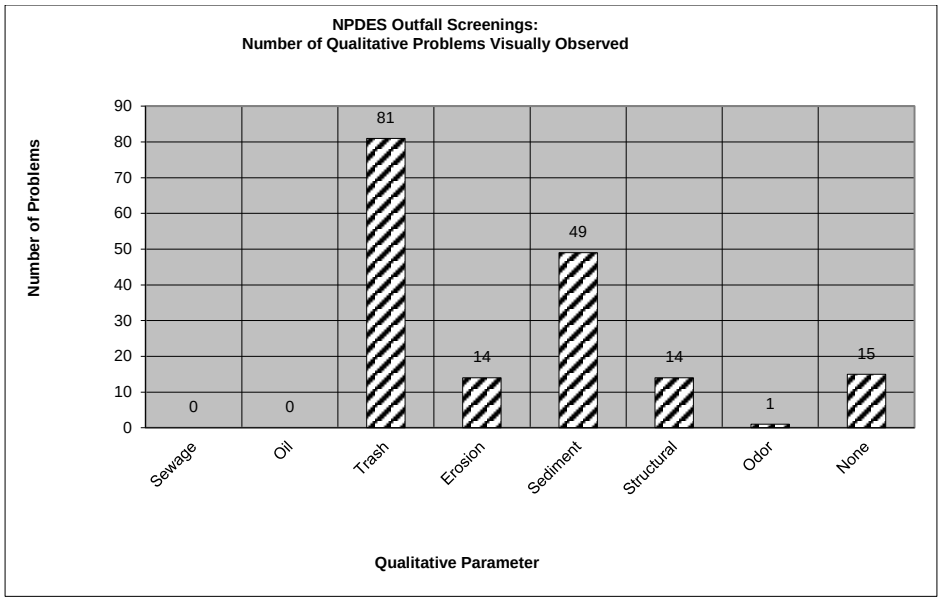

Figure 5-4b: Minor Outfalls Number of *qualitative* problems visually observed.

As described above, routine outfall screenings include a quantitative analysis, a qualitative assessment and a visual inspection. Based on these three procedures, a total of 244 problems were encountered during the 141 routine outfall screenings during this reporting period. Many of the outfalls had more than one problem. Observations regarding the receiving channel within the immediate vicinity of the outfall were also included.

During the reporting period, outfall screening was distributed among eight watersheds as follows: Gwynns Falls (74), Back River (26), Baltimore Harbor (2), Bird River (1), Loch Raven (24), and Jones Falls (11), and Patapsco (3).

5.4 Enforcement

The Illicit Connection Program was developed by identifying existing programs that address the requirements of the illicit connection program and incorporating those programs and their procedures by reference into the overall illicit connection program. These existing programs include:

- **Baltimore Metropolitan Water District** has responsibility for correction of problems in the water distribution system. Baltimore City administers this portion of the Baltimore Metropolitan Water District program. Only those problems associated with the water distribution system will be routed to the City via their complaint procedure.
- **Department of Public Works - Bureau of Utilities** has responsibility for maintenance of the County sanitary sewer system and the below ground portion of the County storm water sewer system. Any sanitary sewer problems encountered will be referred to this Bureau. This program also has the equipment, training and expertise to conduct below ground investigations to locate illicit connections.
- **Department of Public Works - Bureau of Highways** has responsibility for maintenance of the above ground portions of the storm water sewer system. All outfall structural problems will be routed to this Bureau for correction. The

determination of corrective action will be on a priority basis within the limits of the County's capital improvement budget.

- **Department of Environmental Protection and Sustainability - Groundwater Management Section** has the authority to order correction of failing septic systems and the expertise to facilitate the correction of these systems if they require innovative technology for permanent correction. Any septic system failing to the storm water sewer system will be referred to this Section.
- **Department of Health Environmental Services Section** - Baltimore County Health inspectors investigate some complaints that are now categorized as potential illicit connections. These complaints include septic systems, leaky refuse and grease containers, the dumping of used motor oil, leaky engines, and industrial maintenance activities among others. Because these investigations are only a small percentage of the thousands of complaints received each year by the regional programs, it was difficult to separate complaints with a potential illicit connection from the rest of the caseload. These thousands of complaints were analyzed and broken down into the categories seen in Figure 5-5. After looking at the data from 2005-2009, it was determined that the breakdown into categories is approximately the same each year and we can assume these numbers will continue to be the same in the future.

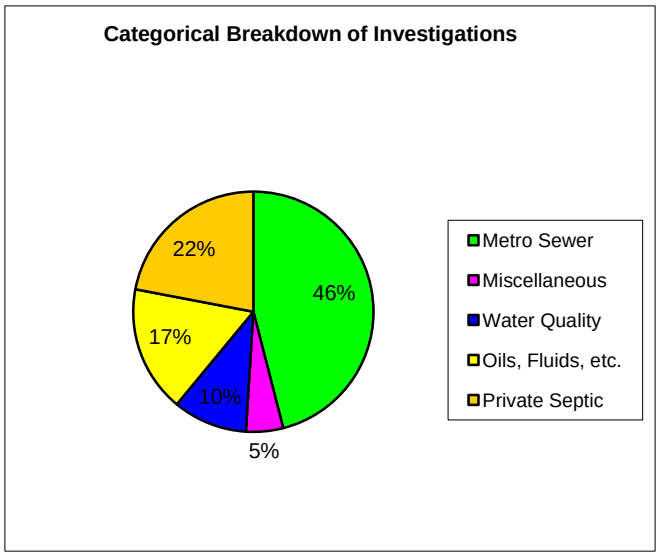

Figure 5-5: Involvement of the Regional Programs in the Investigation of Illicit Connections. This is the approximate breakdown of cases based on past data.

- **Maryland Department of the Environment (MDE)** has responsibility for the permitting of industrial discharges under the NPDES Industrial Permit program and the NPDES Industrial Stormwater Permit program. Any discharges that are industrial in nature and for which the source has been identified will be routed to MDE.

The Watershed Monitoring Section of Environmental Protection and Sustainability will provide overall coordination, record keeping and tracking of the Illicit Connection Program. This section will perform the outfall screening and initial field investigations if an illicit connection is detected as a result of the screening. This section will also be responsible for directing the removal of illicit connections that do not fall under the responsibility of an existing program.

5.5 Illicit Connections Investigations and Corrections

During the reporting period, the Watershed Monitoring section handled 99 investigations, of which 44 were citizen complaints. The citizen complaints include participants in the Stream Watch Program through various watershed associations. Four citizen complaints were received through our report pollution web form, although it is important to note citizens are still emailing as well. The remainder of the investigations listed as complaints in table 5-3 came from other sections of EPS or other agencies. Table 5-4 lists a summary of cases referred to other agencies and those handled by EPS as well as the status of the investigations. Complaints that are still open will be investigated until resolution. These complaints and their status are detailed in Table 5-5. Open complaints or complaints from 2013 that had a change in status are listed at the beginning of the table. Case numbers from 2013 in italics were added after prior report was written.

Table 5-4: Summary of Complaint Status

	On-going	Case Closed	**Total**
Referred to other agencies	17	49	**66**
Handled by EPS	3	30	**33**
Total	**20**	**79**	**99**

Table 5-5: Open/Change in Status Complaints 2013 and Complaints Processed from January 1, 2014 through December 31, 2014

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
13-002	1/22/13	Water bubbling next to road.	Complaint	***Update: Baltimore City says this is a Baltimore County issue. Working on resolution with Baltimore County DPW.***	**On-going**	9755 Matzon Rd. 37 G2
13-007	2/26/13	Abandoned vehicles on public property.	SWAP Hotspot	Referred to Police Department. Requested update twice, no response.	**On-going**	1202 Middle River Road. 37 E1
13-012	3/28/13	Property owner clear cutting their land.	Complaint	Referred to EIR.	**On-going**	080. 45 A3
13-015	4/18/13	Submerged outfalls.	Outfall	Inlet in street was almost full of water. Referred to Rec and Parks. No response after two update requests.	**On-going**	So-1550. 19 B9

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
13-025	5/21/13	Oil sheen covering stream.	Complaint	MDE is investigating when time allows. It is not oil but food grade material. ***Update: Site still being monitored monthly, problem has not been seen again.***	**Case closed**	So-2694. 16 E10
13-041	6/27/13	Staining around fuel tanks.	SWAP Hotspot	Referred to MDE Oil Control Program. MDE never answered requests for investigation result.	**On-going**	595. 16 D11
13-042	6/27/13	Staining around fuel tanks.	SWAP Hotspot	Referred to MDE Oil Control Program. MDE never answered requests for investigation result.	**On-going**	So-1731. 27 C2
13-043	6/27/13	Staining on fuel pumps, drums stored outside.	SWAP Hotspot	Referred to MDE Oil Control Program. MDE never answered requests for investigation result.	**On-going**	080. 45 A3
13-058	10/23/13	Spilled gasoline washed into storm drain by gas station employee.	Complaint	Complaint was also given to MDE by citizen. Contacted MDE to find out who is investigating so I can follow up with them. After two requests never received answer back.	**On-going**	Essex Road bridge. 33 E3
13-061	3/11/13	Outfall broken at joint.	Outfall	Referred to DPW Storm Drain Engineering. Haven't heard back about status.	**On-going**	111 W. Chesapeake Avenue. 27 C6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
13-065	4/11/13	Outfall broken at joint and apron damage.	Outfall	Referred to DPW Storm Drain Engineering. Requested updated and never received one.	**On-going**	7 Jerusalem Mill Court. 22 D9
13-073	4/23/13	Landscape dumping at outfall, cracked apron.	Outfall	Apron cracked by large metal roll-off container. Doorhangered for landscape dumping. Referred to DPW Storm Drain Engineering.	**On-going**	So-1731. 27 C2
13-080	2013	High e. coli level in outfall.	Outfall	Returned to site and retested outfall several times, e. coli level has been low and high, still investigating possible sources. Excessive dog waste may be responsible. Doorhangered to educate residents.	**On-going**	So-928. 36 H6
13-082	8/21/13	High flow at outfall.	Outfall	Chlorine level was low. Contacted Baltimore City to see if pumping station construction was responsible, never heard back.	**On-going**	Lakeside Blvd. at Owings Run Apt. entrance. 24 E7
13-094	7/5/13	Outfall separated at joint.	Outfall	Referred to DPW Storm Drain Design.	**On-going**	Philadelphia Road over culvert. 29 J9
13-096	5/30/13	Outfall blocked by vegetation and landscape dumping.	Outfall	Referred to State Fairgrounds Management. Never received request for update.	**On-going**	7 Jerusalem Mill Court. 22 D9

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
13-098	11/4/13	Eroding storm drain manhole.	Upland	Referred to DPW Utilities.	**On-going**	3001 Eastern Blvd. 38 B5
13-099	11/4/13	Outfall broken at multiple joints.	Outfall	Referred to SD Design. ***Update: This was repaired with Stormwater fee FY 2014 funds.***	**Case closed**	9813 Philadelphia Road. 29 F13
13-102	8/27/13	Outfall pipe separated at joint.	Outfall	Referred to SD Design. They never responded to request for update.	**On-going**	1717 Reisterstown Rd. 25 E9
13-103	8/15/13	Swampy odor in area.	Complaint	No smell during visit.	**Case closed**	595. 16 D11
13-104	8/28/13	Yard waste being dumped in stream.	Complaint	Doorhangered neighborhood to educate on proper disposal.	**Case closed**	So-1731. 27 C2
13-105	3/28/13	Leaves being dumped at outfall.	Outfall	Doorhangered neighborhood to educate on proper disposal.	**Case closed**	080. 45 A3
13-106	10/17/13	Yard waste dumped in storm drain.	Upland	Doorhangered neighborhood to educate on proper disposal.	**Case closed**	Outfall 560. 28 G11

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
13-107	4/22/13	Foam and high phenols at outfall.	Outfall	Traced to car dealer who was dumping mop buckets into storm drain. They have been informed on proper procedures.	**Case closed**	Outfall 315. 27 E7
13-108	3/11/13	Pet waste and yard waste dumping.	Upland	Doorhangered to educate about proper disposal.	**Case closed**	So-1550. 19 B9
13-109	10/22/13	High e. coli at outfall.	Outfall	High bacteria was due to raccoons living in storm drain. Line was tv'ed and flushed.	**Case closed**	So-1805. 18 J10
13-110	11/7/13	New outfall with high chlorine.	Outfall	Revisited outfall, was dry. Has been added to database for future monitoring.	**Case closed**	Behind 6719 Fordcrest. 36 K4
13-111	10/4/13	Unusually high flow at USGS gage during dry weather.	Complaint	Screened outfalls in area, walked stream found no issues. Was probably due to a water leak that has since been repaired.	**Case closed**	So-928. 36 H6
13-112	2013	High ammonia and fluoride at outfall.	Outfall	Traced to inlet in parking lot of Teledyne. Referred to Plumbing.	**On-going**	So-1289. 25 H7
13-113	2013	Water running in inlet.	Complaint	May have been the leaking fountain which has been turned off. No water currently running.	**Case closed**	Lakeside Blvd. at Owings Run Apt. entrance. 24 E7

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-001	3/17/14	Mobile car washing business discharging to storm drain.	Upland	MDE visited site and informed them of how to properly handle discharge to stay in compliance.	**Case closed**	8716 Liberty Road. 24 G13
14-002	01/17/14	Garage floor covered with oil.	Complaint	May be running auto shop out of home. PAI has placed a lien since owner failed to show for hearing.	**Case closed**	5650 Carville Ave. 42 A9
14-003	03/17/14	Piles of sediment and gravel in street.	Complaint	Sediment control investigated and found no violations.	**Case closed**	St. Agnes and Masefield. 33 G12
14-004	3/5/14	Cloudy water at outfall.	Complaint	No issues found. Citizen will let us know if they see it again.	**Case closed**	Outfall so-3227. 33 G10
14-005	1/8/14	Excessive dog feces found while doing SWM pond inspection.	Complaint	Doorhangered twenty houses to educate about proper disposal.	**Case closed**	Valles Court. 28 E5
14-006	3/17/14	Yard waste dumping in woods.	Upland	Doorhangered four houses to educate about proper disposal.	**Case closed**	Clifmar. 24 K13
14-007	1/8/14	Excessive dog feces found while doing SWM pond inspection.	Complaint	Doorhangered twenty-four houses to educate about proper disposal.	**Case closed**	Minte Dr. 29 B6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-008	3/2014	Trash along road.	Complaint	Site had normal roadside litter, not excessive. Heavy equipment tire present, referred to DPW Highways. Highways would not clean up tire because it wasn't blocking water flow. Added to potential project list for citizen clean-ups.	**Case closed**	Next to 8900 Reisterstown Rd. 25 C8
14-009	5/27/14	Grass blown in street.	Complaint	Notified company this practice is illegal. DPW street swept.	**Case closed**	1919 Church Road. 44 J5
14-010	06/07/14	Overflowing dumpster and dumping at business.	Complaint	Referred to PAI. Inspector found no violations.	**Case closed**	30 Balfred Rd. 40 K5
14-011	04/25/14	Oil Sheen in stream caused by nearby facility.	Complaint	Visited facility found no evidence of spills. No sheen in stream. Gas pump has spill kit and UST is below size requiring a SPCC.	**Case closed**	4100 Maple Avenue. 42 B8
14-012	4/25/14	Sanitary manhole cover not on properly.	Complaint	Referred to DPW Utilities who found all covers on properly.	**Case closed**	Spyglass Ct. 18 G12
14-013	3/21/14	Report of septic leak and trash dumping.	Complaint	Bacteria results found no evidence of septic leak. PAI found no trash violations.	**Case closed**	1104 Freeland. 3 B3
14-014	6/5/14	Sediment from illegal ditches going into stream.	Complaint	The ditches are an allowable part of the agricultural operation on property.	**Case closed**	4830 Trenton Mill Rd. 5 C13

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-015	7/16/14	Trash outside of SWM pond.	Complaint	Property Management and Highways cleaned the trash.	**Case closed**	8537 Brest Rd. 24 H10
14-016	07/11/14	Sludgy water dumped into storm drain.	Complaint	Crew was working for Baltimore City cleaning water valve vaults. They have been informed on proper disposal procedures.	**Case closed**	Wise Avenue and North Point Road. 45 E6
14-017	8/29/14	Stream clogged with down trees and trash.	Complaint	DPW Highways cleaned several bags of trash and removed tree.	**Case closed**	7323 Prince George Street. 33 D1
14-018	6/17/14	Grease draining to stream.	Complaint	Source of foul water was grocery store compactor discharging to storm drain. EH had them correct the issue.	**Case closed**	7309 McClean Blvd. 27 J11
14-019	7/22/14	Paint chipping off outfall.	Complaint	The material chipping is no longer used in outfalls. This is not a safety issue, so it will be monitored and fixed if it becomes worse.	**Case closed**	Dutton Avenue. 41 B3
14-020	11/10/14	Oil spilled in intersection.	Complaint	Fire department responded but oil was dry, they can't do anything with dry oil.	**Case closed**	Sagamore Forest Lane. 16 E5
14-021	8/4/14	Building power washing going into storm drain.	Complaint	Sent management company letter on compliance options for future power washing activities.	**Case closed**	20 Lambourne Road. 27 D6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-022	10/28/14	Trash in stream.	Complaint	Metro parking lot, dumpster, trash cans were clean. Source is litter from bus stop. Suggested to Blue Water Baltimore as a volunteer clean-up site.	**Case closed**	4300 Old Court Road.
14-023	4/24/14	Pool being discharged to street.	Complaint	No discharge at time of visit. Doorhangered to educate on better disposal. Homeowner let us know it was rainwater from top of cover.	**Case closed**	17004 Sunswept Lane. 6 K11
14-024	Mar-14	Salt piles stored near storm drain.	Complaint	No salt piles observed. Sent email to educate on proper procedure for this winter.	**Case closed**	9901 York Road. 18 J8
14-025	7/2/14	Gray Discharge at outfall.	Outfall	Source was sidewalks being redone. Doorhangered to educate.	**Case closed**	245 Linden Avenue. 27 E7
14-026	8/20/14	48 tires stored in yard.	Complaint	PAI issued correction notice to remove.	**Case closed**	41 Fullerton Heights Avenue. 28 E13
14-027	9/24/14	Trash being thrown outside of trash cans.	Complaint	PAI found no violations.	**Case closed**	1314 3rd Road. 38 A8
14-028	8/11/14	Fish kill.	Complaint	Naturally occurring due to fish being trapped in pool.	**Case closed**	11 Farwell Court. 29 D8

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-029	07/07/14	Area G Hot Spots found various sediment, grease, trash, car washing issues.	SWAP Hotspot	Various violations and no violations found.	**Case closed**	Area G (Jones Falls).
14-030	12/09/14	Approximately 10 bags of leaves dumped.	Upland	Baltimore City has removed bags of leaves.	**Case closed**	Glen Falls at railroad tracks. 15 E2
14-031	11/26/14	Leaky oil drums, vehicle washing.	SWAP Hotspot	Asked MDE twice for update and got no response.	**On-going**	3403 East Joppa Road. 28 H7
14-032	11/26/14	Trash and grease around dumpsters.	SWAP Hotspot	EH spoke to owner, they will remove items.	**Case closed**	4140 East Joppa Road. 29 B6
14-033	11/26/14	Messy grease dumpster, stains around inlet and back door from wash water.	SWAP Hotspot	EH told business to clean up grease. No wash water was observed being thrown out back door.	**Case closed**	8810 Waltham Woods Road. 28 C6
14-034	11/26/14	Grease spilled on and around dumpster.	SWAP Hotspot	EH told business to clean up grease.	**Case closed**	8816 Waltham Wood Road. 28 C6
14-035	11/26/14	Cars being worked on in parking lot, resulting in spilled fluids.	SWAP Hotspot	EH did not find any cars being worked on but asked manager to call to discuss. Emailed photos taken to show this activity and asked if manager had called inspector. Never got a response back from EH.	**On-going**	2105 E. Joppa Road. 28 C7
14-036	11/26/14	Wash water dumped behind building	SWAP Hotspot	EH instructed business how to properly dispose of wastewater.	**Case closed**	4136 E. Joppa Road. 29 B6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-037	10/8/14	Inlet collapsing and causing erosion.	Complaint	Utilities raised and repaired inlet. CPO put stream on potential project list.	**Case closed**	1007 Chestnut Ridge Drive. 18 C11
14-038	11/26/14	Car washing discharge going to storm drain.	SWAP Hotspot	Sent violation letter and then elevated complaint to MDE. Enterprise is no longer washing cars at this facility.	**Case closed**	2031 E. Joppa Road. 28 C7
14-039	11/21/14	Car leaking oil.	Complaint	EH did not observe car and found no significant oil spots.	**Case closed**	8600 block Oakleigh Road. 28 A7
14-040	05/27/14	Excessive trash in stream from business.	Complaint	Dumpsters were clean, no excessive trash. Some litter from upstream.	**Case closed**	6501 B Baltimore National Pike. 41 A1
14-041	11/12/14	Sediment/road debris pile dumped near culvert.	Complaint	Highways removed pile, but complaintant said some still remains. Highways reported remaining rubble is providing barrier to keep debris out of culvert.	**Case closed**	Francis Avenue at 195. 41 J10
14-042	11/22/14	Burning materials on bulkhead, adding construction debris to bulkhead, pipe draining to water.	Complaint	Sediment Control and EIR had already received complaint, except burning. Fire Department found no violations.	**Case closed**	13116 Cherwin Avenue. 30 K10
14-043	06/09/14	Trash dumping.	Complaint	Complaintant got license plate. Police knocked on residence with no answer. Asked them to pursue a clean-up action. Police never responded to request for update.	**On-going**	933 Hillside Drive. 26C4

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-044	06/06/14	Evidence of sewer overflow.	Complaint	Utilities verified there were no ongoing issue.	**Case closed**	Patapsco State Park east of Halethorpe Farms Road. 42 A12
14-045	04/28/14	Chlorine found at outfall.	Complaint	Referred to Baltimore City.	**On-going**	Outfall so-461. 33 A11
14-046	06/05/14	Car wash business is being run out of home.	Upland	Doorhangered to educate on proper disposal of car wash discharge.	**Case closed**	3938 Rolling Road. 25 A12
14-047	04/29/14	Trash and sofa clogging stream.	Complaint	WMM found no sofa. Highways cleaned litter.	**Case closed**	8122 Streamwood Drive. 25 B11
14-048	05/08/14	Outfall 100% submerged.	Outfall	SWM reported this is on the list to be fixed.	**Case closed**	Outfall so-1054. 26 D9
14-049	05/08/14	Fluoride found in outfall.	Outfall	Leak has been repaired.	**Case closed**	Outfall so-1270. 26 D8
14-050	10/24/14	Bus washing, overflowing salt pile and overflowing dumpsters.	SWAP Hotspot	Referred to MDE.	**On-going**	1524 E. Joppa Road. 27 J7
14-051	05/05/14	Outfall blocked by sediment and trash.	Outfall	SWM cleaned pond.	**Case closed**	so-1383. 24 J10
14-052	03/25/14	Optical brighteners found in outfall.	Complaint	MDE issued violation. King Motors has ceased car washing activities.	**Case closed**	Outfall 822. 33 H5
14-053	12/2014	Buried outfall.	Outfall	DPW Highways will unbury outfall.	**Case closed**	Outfall so-1344. 25 A6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-054	05/07/14	Excessive trash in ditch, 100s of bottles.	Outfall	Highways is doing a right of way search to see who is responsible for cleaning. If it's them it will be cleaned in 90 days.	**Case closed**	Outfall 130. 37 E6
14-055	05/15/14	Trash going into stream. White PVC pipe draining to stream.	Complaint	Trash was mostly from upstream litter not business. EH found pvc pipe only drained rainwater.	**Case closed**	1817 Frederick Road. 41 B4.
14-056	05/21/14	Various complaints from Randallstown trash listening session.	Complaint	SHA put sites on rotating maintenance schedule. Requested update from MTA and one SHA site and never heard back. SWM cleaned SWM pond trash. WMM removed large trash item. One site added to potential project list for volunteer cleanup.	**On-going**	Various. 24 K13
14-057	03/28/14	Grey discharge at outfall.	Complaint	Sent grease issue to EH. Will investigate high e. coli.	**On-going**	Outfall 289. 32 H1
14-058	08/13/14	Trash tour problem sites.	Complaint	Sent to EH, PAI, SHA, DPW Highways. Issues have been corrected, when enforceable issues found by inspectors.	**Case closed**	Various. 42 A6
14-059	05/28/14	Outfall 95% submerged.	Outfall	Highways will correct this.	**Case closed**	Outfall so-191. 37 H6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-060	03/20/14	Outfall with sudsy discharge.	Complaint	Rescreened outfall, no suds all parameters within range, added to our database. SD Design said outfall damage is not affected flow, will keep an eye on to make sure damage doesn't get worse.	**Case closed**	Outfall so-3223. 33 H6
14-061	05/28/14	Various complaints from Ag Center trash listening session.	Complaint	Added some trash cleanups and an invasive removal to potential project list. Referred to SHA (completed some, never heard back on others), PAI (complete),EH (complete), Highways (never heard back) and SD Design (never heard back).	**On-going**	Various. 29 A6
14-062	10/2014	Sediment issues at residential construction project.	SWAP Hotspot	Referred to Sediment Control. Asked twice for update, they hadn't investigated yet.	**On-going**	W. Joppa Road and Meadowridge Court. 27 G7
14-063	05/05/14	Residential yard waste dumping in swm pond.	Outfall	Doorhangered 11 houses to educate. While out homeowner notified us of clogged stormdrain, DPW cleaned.	**Case closed**	Outfall so-1382. 24 J10
14-064	04/21/14	High bacteria.	Outfall	Narrowed down storm drain line, requested Utilities TV line.	**On-going**	Outfall 599. 16 D10
14-065	07/22/14	Leaking water meter.	Complaint	Baltimore City repaired leak.	**Case closed**	3010 Bender Ridge Court. 20 G5
14-066	03/16/14	Outfall with high ammonia.	Complaint	Couldn't locate. Asked BWB for help and they said they probably couldn't find it again.	**Case closed**	Gwynndale and Gwynnmore. 33 H6

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-067	03/20/14	Outfall with high ammonia.	Complaint	Baltimore City corrected sewer leak.	**Case closed**	4806 Seton Drive. 33 H3
14-068	06/04/14	Various complaints from Dundalk trash listening session.	Complaint	Prologue did homeless outreach, PAI issued violation, Rec and Parks will keep an eye on litter at park, clean when necessary.	**Case closed**	Various. 44 K5
14-069	11/06/14	High fluoride at outfall.	Complaint	Traced to water leak in sidewalk. Referred to Baltimore City.	**On-going**	Cedar Drive. 33 G7
14-070	07/10/14	Leaking sewer pipe.	Complaint	Will return to site to take more bacteria samples.	**On-going**	Wycliffe Road. 28 A11
14-071	04/18/14	Car wash discharging to storm drain. Reopened due to another complaint.	Complaint	MDE and DPW spoke to car wash about proper procedure. Will revisit with DPW.	**On-going**	955 Essex Avenue. 37 E8
14-072	2014	Pipe crossing stream is discharging ugly material.	Complaint	Only pipe present is USGS gage pipe.	**Case closed**	Regester Avenue. 27 G11
14-073	08/07/14	Liquid dripping from spent grain silo.	Complaint	Referred to EH.	**On-going**	8901 Yellow Brick Road. 37 B4
14-074	07/17/14	High E.coli at outfall.	Outfall	Traced to a flood control pit in storm drain manhole, will test above this in future as this may be tidal water.	**Case closed**	Outfall so-111. 45 C5

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-075	03/17/14	Soapy discharge in stormwater pond.	Complaint	No discharge at time of visit. From pictures, appears source was a sanitary sewer. No evidence of recent overflows.	**Case closed**	7101 Rolling Mill Road. 36 F11
14-076	12/22/14	Outfall 100% submerged.	Outfall	Referred to Highways.	**On-going**	Outfall so-2085. 24 J3
14-077	12/22/14	Outfalls filled with sediment, neighbor complained about trash in pond.	Outfall	SWM put this on maintenance list.	**Case closed**	Outfalls so-3148 and so-3149.
14-078	12/22/14	Couch dumped in BGE right-of-way.	Upland	BGE removed couch.	**Case closed**	Ritters Lane. 24 G3
14-079	12/22/14	Outfall buried by woody debris.	Outfall	Highways cleared outfall.	**Case closed**	Outfall so-2441. 24 F3
14-080	03/20/14	Elevated ammonia at outfall.	Complaint	Did full screen on outfall, all tests were low including ammonia which was <0.1 ppm. Will change outfall to higher priority in case there is an intermittent issue.	**Case closed**	Outfall 676. 33 G2
14-081	12/08/14	Mattresses dumped on side of road.	Outfall	Highways removed mattress.	**Case closed**	Outfall 329. 24 G2
14-082	12/18/14	Stream erosion.	Outfall	DPW is investigating improving the culvert.	**Case closed**	Outfall so-1042. 27 E9
14-083	12/19/14	Excessive trash in SWM pond.	Outfall	SWM will put on the list to be cleaned.	**Case closed**	Outfall 590. 24 E1
14-084	12/19/14	Lawn chairs dumped at outfall.	Outfall	Highways removed chairs.	**Case closed**	Outfall so-2466. 24 E1
14-085	12/19/14	Yard waste and residential dumping in SWM pond.	Outfall	Distributed door hangers to educate.	**Case closed**	Outfall so-3118. 16 E13.

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-086	12/19/14	Residential trash dumping.	Outfall	Distributed litter fact sheets.	**Case closed**	Outfall so-2463. 24 G1
14-087	12/19/14	Yard waste at outfall.	Outfall	Will doorhanger to educate.	**On-going**	Outfall so-1362. 25 A7
14-088	12/30/14	Outfall 60% full of sediment.	Outfall	Highways will clear outfall.	**Case closed**	Outfalls so-2683. 16 G10
14-089	12/30/14	Residential dumping in SWM pond.	Outfall	Distributed litter fact sheets.	**Case closed**	Outfall so-2681. 16 F10
14-090	12/30/14	Outfall 99% submerged.	Outfall	SWM inspected and the facility failed. It is on list for repair.	**Case closed**	Outfall so-2684. 16 F10
14-091	12/30/14	Yardwaste dumping.	Outfall	Distributed litter fact sheets.	**Case closed**	Outfall so-2687. 16 G10
14-092	04/22/14	Outfall damage causing erosion.	Complaint	Storm Drain Design has placed this on the low priority project list.	**Case closed**	Outfall so-1539. 19 C10
14-093	05/09/14	High phenols at outfall.	Outfall	Referred to Utilities.	**On-going**	Outfall 021. 18 J6
07-084	11/13/14	Chlorine found at outfall. Reopened case.	Complaint	Chlorine appears to be irrigation water from nearby school.	**Case closed**	Outfall so-1115. 25 K10.
14-094	10/01/14	Concern about illicit discharge in outfalls.	Complaint	Found one outfall, screened but it was dry. Stream was fine. Referred outfall erosion to SD Design.	**On-going**	Outfall so-2024. 26 J2.
14-095	10/30/14	Soapy discharge in stormwater pond.	Complaint	Visited outfall and it was dry. Will make high priority to keep an eye on in case of intermittent issue.	**Case closed**	Outfall so-1850. 18 H12
12-094	12/18/14	Orange material and sheen at outfall. Reopened case.	Complaint	No sheen or orange material but did find high fluoride, chlorine, phenols.	**On-going**	Outfall 144. 27 A4

Case No.	DATE	COMPLAINT	TYPE	ACTION TAKEN	STATUS	LOCATION
14-096	07/08/14	High surfactants and optical brighteners in outfall.	Complaint	Was actually a culvert, dry during screening. Pipe damage and erosion reported to SD Design.	**On-going**	7911 Beverly Avenue. 28 A10
14-097	07/15/14	Concern for water quality in stream.	Complaint	Tested stream and screened outfalls. No water quality issues present. One outfall had high phenols suspect from landscaping company runoff.	**Case closed**	8349 Tally Ho Road. 26 G2

5.6 Commercial/ Industrial Pollution Surveys (Hotspots)

Commercial and industrial pollution surveys have been conducted for years as part of the SWAP process, referred to as Hotspot Site Investigations (HSIs). A ramped up hotspot program was initiated in the 2015 fiscal year.

5.6.1 Hotspot Site Investigations

For many years, commercial and industrial sites (private and public) were selected for HSIs by looking for sites that seemed likely to be actual stormwater pollution hotspots. During the 2015 fiscal year, a total of 46 sites were assessed in this way in the following SWAP areas: Area A (5), Area N (23), and Area S (18). The Area A HSIs were re-visits of previously identified hotspots, in which 80% of these assessments were “confirmed hotspots”. Confirmed hotspots are written up as complaints and tracked until resolution. Table 5-6 lists the hotspot complaints handled during the 2015 fiscal year. The 2014 hotspot complaints have also been included above in Table 5-4, which are all the complaints the IDDE program investigated in 2014.

Consultants and staff doing fieldwork have been instructed to immediately report suspected illicit connections found. Hotspots were found both in hot spot assessments and while doing other fieldwork related to the SWAP. Complaints are also received at stakeholder meetings. Participants are asked to fill out cards with issues in the area and any illicit connections identified are investigated.

Table 5-6: SWAP Complaints Processed from July 1, 2014 through June 30, 2015

Case No.	DATE	COMPLAINT	ACTION TAKEN	STATUS	LOCATION
14-029	07/07/14	Area G Hot Spots found various sediment, grease, trash, car washing issues.	Various violations and no violations found.	**Case closed**	Area G (Jones Falls).
14-031	11/26/14	Leaky oil drums, vehicle washing.	Asked MDE twice for update and got no response.	**On-going**	3403 East Joppa Road. 28 H7
14-032	11/26/14	Trash and grease around dumpsters.	EH spoke to owner, they will remove items.	**Case closed**	4140 East Joppa Road. 29 B6
11-025	05/04/11	Revisited site, dumpster area is leaking juice and surrounded by trash. Reopened case.	EH inspector found the area clean, no violation.	**Case closed**	6300 Baltimore National Pike. 41 B1
14-033	11/26/14	Messy grease dumpster, stains around inlet and back door from wash water.	EH told business to clean up grease. No wash water was observed being thrown out back door.	**Case closed**	8810 Waltham Woods Road. 28 C6
14-034	11/26/14	Grease spilled on and around dumpster.	EH told business to clean up grease.	**Case closed**	8816 Waltham Wood Road. 28 C6
14-035	11/26/14	Cars being worked on in parking lot, resulting in spilled fluids.	EH did not find any cars being worked on but asked manager to call to discuss. Emailed photos taken to show this activity and asked if manager had called inspector. Never got a response back from EH.	**On-going**	2105 E. Joppa Road. 28 C7
14-036	11/26/14	Wash water dumped behind building	EH instructed business how to properly dispose of wastewater.	**Case closed**	4136 E. Joppa Road. 29 B6

Case No.	DATE	COMPLAINT	ACTION TAKEN	STATUS	LOCATION
14-038	11/26/14	Car washing discharge going to storm drain.	Sent violation letter and then elevated complaint to MDE. Enterprise is no longer washing cars at this facility.	**Case closed**	2031 E. Joppa Road. 28 C7
14-050	10/24/14	Bus washing, overflowing salt pile and overflowing dumpsters.	Referred to MDE.	**On-going**	1524 E. Joppa Road. 27 J7
14-062	10/2014	Sediment issues at residential construction project.	Referred to Sediment Control. Asked twice for update, they hadn't investigated yet.	**On-going**	W. Joppa Road and Meadowridge Court. 27 G7
15-008	01/16/15	At SHA facility sediment staining on outfall riprap, erosion on another outfall	Haybales have been replaced by boom around inlet.	**Case closed**	306 Mount Carmel Rd. 7 D10
15-027	03/30/15	Storage tank leaking, working on trucks outdoors.	MDE is having business correct some housekeeping issue. EH found trucks are washed over oil/grease separator and not repaired outside.	**Case closed**	3206 Hammonds Ferry Road. 42 E10
15-028	03/30/15	Leaking and overflowing dumpsters.	PAI found no violations. EH had them clean dumpster area and close lids.	**Case closed**	40 West Shopping Center, N. Rolling Road.
15-030	03/30/15	Cars leaking fluids, dumpster missing lid, discharge going to storm drain.	EH found discharge was water coming from an overflow device inside building, was corrected. PAI issued correction notice for junk/debris.	**Case closed**	4615 Hollins Ferry Road. 42 C11
15-065	04/22/15	Rusty, oily drums without lids.	Referred to EH.	**On-going**	1 Beaver Court. 18 G6.

Case No.	DATE	COMPLAINT	ACTION TAKEN	STATUS	LOCATION
15-066	04/22/15	Uncovered drums, trash, tires, untagged truck.	PAI found no violations.	**Case closed**	105 Beaver Court. 18 G5
15-075	04/22/15	Junk piles and untagged vehicles.	Referred to PAI.	**On-going**	200 Cockeysville Road. 18 G5
15-112	04/22/15	Pile of trash in woods behind house.	PAI didn't find trash issue, but issued correction notice for abandoned vehicle.	**Case closed**	5213 Pembroke Avenue. 33 H6
15-058	04/27/15	Junky conditions, salt stored on pallets outside.	Referred to PAI.	**On-going**	10822 Williamson Lane. 18 H4
15-059	04/27/15	Untagged vehicles	Referred to PAI.	**On-going**	10840F Williamson Lane. 18 G4
15-060	04/27/15	Untagged vehicles	Referred to PAI.	**On-going**	10823 Veneer Lane #4. 18 G4
15-061	04/27/15	Untagged vehicles	Referred to PAI.	**On-going**	10823 Veneer Lane, #C. 18 G4
15-062	04/27/15	Overflowing dumpster of dirt, piles have been started around dumpster because it's full.	Referred to PAI.	**On-going**	10819 Williamson Lane. 18 G4
15-063	04/27/15	Piles of metal, old gas tank, untagged vehicle.	Referred to PAI.	**On-going**	10817 Williamson Lane. 18 G4
15-064	04/27/15	Many untagged vehicles, at least one truck leaking fluids.	Referred to PAI.	**On-going**	10823 Williamson Lane. 18 G4.
15-076	04/27/15	At least 6 untagged vehicles on property.	Referred to PAI.	**On-going**	10820 Williamson Lane. 18 G4

Case No.	DATE	COMPLAINT	ACTION TAKEN	STATUS	LOCATION
15-077	04/27/15	Piles of brush, junk piled against building.	Referred to PAI.	**On-going**	10838 Williamson Lane. 18 G4
15-078	04/30/15	At least 6 untagged vehicles on property.	PAI issued correction notice.	**Case closed**	10901 McCormick Road. 18 F5
15-071	05/21/15	Fish/plant tanks being drained to parking lot.	Referred to EH.	**On-going**	11035 York Road. 18 H3
15-072	05/21/15	Bus washing in parking lot.	Bus lot was contacted to let them know this activity was not allowed and the EPA fined us for this during our audit.	**Case closed**	103 Wight Avenue. 18 F4
15-073	05/21/15	Grease on ground around used oil dumpster.	When EH visited, business was already taking care of issue. Absorbent was on ground and top of container had been cleaned.	**Case closed**	10752 York Road. 18 H5
12-037	05/21/15	At least 10 untagged vehicles on property, reopened case.	Referred to PAI.	**On-going**	10926 York Road. 18 H4
15-074	05/21/15	Washing vehicles in parking lot.	MDE issued notice of corrective action.	**Case closed**	10300 York Road. 18 H6
15-093	05/29/15	Untagged vehicles, working on vehicles outside.	Referred to PAI.	**On-going**	11013 York Road. 18 H4

5.6.2 HSI Pilot Study

A pilot study was conducted in which 158 commercial and industrial sites were assessed without any sort of pre-screening. Efforts were concentrated along the York Road corridor in the Timonium and Cockeysville area (SWAP Area O). The percentage of sites found to have issues was lower using this approach (12% “confirmed hotspots”). The vast majority (88%) were “not a hotspot”. Revisions to the field data sheet, prior to the pilot study, included removal of the option to identify a site as “potential hotspot”. This accounts for the difference in the data between

Areas A and O, and Areas N and S. See Table 5-7 for HSIs by SWAP Area and Figures 5-6 through 5-9 for maps showing locations of HSIs.

Table 5-7: Hotspot Investigations Conducted from July 1, 2014 through June 30, 2015

SWAP Area	Total # HSIs Assessed	# Confirmed Hotspots	# Potential Hotspots	# Not a Hotspot	% Confirmed Hotspots
A Lower Patapsco	5	4	n/a	1	80%
N Urban Gunpowder	23	9 (includes 2 “severe”)	7	7	39%
S Liberty Reservoir	18	1	13	4	5%
O Loch Raven South (Pilot)	158	19	n/a	139	12%
TOTAL	**204**	**33**	**20**	**151**	**16%**

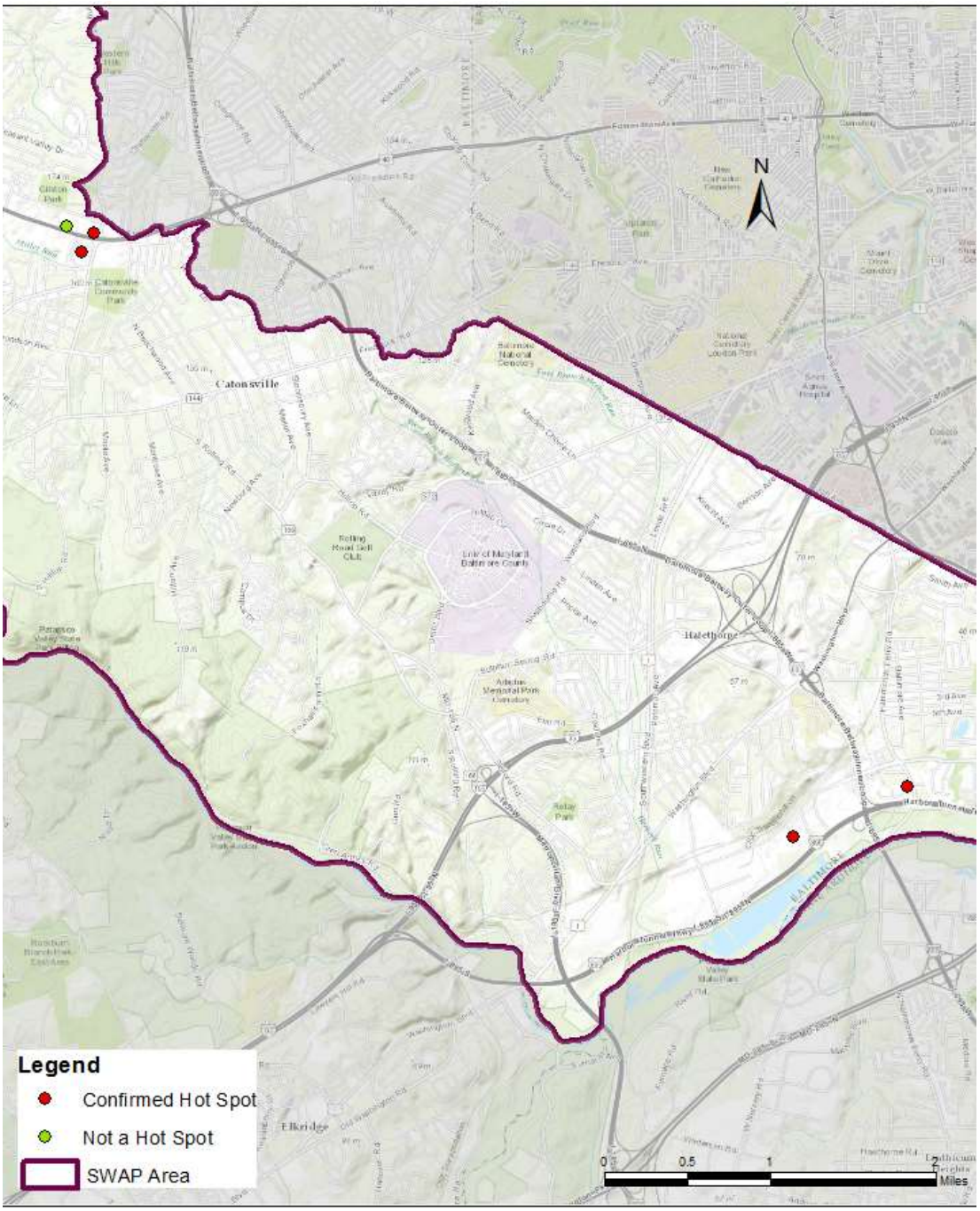

Figure 5-6: HSI Locations in Area A

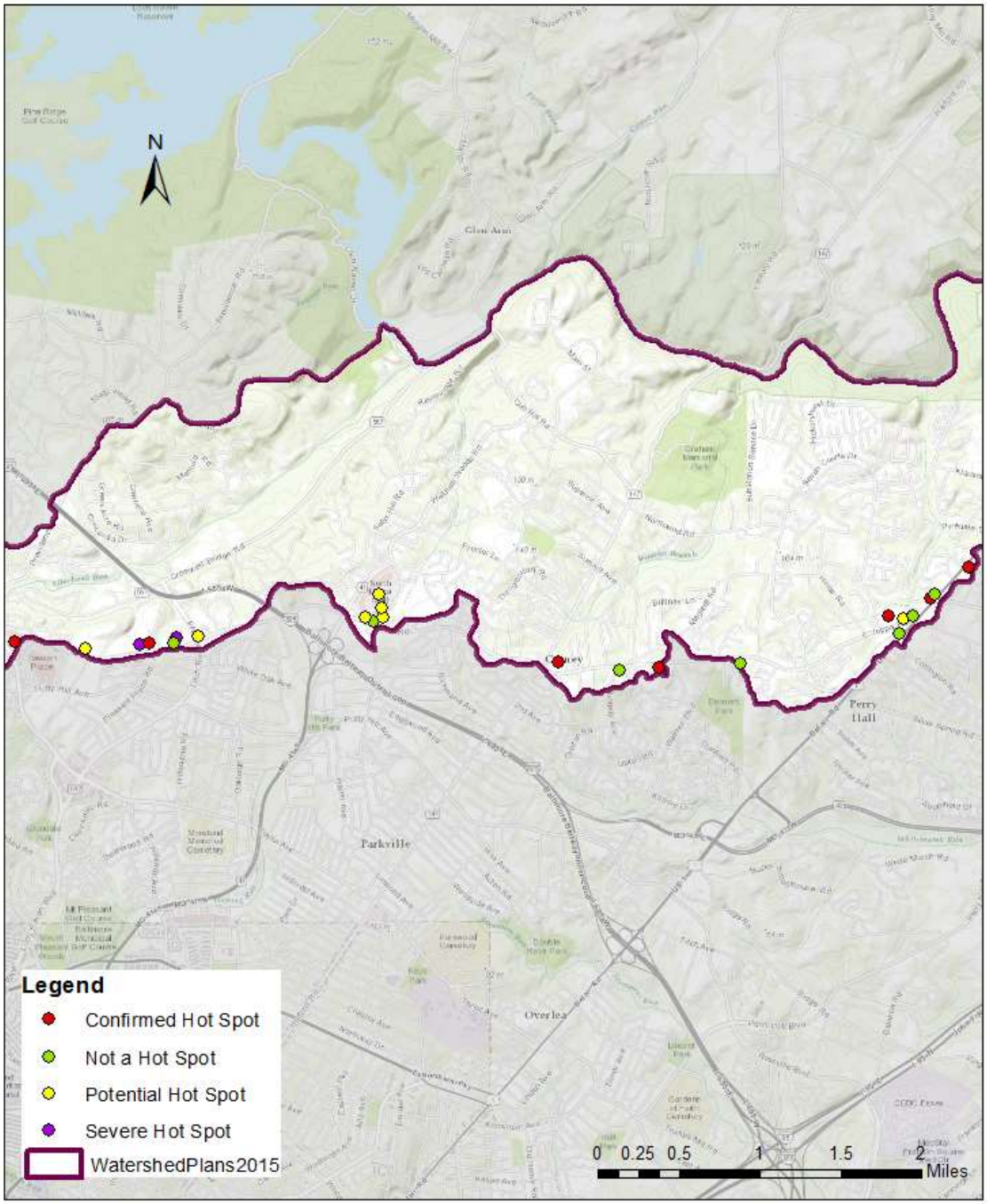

Figure 5-7: HSI Locations in Area N

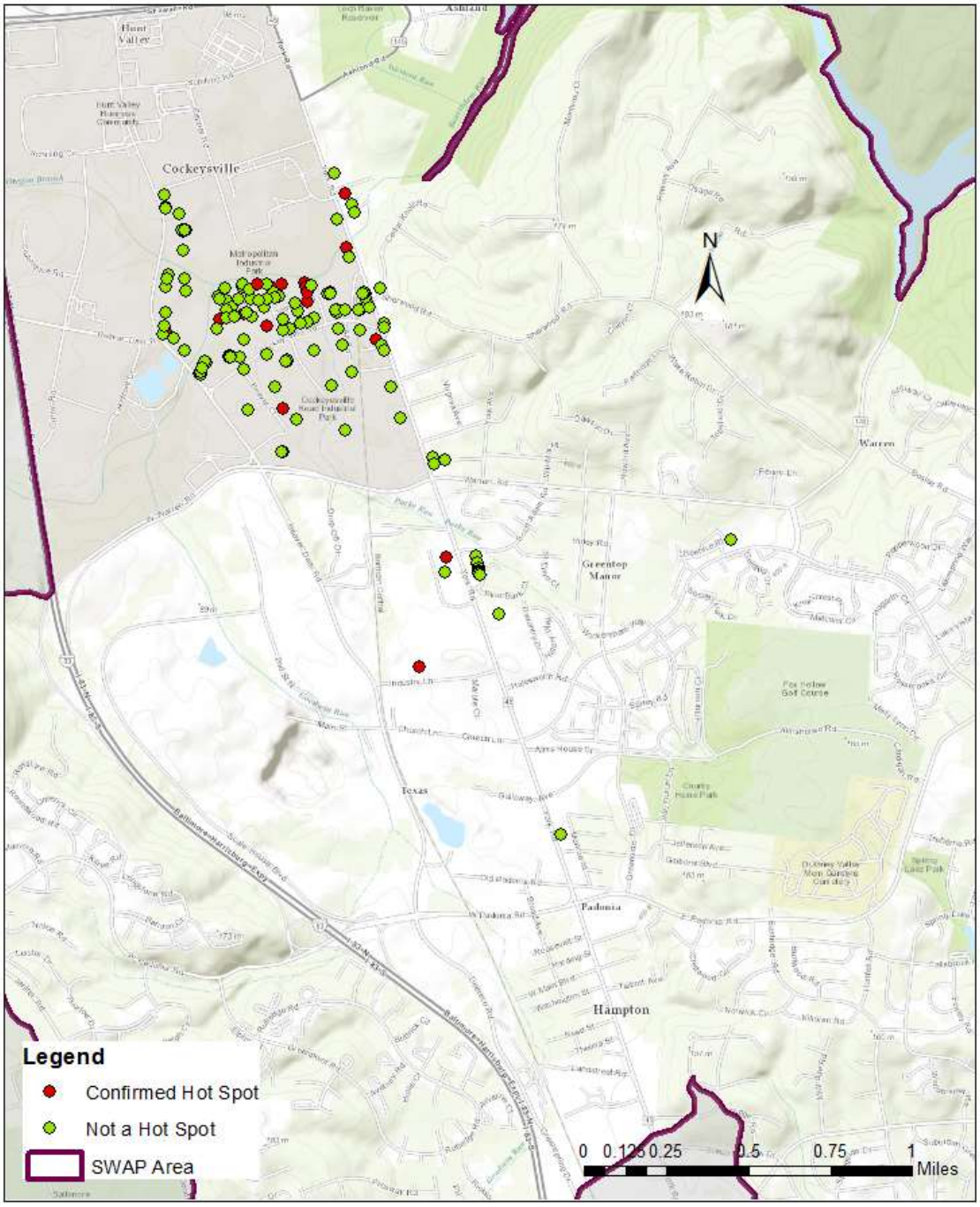

Figure 5-8: HSI Locations in Area O

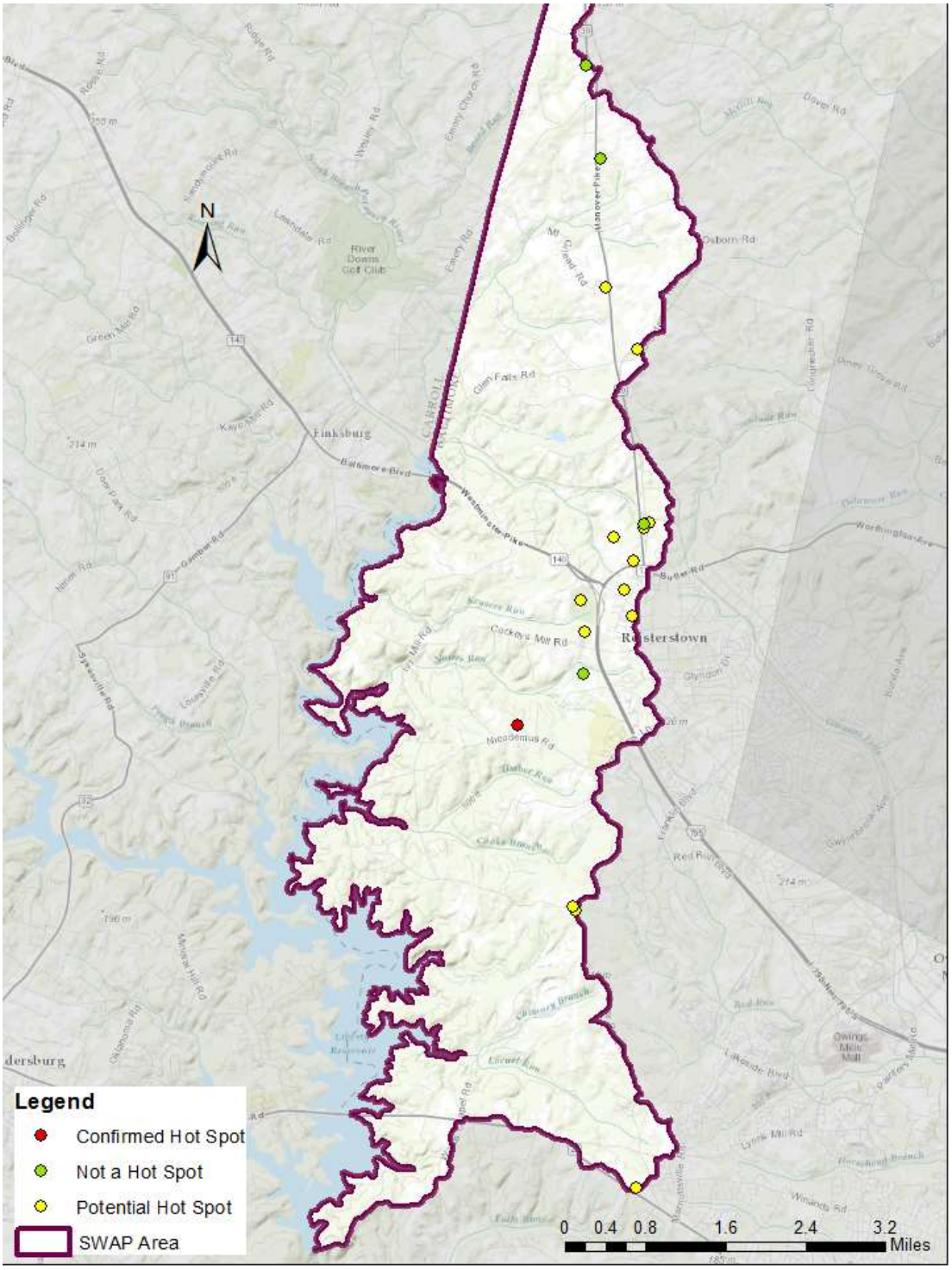

Figure 5-9: HSI Locations in Area S

5.6.2 Future Hotspot Site Investigations

EPS staff will refine the program to make more efficient use of field time. In the current year, we plan to analyze the data further and look for patterns that would allow us to identify problem sites more readily without being slowed down by assessing sites that are rather unlikely to contaminate stormwater runoff, such as office buildings. We feel that by identifying the categories of commercial and industrial sites that tend to have issues, that we can better use our time and allow more pollution problems to be addressed. The plan will include a method for prioritizing hotspots for future re-checks. A Standard Operating Procedure (SOP) for hotspot assessments will be included in the 2016 report.

5.7 Outreach

Not all complaints investigated, even if an issue is found, result in an enforcement action. Some problems, such as litter, are not severe enough or cannot be attributed to one source. Or we may have a report of dumping into a storm drain, but no evidence is found when we visit the site. WMM has developed a door-hanger to be used in such instances. The door-hanger was based on one developed by MDE. Staff can check off the particular issue found from the list on the door-hanger. There is also educational information on the reverse side, letting them know storm drains are connected to streams and the proper disposal of materials.

A brochure on the illicit connection program has also been developed. It is distributed at events and stakeholder meetings to educate and advertise the program. A form is now available on our website to report pollution complaints. Previously complainants could send an email to watersheds@baltimorecountymd.gov, but sometimes information about the problem was missing. The web form will eliminate the problem of missing data and hopefully increase the number of complaints submitted by making the process easier.

5.8 IDDE Research

In 2011, Baltimore County participated in the Illicit Discharge Detection and Elimination in Baltimore Project organized by The Center for Watershed Protection (CWP). This was a one-year grant project that looked at both major and minor outfalls and investigated illicit connections on a subwatershed scale in Baltimore County and City.

CWP found fluoride in four samples, which was not in the presence of chlorine. As a result, they recommend fluoride as an indicator of potable water instead of chlorine. Baltimore County does not use fluoride as an indicator because it is too sensitive to discharges that are not regulated under the NPDES permit, such as residential car washing. Baltimore County has found that using chlorine instead of fluoride saves time and effort expended on investigations where no illicit discharges are occurring. Results from the study found minor outfalls (<36”) to be a significant contributor to pollutant loadings. Baltimore County has not found this to be the case.

Due to some question about how applicable the results are to Baltimore County, a research project was launched in February 2012. The study is looking at pollutant loadings from county outfalls. One task of the study will be to compare the current NPDES illicit connection parameters (chlorine, copper, phenols, ammonia, pH and temperature) with the parameters used by CWP. The additional CWP parameters (boron, fluoride and E. coli) will be used in conjunction with the current tests, to see if we are missing illicit discharges. The results will also be examined to see if small outfalls are a significant contributor to pollutant loadings. In previous years, most of the Baltimore County small outfalls have been found to be dry.

The study is concentrated in six SWAP areas, which contains 1,224 outfalls; we will complete all the outfalls both major and minor in the six areas. Lab samples will be taken at each outfall where a discharge measurement can be taken and nutrient loadings will be calculated. We have completed screenings for 854 outfalls and 370 remained to be screened. The goal is complete these outfall screenings and analyze the data for the 2016 report.

5.9 Illicit Discharge Elimination – Program Credit

An Expert Panel evaluated infrastructure-related nutrient discharges against 5 technical criteria and identified 8 discharge types to be recommended for an annual nutrient reduction credit. The Panel recommended a phased approach whereby the credit would be granted in the Phase 5.3.2 Model for localities that go above and beyond the following minimum requirements set forth under the MS4 permit. The programmatic credit is available beginning 2015 and extending through 2017. The program credit is not cumulative year over year, (i.e., the maximum allowable reduction is capped at 1% of all qualifying pervious acres in each community). The specific acres subject to the program credit lapse 5 years after the first year in which they are reported to the appropriate state regulatory authority. Additional qualified acres may be reported in succeeding years but those additional acres also expire after 5 years. At the end of the 5 years the community is encouraged to report load reductions based on the elimination of individual nutrient discharges.

The Panel defined the annual credit as being equivalent to a maximum of 1% of the dry weather nutrient load within the jurisdiction, which is defined as 20% of the total annual N and P load discharged from the urban pervious land in which advanced nutrient reduction programs are targeted. Credit is contingent on documentation that they possess advanced program elements to target, screen, detect and correct the nutrient discharges with the highest nutrient loading risks.

Two of the following additional criteria are required:

1. GIS assessment of storm and sanitary network to identify high risk segments for cross-connections of exfiltration.
2. Dry weather stream monitoring to prioritize segments with the highest nutrient and bacteria levels that warrant further investigation.
3. Methods to investigate for sewer leaks in problem storm drain systems (e.g., CCTV, dye testing, etc).
4. Targeted inspection outreach of facilities subject to high risk for illicit discharges of sewer clogging.
5. Detailed field assessments to identify sanitary segments with high risk of exfiltration or dry weather overflows.

Baltimore County is eligible to begin taking program credit for the program credit based on its IDDE program which goes beyond the requirements of the MS4 permit. Advanced nutrient reduction programs in effect during FY 2015 are listed in Table 5-8. Figure 5-10 shows the locations in Baltimore County which qualify for program credit.

Table 5-8: Advanced Nutrient Reduction Programs in fiscal year 2015

Project	Qualifying Criteria	Watershed or Area	Duration

Bacteria Subwatershed Prioritization	2	PB, LR, JF, GW, PA, LI	2015
SWAP Hotspot Site Inspections	4	SWAP Areas A, C, D, E, F, G, H, I, K, L, M, N, O, R, S, T, V, X	2015

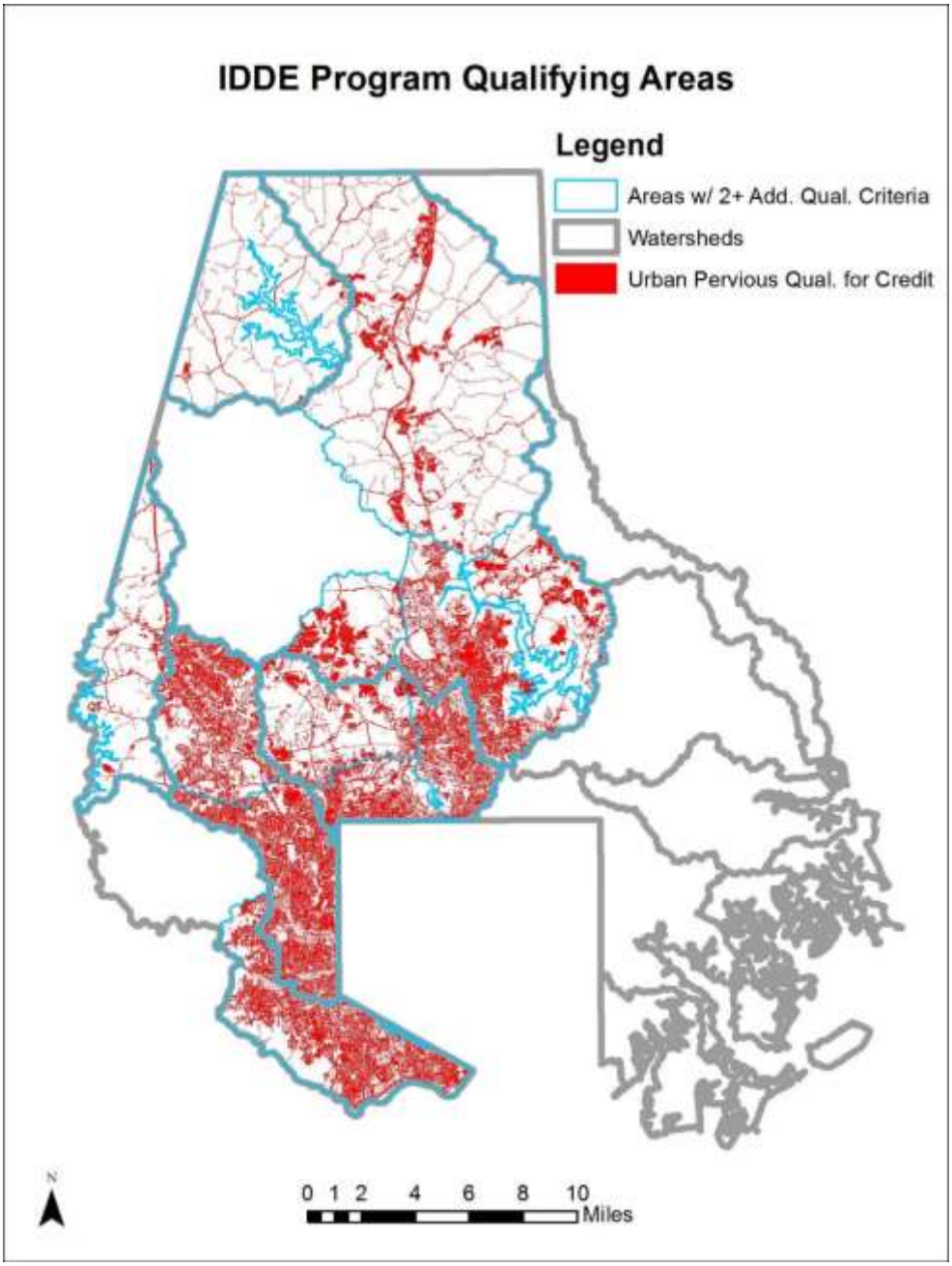

Figure 5-10: Locations in Baltimore County which qualify for program credit

Table 5-9 presents the qualifying acreage, the nitrogen and phosphorus loads they produce, and the resultant advanced IDDE program credit. The calculation method is documented in the expert panel report (CSN and CWP 2014) and in Baltimore County's standard operating procedures (Baltimore County, 2015). An example calculation is shown below.

$$TN_i = 0.01 \times 0.20 \times A_{q,i} \times R_{TN,i}$$

where TN_i = total nitrogen credit for watershed i,
QA_i = urban pervious acres in qualifying area in watershed i, and
$R_{TN,i}$ = urban pervious nitrogen loading rate for watershed i

Table 5-9: Advance Program Credit taken for fiscal year 2015

Watershed	Acres	Landuse	TN loading rate	TN Load	TN Credit	TP loading rate	TP Load	TP Credit
Gwynns Falls	14,594	Urban Pervious	11.55	168,560.70	337.12	0.3	4,378.20	8.76
Jones Falls	9,734	Urban Pervious	11.55	112,427.70	224.86	0.3	2,920.20	5.84
Liberty Reservoir	1,791	Urban Pervious	11.56	20,703.96	41.41	0.3	537.30	1.07
Loch Raven Reservoir	19,078	Urban Pervious	11.55	220,350.90	440.70	0.3	5,723.40	11.45
Patapsco River	8,181	Urban Pervious	9.73	79,601.13	159.20	0.25	2,045.25	4.09
Prettyboy Reservoir	1,424	Urban Pervious	11.55	16,447.20	32.89	0.3	427.20	0.85
Total	**54,802**			**618,092**	**1,236**		**16,032**	**32**

5.10 Summary

The Outfall Prioritization Program has increased efficiency in detecting pollutants. A database is used to assign a priority rating for each outfall based on past screening data and the potential for having illicit connections. Outfalls are screened periodically based on their priority rating, which is assigned or appropriately changed when information is entered. The type and severity of pollution determines the outfall's position in the queue. The combination of citizen involvement, routine outfall screenings and the regional staff complaint investigations is working well to meet our continuing goal of preventing and eliminating illicit connections. Continuing effort will be made to educate and encourage citizens to report illicit discharges.