The Clean Water Act and the Chesapeake

Enforcement's Critical Role in Restoring the Bay - Update

ENVIRONMENTAL INTEGRITY PROJECT

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About the Environmental Integrity Project

The Environmental Integrity Project (EIP) is a nonpartisan, nonprofit organization dedicated to the enforcement of the nation's anti-pollution laws and to the prevention of political interference with those laws. EIP provides objective analysis of how the failure to enforce or implement environmental laws increases pollution and harms public health, and helps local communities obtain the protection of environmental laws.

About this Report

EIP examined public data obtained from EPA and states to evaluate progress in meeting TMDL goals by the largest municipal and industrial sources of nutrients in the Chesapeake Bay watershed, focusing on nitrogen discharges. Using this data, which EIP obtained directly from state agencies or through EPA's Enforcement and Compliance History Online (ECHO) database, EIP compared loadings between 2010, 2011, and 2012; assessed rates of violations and failures to report among the most significant dischargers; and estimated the pollution attributable to illegal discharges. EIP also reviewed the Bay states' performance in inspecting dischargers and maintaining current permits. This report updates the Environmental Integrity Project's (EIP's) December 2012 analysis of early progress towards the TMDL goals with 2012 loadings data.

Acknowledgement

EIP Research Analysts Troy Sanders and Tom Lyons, EIP Executive Director Eric Schaeffer, and EIP Attorney Tarah Heinzen contributed to this report. Thank you to the Virginia Department of Environmental Quality and the Pennsylvania Department of Environmental Protection for reviewing the draft report and providing additional data and feedback.

Data Limitations

EIP based its analysis of water discharges and pollutant loadings on publicly available data retrieved from EPA and state environmental agencies. Occasionally government data may contain errors, either because regulated entities inaccurately report it or because government agencies incorrectly transcribe it. EIP retrieved the data in this report in June and November 2013, and subsequent data retrievals may differ slightly as some companies and agencies correct prior reports.

EIP is committed to ensuring that the data we present are as accurate as possible. We will correct any errors that are verifiable.

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Executive Summary

Nitrogen, phosphorus, and sediment pollution from thousands of sources continue to threaten the Chesapeake Bay and its tributaries. In response, the U.S. Environmental Protection Agency and the Chesapeake Bay watershed states have established a pollution diet of "Total Maximum Daily Loads" (TMDLs) to limit discharges of those pollutants. These limits went into effect in late 2010, and require reductions in loadings to the Bay of 25% for nitrogen, 24% for phosphorus, and 20% for sediment by 2025.[1] Measured in pounds, that means decreasing the nitrogen that flows to the Bay by more than fifty million pounds a year, phosphorous by more than three million pounds, and sediment by more than one and a quarter billion pounds.

Monitoring data show that discharges of nitrogen from industrial facilities and sewage treatment plants declined about three million tons in 2012 compared to the previous year, or about 6.5%. These major "point sources" account for about 20% of the nitrogen that enters the Bay. Reported nitrogen discharges within the Bay watershed declined significantly in Pennsylvania and Virginia in 2012 compared to 2011, while increasing in Maryland, Delaware, and New York. Overall, Bay watershed states are making significant progress towards meeting the 2025 nitrogen targets for large point sources, thanks in large part to a major public investment in upgrading sewage treatment plants. However, this analysis also shows that the Bay states will meet their water quality goals sooner if they crack down on violators who fail to comply with nutrient limits in their permits. In 2012, violations by just 17 large polluters contributed nearly 700,000 pounds of nitrogen to the Bay.

Incomplete data reporting by individual facilities – as well as by the Bay states to the U.S. EPA – continues to limit information about many dischargers. Thousands of so-called "nonsignificant" sources that discharge smaller amounts of pollution to the Bay are also seldom inspected, further limiting information about their real impact on water quality. The failure to monitor and disclose discharges of these nutrients makes it difficult to track progress and hold polluters accountable for operating within their nutrient limits. Finally, thousands of expired permits continue to evade renewal, which may delay establishment of permit limits that reflect TMDL goals.

Progress Reducing Nitrogen Pollution

EIP estimated annual nitrogen releases in 2012 from 333 significant facilities for which complete monitoring data was available; these facilities accounted for about 98% of total nitrogen loadings from all 478 significant point sources in the watershed in 2010. Nitrogen discharges from the largest municipal and industrial plants dropped significantly in Pennsylvania, Virginia, the District of Columbia, and West Virginia between 2011 and 2012, declining more than 16% in

[1] *See, e.g.*, EPA, Fact Sheet: Chesapeake Bay Total Maximum Daily Load (TMDL), http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/BayTMDLFactSheet8_26_13.pdf

Pennsylvania and 7.5% in Virginia. These states will need additional reductions to meet wasteload allocation targets, but the progress to date is encouraging.

In contrast, reported nitrogen discharges from significant municipal and industrial sources increased from 2011 to 2012 by more than 400,000 pounds in Maryland, nearly 500,000 pounds in New York, and nearly doubled in Delaware. Though the Bay states have until 2025 to reach their TMDL limits, these early indicators of point source progress are important because the states must meet at least 60% of the load reductions by 2017.

Significant Source Nitrogen Loadings, 2010 to 2012

State	WASTELOAD ALLOCATION	2010 N LOAD	2011 N LOAD	2012 N LOAD	% of 2010 SIGNIFICANT LOAD CONSIDERED*
DC	4,689,000	4,887,769	3,922,271	3,307,337	100%
DE	204,710	114,540	120,851	233,565	91%
MD	6,774,444	12,378,486	10,149,544	10,562,620	94%
NY	1,545,956	2,366,407	2,430,785	2,920,537	99%
PA	10,402,783	13,092,671	13,657,529	11,457,379	96%
VA	15,255,948	22,403,004	16,719,515	15,460,155	100%
WV	360,721	609,702	503,633	449,616	99%
Total	**39,233,562**	**55,852,579**	**47,504,128**	**44,391,210**	**98%**

*These percentages indicate the proportion of the significant municipal and industrial facilities' 2010 nitrogen load considered in EIP's analysis.

Violations

Permit limits and WLAs mean little if dischargers do not meet them. Unfortunately, violations of permit limits for nitrogen, phosphorus, and sediment remain common throughout the Bay states, even for significant dischargers. 8% of the industrial and municipal dischargers analyzed in this report violated nitrogen permit limits for at least three months in 2012. In addition, just 17 large point sources reported illegal discharges of nitrogen totaling nearly 700,000 pounds. Correcting those violations would eliminate a significant portion of the nitrogen that must be reduced to meet the TMDL targets for nitrogen. This analysis includes only those facilities that released more than 1,000 pounds of nitrogen above allowable limits in 2012. Approximately twice

as many facilities exceeded nitrogen limits by this quantity in 2011, but the total loadings due to violations, not including sanitary sewer overflows (SSOs), actually increased from 2011 to 2012.

These illegal loadings estimates are conservative, because discharge data were not available for all facilities, the excess discharges that result from violations of some permit limits cannot be easily quantified, and numerous facilities fail to report complete discharge information. Approximately 10% of the point sources analyzed in this report violated nitrogen discharge reporting requirements for at least three months in 2012 – a slightly higher percentage than in 2010 and 2011 – while another 8% did not report phosphorus discharges as required for at least three months. Violators and non-reporting dischargers may also overlap because a facility can provide monitoring data showing it has violated a limit at some point in the year, while failing to report any data in other monitoring periods.

2011-2012 Nitrogen and Phosphorus Loadings over Permit Limits				
State	2011 Nitrogen	2012 Nitrogen	2011 Phosphorous	2012 Phosphorous
DC	-	-	-	-
DE	-	22,588	-	-
MD	238,488	311,837	20,769	9,040
NY	12,510	10,277	5,312	1,784
PA	271,837	304,075	7,669	47,461
VA	23,514	-	810	-
WV	34,096	25,090	-	-
MD SSOs	66,378	33,931	9,329	4,769
TOTAL:	**646,823**	**707,798**	**43,889**	**63,054**

Many of these violations are the result of exceeding nitrogen limits established to protect local water quality, and do not necessarily mean that the annual wasteload targets established to protect the entire watershed have been exceeded. But in the worst cases, such illegal discharges can undo the progress made by cities and companies that comply with their permits, many of which have upgraded to reduce pollution. SSOs also contribute significant pollution loadings above permitted limits, and Maryland's SSOs alone contributed more than 30,000 pounds of nitrogen discharges to the Bay in 2012. The Clean Water Act prohibits all SSOs, and the Bay TMDL assumes that the Bay states will eliminate all such releases by 2025.

Recommendations

Achieving the TMDL goals and restoring the Chesapeake Bay will require further pollution reductions from every contributing sector, including industrial and municipal facilities. If discharges from these sources do not decrease through improved compliance and technology upgrades, either other sectors will have to pick up the slack or we will fail to meet the TMDL's goal of restoring the Chesapeake Bay. As in our 2012 report, EIP recommends that the Bay states improve their permitting and enforcement programs for point sources in the following ways:

- Target enforcement resources at the most significant facilities violating nutrient limits and reporting requirements;

- Adopt mandatory minimum penalties based on the pounds of illegal pollution discharged to more effectively deter violations and support monitoring and enforcement programs;

- Strengthen permit limits by incorporating compliance schedules to meet TMDL pollutant caps within the next permit cycle;

- Improve reporting of pollution data for significant and nonsignificant sources to EPA's Enforcement and Compliance History Online (ECHO) database to improve public access to information and polluter accountability;

- Require point sources to meet both concentration and mass limits for the TMDL pollutants, and require monthly mass limits as well as annual limits to protect local water quality and improve the accuracy of loadings calculations;

- Renew permits on schedule, and avoid "administrative continuances" of outdated discharge permits;

- Develop plans to address SSO discharges, and require facilities to report the amount and location of such discharges to a public database, as in Maryland;

- Establish user fees based on the amount of pollution discharged to further support state water quality programs.

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Introduction

This report updates EIP's December 2012 analysis of Chesapeake Bay municipal and industrial point sources pollution and progress meeting the Chesapeake Bay Total Maximum Daily Load (TMDL) goals. EIP again looked at EPA and state data related to nitrogen, phosphorus, and sediment discharges from Bay watershed sources and compared information related to state permitting and enforcement, facility-specific violations, and state trends from 2011 to 2012. The 2012 report is available at http://environmentalintegrity.org/news_reports/12_06_2012.php.

A. Significant Point Source Loadings Progress

To evaluate overall progress in loadings reductions from 2011 to 2012, EIP compared 2011 and 2012 nitrogen loadings from significant Bay point sources for which sufficient data was available on ECHO to estimate 2012 loads. These 333 dischargers were responsible for 98% of all significant municipal and industrial point source nitrogen loadings in 2010. The Table below summarizes initial progress reducing nitrogen pollution from these sources.

State	WASTELOAD ALLOCATION	2010 N LOAD	2011 N LOAD	2012 N LOAD	% of 2010 SIGNIFICANT LOAD CONSIDERED
DC	4,689,000	4,887,769	3,922,271	3,307,337	100%
DE	204,710	114,540	120,851	233,565	91%
MD	6,774,444	12,378,486	10,149,544	10,562,620	94%
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VA	15,255,948	22,403,004	16,719,515	15,460,155	100%
WV	360,721	609,702	503,633	449,616	99%
Total	**39,233,562**	**55,852,579**	**47,504,128**	**44,391,210**	**98%**

Overall, these significant sources reduced their nitrogen loads by approximately 7% between 2011 and 2012. These continued pollution reductions from 2011 to 2012 are promising, but overall progress has slowed, and not all of the Bay states have continued the progress made in previous years. While nitrogen discharges from these sources significantly declined in Pennsylvania, the District of Columbia, Virginia, and West Virginia, they increased by about 400,000 pounds in

Maryland, increased by nearly 500,000 pounds in New York, and nearly doubled in Delaware. Pennsylvania's significant loadings reductions are particularly noteworthy, considering the state increased nitrogen loads from these sectors between 2010 and 2011.

B. Loadings Due to Violations

EIP again reviewed EPA's 2012 violation and discharge data from all significant sources in the Bay watershed, as well as insignificant sources with at least one exceedance of a TMDL pollutant limit, to calculate the loadings in excess of permit limits and gauge the impact of violations.[2] These violations continue to contribute noteworthy loadings of TMDL pollutants to the Bay, indicating that improved compliance and enforcement alone could significantly reduce the share of pollution loadings to the Bay from municipal and industrial point sources. Some Bay jurisdictions had increases in nitrogen and phosphorus discharges above permit limits, while others made progress reducing these loadings.

2011-2012 Nitrogen Loadings over Permit Limits				
State	2011 Nitrogen	2012 Nitrogen	2011 Phosphorous	2012 Phosphorous
DC	-	-	-	-
DE	-	22,588	-	-
MD	238,488	311,837	20,769	9,040
NY	12,510	10,277	5,312	1,784
PA	271,837	304,075	7,669	47,461
VA	23,514	-	810	-
WV	34,096	25,090	-	-
MD SSOs	66,378	33,931	9,329	4,769
TOTAL:	**646,823**	**707,798**	**43,889**	**63,054**

When combined, discharges to the Bay due to permit violations added up to nearly 700,000 pounds of nitrogen and nearly 60,000 pounds of phosphorus in 2012 – not including contributions from Virginia or SSOs.[3] These violations, which decreased in loadings in Maryland while increasing in loadings in Pennsylvania, continue to threaten the progress states are making to reduce pollution through targeted upgrades of certain facilities. Appendix A summarizes the Chesapeake Bay watershed dischargers that most significantly exceeded their permit limits for nitrogen and phosphorous in 2012.

[2] *See* Appendix D: Methodology for an explanation of how EIP calculated loadings in excess of permitted limits.
[3] VA did not report nitrogen or phosphorus discharges to EPA for more than 50% of discharging facilities; the facilities that Virginia did report did not exceed their permit limits by more than 1,000 pounds.

Total loadings above permit limits include a few disproportionately large violators. For example, the Chambersburg Borough STP exceeded its permit limit by more than 100,000 pounds of nitrogen in 2012. Ten additional facilities had excess discharges of more than 10,000 pounds of nitrogen.[4] All told, 17 facilities exceeded their nitrogen-based permit limits by more than 1,000 pounds. EIP found similarly significant violations of phosphorous limits. For example, the Chambersburg Borough STP exceeded its phosphorus limit by more than 34,000 pounds, and 7 additional facilities exceeded phosphorous limits by more than 500 pounds.

These violations do not necessarily mean that a facility has exceeded the annual wasteload allocations established to protect the Chesapeake Bay. But in the worst cases, such illegal discharges can undo the progress made by cities and companies that comply with their permits, many of which have upgraded to reduce pollution. Moreover, even illegal discharges that do not cause a facility to exceed its WLA can harm local water quality and contribute to the degradation of the Bay. The Bay TMDL is designed to protect the Bay itself and its tidal tributaries, and strategies that focus solely on meeting WLAs to protect the estuary will not necessarily protect the many rivers and streams that feed the watershed from harmful pollution events throughout the year.

EIP also considered the loadings of nitrogen and phosphorous associated with illegal SSOs, which contribute significant pollution loadings above permitted limits. The Chesapeake Bay nutrient reduction strategy must consider the role of SSOs throughout the region in elevating nitrogen and phosphorous loadings, as the TMDL assumes that the Bay states will eliminate all illegal SSO loadings by 2025. These illegal discharges of untreated wastewater can occur due to mechanical failure, sewage pipe breaks, and stormwater infiltration of sewage systems.

EIP estimated Maryland's SSO loadings from online reports filed by municipalities in Maryland; because EIP could not locate information from other states or cities in the watershed, these calculations underestimate the total impact of SSOs on the Bay. In 2012, Maryland SSOs discharged an estimated 34,000 pounds of nitrogen and nearly 5,000 pounds of phosphorous into the Bay. This represents a decline in SSO loadings by about half, compared with unusually large SSO discharges in 2011.[5]

[4] EIP looked at loadings of total nitrogen, ammonia nitrogen, kjeldahl nitrogen, and nitrites and nitrates, based on the constituents of nitrogen regulated under the permit.

[5] *See* Maryland Department of the Environment (MDE), Maryland Reported Sewer Overflow Database, *available at* http://www.mde.maryland.gov/programs/water/overflow/pages/reportedseweroverflow.aspx.

Maryland Sanitary Sewer Overflows

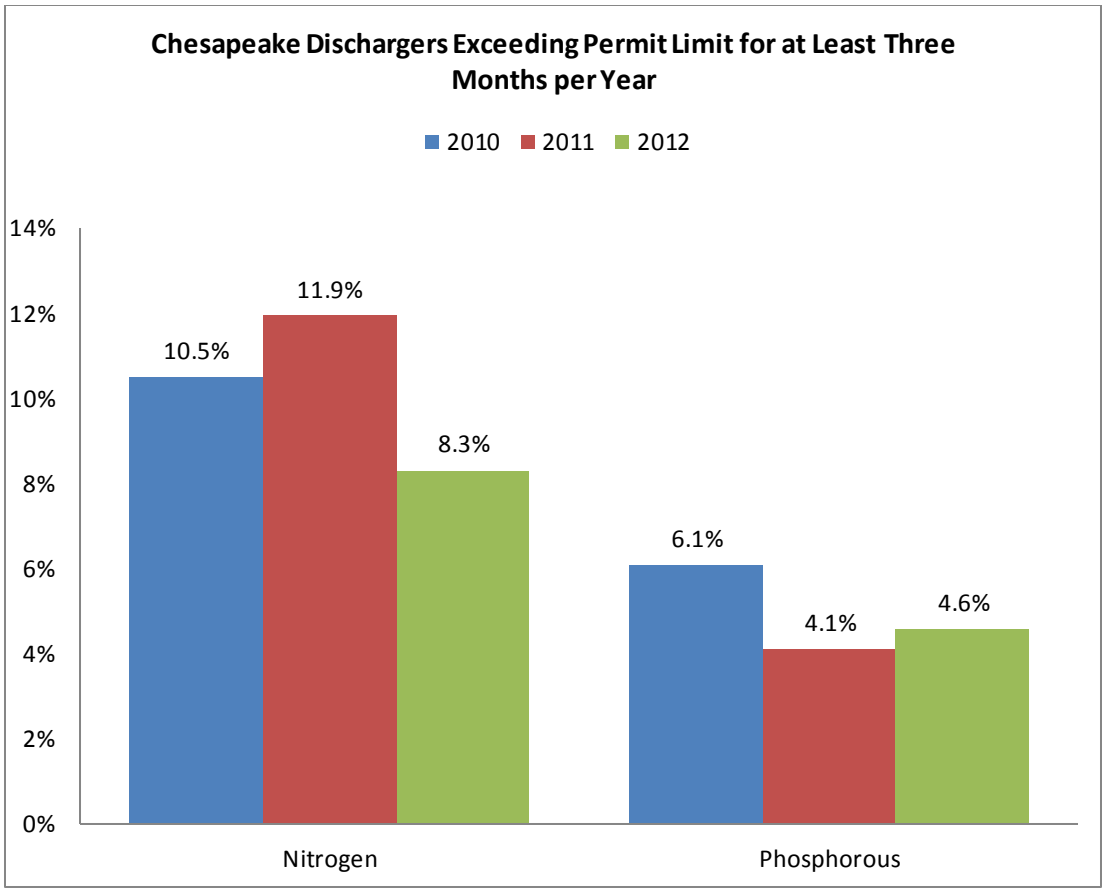
YEAR	Est. Spill Volume (million gallons)	Est. Nitrogen Load (lbs)	Est. Phosphorous Load (lbs)
2006	125.67	43,340	6,091
2007	52.58	18,134	2,549
2008	131.17	45,235	6,357
2009	86.11	29,699	4,174
2010	90.76	31,300	4,399
2011	192.48	66,380	9,329
2012	98.39	33,931	4,769
Average	111.02	38,288	5,381

C. Chronic Violators

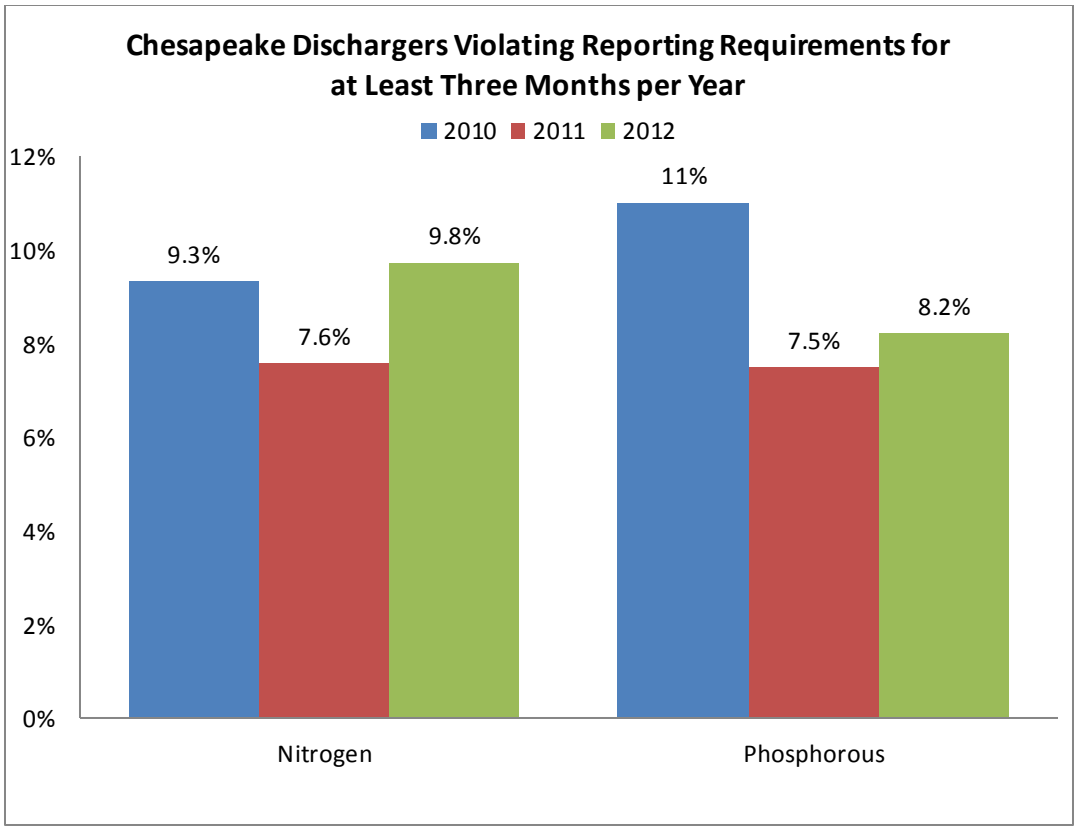
EIP cross-referenced EPA's database of Chesapeake Bay watershed point sources with the ECHO database records of effluent exceedances to identify facilities with repeated violations of permit limits for nitrogen or phosphorus.[6] Some facilities continue to amass dozens of permit violations, indicating that enforcement actions and penalties are still failing to deter repeated illegal discharges. Appendix C shows the 25 most frequent violators for each type of permit limit in 2012.

To more thoroughly assess the degree to which certain facilities are consistently in violation, EIP also determined how many Bay dischargers have been in violation of effluent limits for TMDL pollutants at least one quarter of the year for each of the past 3 years. Numerous facilities continue to regularly violate permit limits meant to restrict discharges of the TMDL pollutants; however, the number of permitted dischargers exceeding their nitrogen permit limits at least three months out of the year decreased from 2011 to 2012 after increasing over the previous two years. This number stayed about the same for chronic phosphorus limit violations.

[6] As with reporting of other data to ECHO, inconsistent or incomplete reporting of effluent exceedances by states may influence the trends in violations reflected in this report.



This noncompliance rate may be understated, as many dischargers also fail to report pollution data as required. In fact, the number of facilities that fail to fully report seems to be rising. For example, about 10% of dischargers failed to report nitrogen data for at least a quarter of 2012 – a slight increase from previous years. Violators and non-reporting dischargers may also overlap because a facility can provide monitoring data showing it has violated a limit at some point in the year, while failing to report any data in other monitoring periods.



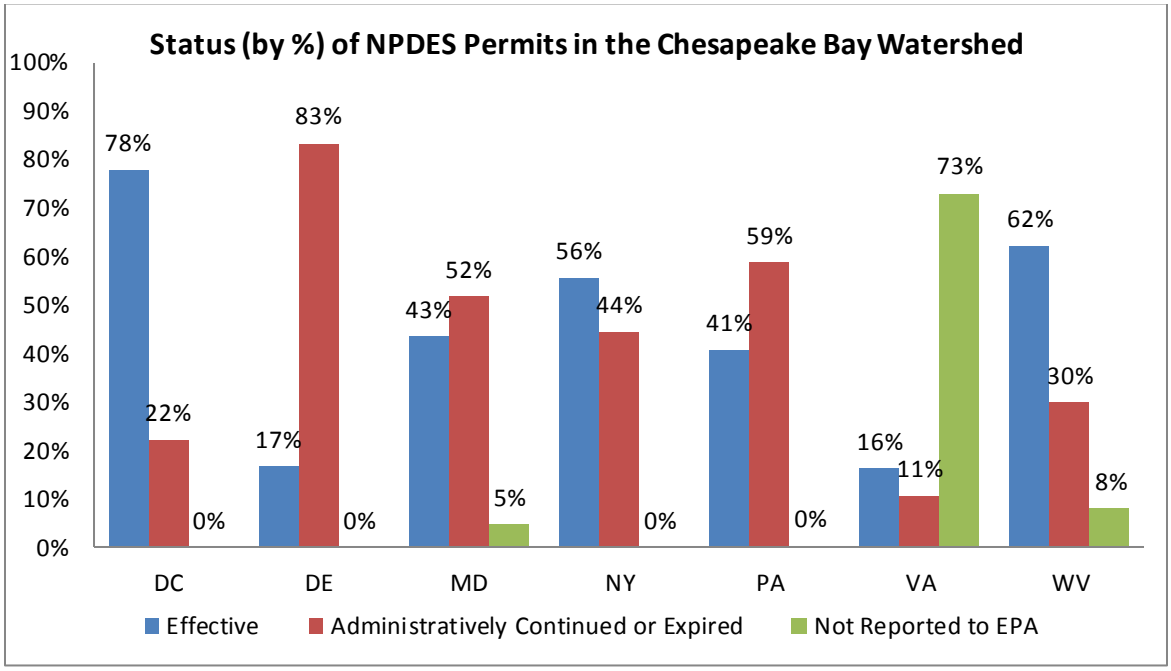
D. Expired and Administratively Continued Permits

Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits cap pollution loads using technology-based or water quality-based limits, and states authorized to run their Clean Water Act permit programs are supposed to renew and update these permits every five years.[7] Regular permit renewals are critical opportunities to address large polluters and reduce total Bay loadings, so the widespread failure to maintain current permits is important to address if the region is to meet the TMDL goals for municipal and industrial point sources. Nonetheless, many states allow discharge permits to expire without timely renewals, or adopt the practice of "administratively continuing" the permit without revisions, reviews, or public notice and comment processes. Such practices can delay or prevent needed improvements to permits as standards for an industry become more protective of water quality, or as water monitoring provides better information about which waters are impaired.

An updated review of the NPDES permits in effect in the Chesapeake Bay watershed in November 2013 show that a troubling number of facilities continue to operate with permits that have been allowed to expire or have been administratively continued after five years. Approximately

[7] 33 U.S.C. § 1342(b)(1)(B).

36 percent of Bay permits are currently expired – nearly 2,030 facilities – indicating the Bay states have not made progress reducing the expired permit backlog over the past year.



The Chart above shows the Bay states' continued poor record with regard to timely review of discharge permits. Every jurisdiction allows a large percentage of its discharge permits to expire, administratively continues permits past the five-year limit without a timely renewal, or abstains from reporting permit information to EPA.[8] Virginia's failure to report most minor source data to EPA limits access to information about whether those permits are current.

This review indicates that all of the Bay jurisdictions continue to lag behind on basic components of administering their Clean Water Act programs: requiring polluters to maintain current discharge permits and providing for public participation. Facilities with expired or administratively extended permits may be subject to upgrades and more stringent permit limits necessary to comply with the Bay TMDL or local TMDLs, and as states delay the permitting process, they also delay critical reductions in Bay pollution loads. This analysis also demonstrates that some Bay states report much more complete data to EPA than others.

E. Inspections

EIP updated its review of EPA's compliance database to compare state-wide inspection rates for major and minor facilities, looking specifically at facilities in the Bay watershed for which ECHO data was available. Though states continue to inspect major sources more frequently than minor

[8] States are only required to submit discharge data for major sources to EPA; those facilities for which ECHO has no record but which appear in the Chesapeake Bay watershed model database are represented in green as "Not Reported to EPA."

sources, nearly half of major sources in the Bay watershed have gone without a single inspection over the past year.

State	Major Sources Uninspected for the Past Year	Total Count of Major Permits	% Majors without Inspection in a Year
DC	3	3	100%
DE	2	3	67%
MD	25	76	33%
NY	23	29	79%
PA	28	127	22%
VA	66	94	70%
WV	11	11	100%
Total	**158**	**343**	**46%**

EIP also looked at minor sources that have gone without inspection for the past five years, and found that the Bay states allow thousands of Bay watershed dischargers to go uninspected for entire permit cycles or longer. A state's decision to designate a source as "minor" does not mean the facility does not discharge large amounts of pollution; the TMDL definition of significant point sources includes numerous so-called minor facilities.

State	Minor Sources Uninspected for the Past 5 Years	Total Count of Minor Permits	% Minors without Inspection for the Past 5 Years
DC	2	6	33%
DE	0	3	0%
MD	522	923	57%
NY	11	70	16%
PA	676	1660	41%
VA	105	542	19%
WV	157	157	100%
Total	**1473**	**3361**	**44%**

F. Penalties

Even where inspections lag, states have the opportunity to take enforcement actions when point sources self-report violations in their Discharge Monitoring Reports. EIP compared state-wide ECHO records of effluent exceedances – permit violations for surpassing a discharge limit on a specific pollutant – with records of monetary penalties assessed.[9] This comparison excluded other permit violations, such as failures to report on time.

EPA's compliance database records penalties over the past five-year period, but tracks effluent violations over the past three years, which may serve to inflate apparent penalty rates.[10] These records also combine state-assessed penalties and EPA-assessed penalties.

STATE	Facilities with Effluent Violations for TMDL Pollutants in Past 3 Years	Facilities with Monetary Penalties in the Past 5 Years
DC	2	0
DE	4	0
MD	182	73
NY	32	8
PA	120	24
VA	26	12
WV	27	3
Total	**393**	**120**

These records show that, even when looking only at actual pollution violations, states and EPA assess penalties following less than one third of violations. Facilities facing a choice between non-compliance and costly upgrades have little incentive to invest in improved technology if they are unlikely to pay penalties for their permit violations.

[9] As noted previously, incomplete or inconsistent reporting of violations and enforcement actions to EPA by states may affect the violation and penalty rates reflected in this report.

[10] Some penalties may also have been assessed for non-effluent violations, further inflating penalty rates for the violations in Table 3.

Recommendations

If the Bay states are to meet the TMDL goals and begin restoring the Chesapeake, all sources – including industrial and municipal dischargers – must do their share and meet established wasteload allocations. Improved inspections, permitting, and enforcement will play critical roles in overseeing progress in these sectors. While this updated review shows some improvement, including overall nitrogen load reductions, it also shows that barriers to Bay progress persist. Each Bay jurisdiction should evaluate those areas in its Clean Water Act program that require the most improvement, as highlighted in this report.

- Target enforcement resources at the most significant facilities violating nutrient limits and reporting requirements;

- Adopt mandatory minimum penalties based on the pounds of illegal pollution discharged to more effectively deter violations and support monitoring and enforcement programs;

- Strengthen permit limits by incorporating compliance schedules to meet TMDL pollutant caps within the next permit cycle;

- Require point sources to meet both concentration and mass limits for the TMDL pollutants, and require monthly mass limits as well as annual limits to protect local water quality and improve the accuracy of loadings calculations;

- Renew permits on schedule, and avoid "administrative continuances" of outdated discharge permits;

- Develop plans to address SSO discharges, and require facilities to report the amount and location of such discharges to a public database, as in Maryland;

- Improve reporting of pollution data for significant and nonsignificant sources to EPA's Enforcement and Compliance History Online (ECHO) database to improve public access to information and polluter accountability;

- Establish user fees based on the amount of pollution discharged to further support state water quality programs.

Appendix A: Bay Point Sources with 2012 Discharges Significantly Above Permitted Levels

FACILITIES WITH 2012 NITROGEN AND NITROGEN-RELATED DISCHARGES MORE THAN 1,000 POUNDS ABOVE PERMIT LIMIT				
NPDES ID	**Facility Name**	**Designation**	**Parameter**	**2012 Estimated Load over Limit (lbs./year)**
PA0026051	Chambersburg Borough STP	Major	Nitrogen, total	102,036
MD0021571	City of Salisbury WWTP	Major	Nitrogen, total	84,662
PA0026361	Lower Lackawanna Valley Sanitary Authority	Major	Nitrogen, total	82,216
MD0021679	Marlay-Taylor WWTP	Major	Nitrogen, total	75,453
MD0021610	Frederick City WWTP	Major	Nitrogen, total	72,356
MD0021822	Ballenger Creek WWTP	Major	Nitrogen, total	60,784
PA0080829	Keystone Protein Co.	Major	Nitrogen, total	51,716
PA0111759	Cargill	Major	Nitrogen, total	37,289
PA0044661	Lewisburg Area Joint Sewer Authority - College Park STP	Major	Nitrogen, total	22,955
DE0000035	Invista	Major	Nitrogen, total	22,588
WV0082759	Opeq/Hdgsvlle-Inwood-Baker Hgts-North End WWTPs	Major	Nitrogen, ammonia total • (as N)	22,111
NY0004308	Kraft Foods Global, Inc.	Major	Nitrogen, total	10,277
MD0020265	Rising Sun WWTP	Major	Nitrogen, ammonia total • (as N)	8,986
MD0021652	Patuxent Water Reclamation Facility	Major	Nitrogen, total	7,130
PA0026263	York City WWTP	Major	Nitrogen, ammonia total • (as N)	5,331
WV0005495	Pilgrim's Pride Corporation	Major	Nitrogen, ammonia total • (as N)	1,497
MD0020613	Perryville WWTP	Major	Nitrogen, ammonia total • (as N)	1,305

*** City of Salisbury WWTP (MD0021571) total nitrogen average monthly limit assumed to be 467 lbs/day in May through October 2012. Total nitrogen load over limit calculated from difference between the sum of the monthly limits and the sum of nitrite plus nitrate total as N and nitrogen, organic total as N from May through October 2012.**

FACILITIES WITH 2012 PHOSPHOROUS DISCHARGES MORE THAN 500 POUNDS ABOVE PERMIT LIMIT				
NPDES ID	**Facility Name**	**Designation**	**Parameter**	**2012 Estimated Load over Limit (lbs./year)**
PA0026051	Chambersburg Borough STP	Major	Phosphorus, total	34,632
PA0026263	York City WWTP	Major	Phosphorus, total • (as P)	7,592
MD0021822	Ballenger Creek WWTP	Major	Phosphorus, total • (as P)	5,333
PA0044661	Lewisburg Area Joint Sewer Authority - College Park STP	Major	Phosphorus, total	4,152
NY0004308	Kraft Foods Global, Inc.	Major	Phosphorus, total • (as P)	1,784
MD0020281	Chesapeake Beach WWTP	Major	Phosphorus, total • (as P)	1,529
MD0021555	Back River WWTP	Major	Phosphorus, total • (as P)	930
MD0021831	Westminister WWTP	Major	Phosphorus, total • (as P)	660

Appendix B: Bay Point Source Dischargers' Nitrogen Loadings 2011-2012

- The table includes all 332 significant dischargers for which complete 2012 DMR data was available, and which were responsible for 98% of all significant municipal and industrial point source nitrogen discharges by mass in 2012.[11] ECHO data is current as of June 2013.
- Dischargers with incomplete or insufficient 2012 DMR data were omitted from aggregate state-by-state comparisons of 2010, 2011, and 2012 loadings. Loads for Virginia dischargers were sourced directly from Virginia Department of Environmental Quality's 2011 Nutrient Load Analysis.

333 Significant Municipal and Industrial Point Sources of Nitrogen Discharges						
STATE	**NPDES**	**FACILITY NAME**	**WASTELOAD ALLOCATION**	**2010 N LOAD**	**2011 N LOAD**	**2012 N LOAD**
DC	DC0021199	D.C. WASA (Blue Plains)	4,689,000	4,887,769	3,922,271	3,307,337
DE	DE0000035	Invista - Seaford Nylon Plant	171,818	90,913	97,966	206,413
DE	DE0020125	Laurel STP	8,528	5,438	2,627	4,196
DE	DE0020265	Seaford WTP	24,364	18,189	20,258	22,956
MD	MD0021563	Aberdeen Advanced WWTP	48,729	19,849	27,179	19,969
MD	MD0021814	Annapolis WRF	158,369	115,015	145,922	156,453
MD	MD0021555	Back River WWTP	1,583,691	3,118,927	1,712,380	3,363,100
MD	MD0021822	Ballenger Creek WWTP	219,280	113,716	123,340	133,695
MD	MD0020231	Boonsboro WWTP				

[11] *See* Appendix D for a detailed explanation of the methodology used to calculate 2012 N loads.

			6,100	23,053	21,398	3,980
MD	MD0024350	Broadneck WRF	24,364	18,785	21,827	14,955
MD	MD0021644	Broadneck WWTP	73,093	46,380	30,799	25,471
MD	MD0021636	Cambridge WWTP	98,676	30,598	31,803	46,949
MD	MD0021628	City of Bowie WWTP	40,201	28,153	23,428	22,157
MD	MD0021571	City of Salisbury WWTP	103,549	408,222	275,216	336,678
MD	MD0063509	Conococheague WWTP	49,947	33,554	31,649	22,158
MD	MD0021661	Cox Creek WWTP	182,734	247,395	225,864	277,834
MD	MD0021598	Cumberland WWTP	182,734	338,200	94,820	70,844
MD	MD0020532	Delmar WWTP	10,355	26,443	10,682	21,279
MD	MD0001775	Erachem Comilog, Inc.	13,809	457,780	317,389	239,342
MD	MD0020877	Fort Detrick WWTP	24,364	23,115	11,243	4,366
MD	MD0021717	Fort Meade WWTP	54,820	10,688	17,656	15,223
MD	MD0021610	Frederick City WWTP	97,458	169,279	163,875	169,550
MD	MD0021512	Freedom District WWTP	42,638	75,198	57,747	44,000
MD	MD0000311	Grace Davison - Curtis Bay	310,721	296,018	226,957	146,614

MD	MD0021776	Hagerstown Water Pollution Control	97,458	174,640	65,837	88,050
MD	MD0022446	Hampstead WWTP	10,964	31,804	33,299	16,852
MD	MD0001201	ISG Sparrows Point, Inc.	131,420	1,036,144	1,254,140	576,785
MD	MD0055174	Little Patuxent WRF	304,556	298,488	269,189	130,517
MD	MD0021679	Marlay-Taylor WWTP	73,093	112,007	120,907	148,546
MD	MD0021865	Mattawoman WWTP	243,645	133,976	65,403	55,522
MD	MD0061794	Mayo Large Communal WRF	9,989	22,446	25,602	23,737
MD	MD0052027	Northeast River Advanced WWTP	24,364	22,393	21,724	12,217
MD	MD0021725	Parkway WWTP	91,367	94,605	88,348	90,682
MD	MD0021601	Patapsco WWTP	889,304	3,534,717	3,323,800	3,169,460
MD	MD0021652	Patuxent WRF	91,367	102,831	95,974	68,583
MD	MD0021539	Piscataway WWTP	365,467	242,246	289,774	159,012
MD	MD0021491	Seneca WWTP	316,738	227,391	204,669	284,312
MD	MD0022764	Snow Hill WWTP	6,091	20,496	16,899	15,486
MD	MD0056545	Sod Run WWTP	243,645	382,018	410,410	336,617
MD	MD0021229	U.S. Army Garrison - A.P.G.	36,547	19,970	11,521	19,795

MD	MD0021687	Upper Potomac River Commission STP	79,109	77,425	73,494	80,370
MD	MD0021741	Western Branch WWTP	372,777	172,632	172,190	94,593
MD	MD0021831	Westminster WWTP	60,911	71,889	35,190	56,867
NY	**Including 27 NPDES listed below**	**NY Significant WWTP Aggregate**	**1,545,956**	**---**	**---**	-
NY	NY0020320	Addison WWTP	NY AGG	13,361	31,707	No Data
NY	NY0004189	AGRO Farma Inc	NY AGG	16,390	14,536	5,010
NY	NY0021431	Bath WWTP	NY AGG	45,365	48,431	52,410
NY	NY0024414	Binghamton-Johnson Joint STP	NY AGG	399,265	408,339	1,064,941
NY	NY0023248	Canisteo STP	NY AGG	10,725	8,726	5,174
NY	NY0035742	Chemung Co Elmiro SD STP	NY AGG	325,234	325,000	285,821
NY	NY0036986	Chemung Co SD#1 STP	NY AGG	185,960	191,665	192,259
NY	NY0023591	Cooperstown STP	NY AGG	17,418	19,281	17,624
NY	NY0025721	Corning WWTP	NY AGG	110,503	123,298	130,596
NY	NY0027669	Endicott WPCP	NY AGG	394,358	379,700	352,110
NY	NY0023906	Erwin WWTP	NY AGG	16,362	16,208	10,727

NY	NY0021407	Greene WWTP	NY AGG	12,115	17,142	18,090
NY	NY0020672	Hamilton WPCP	NY AGG	20,084	31,218	70,129
NY	NY0023647	Hornell WPCP	NY AGG	105,510	105,603	86,335
NY	NY0004308	Kraft Foods Global, Inc.	NY AGG	13,820	6,599	26,217
NY	NY0027561	Leroy R Summerson WWTF	NY AGG	183,122	229,448	51,054
NY	NY0213781	Northgate WWTP	NY AGG	11,892	14,984	16,722
NY	NY0021423	Norwich WWTP	NY AGG	150,566	144,666	112,802
NY	NY0031151	Oneonta WWTP	NY AGG	132,046	134,958	110,185
NY	NY0022730	Owego SD#1	NY AGG	15,771	17,902	18,511
NY	NY0029262	Owego STP	NY AGG	33,628	28,380	73,324
NY	NY0025798	Owego WPCP#2	NY AGG	32,113	36,791	28,017
NY	NY0025712	Painted Post STP	NY AGG	6,529	9,640	6,895
NY	NY0031411	Richfield Springs STP	NY AGG	29,852	10,433	10,181
NY	NY0021466	Sherburne WWTP	NY AGG	12,652	12,379	12,600
NY	NY0029271	Sidney WWTP	NY AGG	31,677	34,462	29,378
NY	NY0031089	Waverly WWTP	NY AGG	40,089	29,289	133,426

PA	PA0027014	Altoona City Authority - Easterly WWTP	146,117	209,995	209,037	228,755
PA	PA0027022	Altoona City Authority - Westerly WWTF	164,381	208,626	240,295	364,734
PA	PA0021806	Annville WTF	13,698	48,924	45,007	45,018
PA	PA0080519	Antrim Township Municipal Authority STP	21,918	15,248	26,480	22,409
PA	PA0027065	Archibald WWTP	109,587	54,250	75,109	69,367
PA	PA0023558	Ashland WWTP	23,744	25,221	19,972	23,454
PA	PA0024228	BC Natural Chicken LLC	18,982	28,844	66,655	68,478
PA	PA0022209	Bedford WWTP	27,397	58,053	62,542	36,753
PA	PA0020486	Bellefonte Borough WWTP	58,812	73,770	57,738	31,775
PA	PA0040835	Bellefonte State Fish Hatchery	78,988	44,662	87,840	89,898
PA	PA0010553	Benner Spring State Fish Hatchery	110,347	58,522	57,069	67,520
PA	PA0023248	Berwick Area Joint Sewer Authority WWTP	92,198	21,777	22,503	22,907
PA	PA0027171	Bloomsburg Municipal Authority	78,855	95,419	78,885	92,030

		WWTP				
PA	PA0111759	Cargill Meat Solutions Corporation	14,612	205,460	333,330	348,926
PA	PA0026077	Carlisle Borough	134,277	198,535	178,824	48,296
PA	PA0007919	Cascades Tissue Group - PA Inc	40,569	42,746	13,754	13,914
PA	PA0026051	Chambersburg Borough STP	124,199	192,397	190,021	227,378
PA	PA0008419	Cherokee Pharmaceutical LLC	44,497	31,424	49,399	67,743
PA	PA0087661	Chestnut Ridge Area Joint Municipal Authority	12,877	27,149	31,586	22,120
PA	PA0028576	Clarks Summit/South Abington Joint Sewer Authority	45,662	123,347	126,548	88,491
PA	PA0026310	Clearfield Municipal Authority WWTP	82,191	163,118	118,897	138,431
PA	PA0027081	Clinton Township WWTP	12,786	22,611	21,701	20,498
PA	PA0026123	Columbia WWTF	36,529	44,204	53,594	57,862
PA	PA0030139	Dallas State Correctional Institute	9,741	18,183	16,062	6,137
PA	PA0023531	Danville STP	66,118	96,598	122,033	46,435
PA	PA0009270	Del Monte Corp				

			30,639	55,302	40,666	39,188
PA	PA0026484	Derry Township Municipal Authority - Clearwater Road WWTF	91,668	29,766	59,174	30,194
PA	PA0020826	Dover Township WWTP	146,117	83,453	133,625	66,199
PA	PA0021245	Duncannon Borough STP	13,516	4,840	10,414	6,867
PA	PA0032883	Duncansville Boro STP	22,228	13,841	11,660	5,730
PA	PA0038415	East Pennsboro Township WWTP	67,579	84,758	94,590	78,674
PA	PA0110582	Eastern Snyder Co Regional Authority WWTP	51,141	38,712	52,672	41,180
PA	PA0023108	Elizabethtown Borough WWTP	82,191	23,594	38,446	21,912
PA	PA0007552	Empire Kosher Poultry Inc	21,928	45,959	16,856	20,513
PA	PA0087181	Ephrata Boro Authority - WWTF #2	54,550	23,995	33,869	26,279
PA	PA0027405	Ephrata Boro Authority - WWTP #1	79,049	115,903	116,493	56,679
PA	PA0081868	Fairview Township	13,333	21,248	24,240	19,979
PA	PA0035157	Farmers Pride Inc	16,438	87,639	113,693	98,436

PA	PA0110361	Freedom Township Water & Sewer Authority	10,959	22,524	20,330	23,846
PA	PA0110540	Furman Foods Inc WWTF	45,450	24,709	4,914	66,982
PA	PA0028673	Gallitzin Borough Sewer & Disposal Authority	7,306	24,489	20,832	17,859
PA	PA0021563	Gettysburg Municipal Authority WWTP	44,748	39,008	40,616	32,375
PA	PA0009024	Global Tungsten & Powders Corp	600,515	328,449	244,085	192,032
PA	PA0026921	Greater Hazleton Joint Sewer Authority WWTP	216,739	333,597	332,135	162,872
PA	PA0029106	Greenfield Township Municipal Authority WTF	14,612	31,477	4,796	4,307
PA	PA0026875	Hanover Borough WWTP	83,441	180,774	187,296	190,521
PA	PA0027197	Harrisburg Advanced WWTF	688,575	1,237,981	1,363,861	1,205,333
PA	PA0023141	Hastings Area Sewer Authority	10,959	32,317	16,542	13,928
PA	PA0024040	Highspire Boro WWTP	36,529	51,750	27,646	9,275
PA	PA0043273	Hollidaysburg STP	109,587	42,586	50,992	30,652

PA	PA0026191	Huntingdon Borough WWTF	73,058	127,927	90,223	41,603
PA	PA0037141	Huntsdale Fish Hatchery	53,512	30,654	53,083	57,521
PA	PA0028665	Jersey Shore Boro WWTP	19,178	64,723	69,807	55,193
PA	PA0080748	Jonestown WWTP	7,306	23,963	26,295	28,602
PA	PA0028681	Kelly Township Municipal Authority	68,492	27,118	25,632	41,128
PA	PA0026743	Lancaster City WWTP	620,248	488,953	610,101	519,248
PA	PA0042269	LASA - Susquehanna Water Pollution Control Central Facility	273,969	322,361	254,918	216,438
PA	PA0027316	Lebanon WWTP	146,117	414,165	445,943	315,302
PA	PA0026441	Lemoyne Borough STP	46,270	117,873	134,215	93,359
PA	PA0044661	Lewisburg Area Joint Sewer Authority - College Park STP	44,200	66,253	75,196	60,524
PA	PA0026280	Lewistown STP	51,470	107,204	114,828	116,821
PA	PA0020320	Lititz WWTP	70,319	43,025	48,977	45,917
PA	PA0021229	Littlestown WWTF	18,265	26,717	36,846	40,407
PA	PA0025933	Lock Haven WWTP	90,192	180,382	188,036	204,459

PA	PA0027189	Lower Allen Township WWTP	114,354	184,813	201,023	196,566
PA	PA0026361	Lower Lackawanna Valley Sanitary Authority WWTP	109,588	173,479	213,471	134,562
PA	PA0209228	Lycoming Co W&S Authority - Montoursville Regional Sewer System WWTF	27,397	22,234	10,400	4,868
PA	PA0020893	Manheim Boro Authority WWTF	21,847	59,699	41,718	13,254
PA	PA0021814	Mansfield Boro WWTP	23,744	25,718	12,559	7,412
PA	PA0020508	McConnellsburg STP	10,959	22,440	23,859	9,940
PA	PA0020885	Mechanicsburg WWTP	38,565	69,256	65,005	57,754
PA	PA0009911	Michael's Foods Egg Products	8,104	31,845	46,673	31,611
PA	PA0020583	Middleburg Boro WWTP	8,219	22,313	18,739	21,241
PA	PA0020664	Middletown WWTP	40,182	69,591	51,339	17,580
PA	PA0022535	Millersburg Area Authority WTP	18,265	38,845	39,728	32,182
PA	PA0020273	Milton Regional Sewer Authority WWTP	80,040	25,816	111,399	21,999
PA	PA0020699	Montgomery Borough WWTP	15,525	79,328	98,778	91,020

PA	PA0060801	Montrose Municipal Authority	14,977	22,663	21,169	21,032
PA	PA0037966	Moshannon Valley Regional	31,634	64,174	77,846	70,718
PA	PA0024406	Mount Carmel WWTF	41,095	64,418	16,191	8,156
PA	PA0023183	Mount Holly Springs WWTF	10,959	22,442	19,971	23,751
PA	PA0021067	Mount Joy Borough Authority WWTP	27,945	48,707	28,865	19,582
PA	PA0045985	Mountaintop Area Joint Sanitary Authority	75,981	49,641	80,675	63,832
PA	PA0024325	Muncy Boro Municipal Authority WWTF	25,570	21,299	25,851	16,728
PA	PA0026654	New Cumberland WTF	22,831	57,340	27,741	33,263
PA	PA0021890	New Holland Borough WWTP	24,475	34,418	29,632	12,359
PA	PA0020923	New Oxford Municipal Authority WWTP	35,057	47,290	32,139	16,602
PA	PA0083011	Newberry Township Municipal Authority	23,744	33,993	27,962	17,747
PA	PA0024384	North Middleton Authority	22,020	23,544	25,637	19,088
PA	PA0023744	Northeastern York County Sewer Authority	46,535	40,738	10,358	8,614

PA	PA0080438	Northern Lancaster Co Authority	8,219	30,439	29,243	23,851
PA	PA0020567	Northumberland Sewer Authority WTP	20,548	31,429	14,778	40,272
PA	PA0024431	Old Mill Road WWTP	31,345	38,648	43,662	12,873
PA	PA0024287	Palmyra Boro STP	25,936	56,923	44,686	55,043
PA	PA0110469	Patton WWTF	9,863	20,204	10,605	8,713
PA	PA0037150	Penn Township WWTP	81,811	78,794	88,547	50,222
PA	PA0008869	PH Glatfelter Co	117,588	74,390	64,710	75,800
PA	PA0027553	Pine Creek Municipal Authority STP	23,744	53,082	96,569	80,710
PA	PA0010561	Pleasant Gap State Fish Hatchery	55,049	29,930	37,221	41,290
PA	PA0046272	Porter Tower WWTP	7,854	27,197	30,699	30,165
PA	PA0008443	PPL Montour LLC	72,749	71,003	73,256	35,003
PA	PA0008885	Procter & Gamble Paper Products Co	100,360	126,829	128,993	129,059
PA	PA0028738	Ralpho Township Municipal Authority WWTF	13,132	36,588	38,753	6,884
PA	PA0080314	Roth Lane STP	101,997	28,174	64,505	40,757

PA	PA0062201	Schuykill County Municipal Authority	10,959	35,898	38,349	42,341
PA	PA0026492	Scranton Sewer Authority WWTP	365,292	716,578	771,656	897,913
PA	PA0027324	Shamokin Coal Township Joint Sewer Authority	127,852	73,664	167,219	143,490
PA	PA0070386	Shenandoah Municipal Sewer Authority WWTP	36,529	20,248	29,703	33,801
PA	PA0060135	Shickshinny Sewer Authority	8,219	17,126	12,048	13,708
PA	PA0030643	Shippensburg Boro STP	60,273	42,943	59,354	63,487
PA	PA0044113	South Middleton Township Municipal Authority STP	29,322	50,269	33,060	45,599
PA	PA0026808	Springettsbury Township WWTF	273,969	315,382	244,727	150,059
PA	PA0026557	Sunbury City Municipal Authority WWTP	76,711	57,340	60,245	38,360
PA	PA0026735	Swatara Township WPCF	115,367	221,295	160,751	65,657
PA	PA0027090	Throop WWTP	127,852	308,866	340,032	199,517
PA	PA0034576	Towanda Municipal Authority WWTP	21,187	21,326	27,159	18,756

PA	PA0112127	Tylersville Fish Culture Station	63,339	37,837	21,097	41,267
PA	PA0026727	Tyrone WWTP	166,231	79,853	79,234	77,096
PA	PA0035092	Tyson Foods Inc	27,397	51,521	39,679	113,177
PA	PA0026239	University Area Joint Authority STP	164,381	182,017	164,381	133,914
PA	PA0043681	Valley Joint Sewer Authority	41,095	48,623	69,041	74,998
PA	PA0020621	Waynesboro STP	29,223	71,332	73,256	78,866
PA	PA0021687	Wellsboro WWTP	46,029	50,962	64,822	30,598
PA	PA0027057	Williamsport Sanitary Authority Central Plant	153,423	399,734	418,199	378,639
PA	PA0027049	Williamsport Sanitary Authority West Plant	77,547	198,338	184,052	75,796
PA	PA0007498	Wise Foods Inc	19,957	28,911	29,384	17,039
PA	PA0026107	Wyoming Valley Sanitary Authority WWTP	584,467	345,706	377,546	306,795
PA	PA0026263	York City WWTP	474,880	528,156	528,156	266,741
VA	**Including 38 NPDES listed below**	**VA James River Significant Source Aggregate**	**8,968,864**	**---**	**---**	-

VA	VA0025160	Alexandria ASA Advanced Wastewater	500,690	435,167	446,687	405,530
VA	VA0027979	Alleghany County - Low Moor WWTP	VA AGG	6,521	4,551	3,730
VA	VA0060968	Aquia Wastewater Treatment Plant	73,093	37,327	35,135	27,593
VA	VA0025143	Arlington County WPCP	365,467	345,300	107,288	52,985
VA	VA0024899	Ashland WWTP	36,547	32,918	15,298	16,553
VA	VA0003697	Babcock & Wilcox Nuclear Operation	VA AGG	237,234	201,632	219,546
VA	VA0022802	Basham Simms Wastewater Facility	18,273	6,364	4,230	3,389
VA	VA0077763	Bear Island Paper Company LLC	47,328	45,681	56,098	77,568
VA	VA0020532	Berryville STP	8,528	27,124	32,076	20,451
VA	VA0091383	Broad Run WRF	134,005	34,820	45,502	47,545
VA	VA0020991	Buena Vista STP	VA AGG	48,008	50,357	38,430
VA	VA0021288	Cape Charles Town - WWTP	6,091	8,814	9,172	2,734
VA	VA0073504	Caroline County Regional WWTP	9,137	24,897	16,426	18,869
VA	VA0088480	Chickahominy WWTP	VA AGG	1,028	-	-
VA	VA0026409	Colonial Beach Town of STP	18,273	12,213	2,794	2,041

VA	VA0025542	Covington City - Sewage Treatment	VA AGG	58,263	60,298	63,689
VA	VA0020303	Crewe WWTP	VA AGG	2,572	1,991	1,986
VA	VA0061590	Culpeper Wastewater Treatment	73,093	43,204	17,037	12,225
VA	VA0026514	Dahlgren District Wastewater Treatment	9,137	4,113	5,568	3,333
VA	VA0024724	Dale Service Corporation - Plant #1	42,029	26,714	19,677	16,928
VA	VA0024678	Dale Service Corporation - Plant #8	42,029	27,835	23,002	19,394
VA	VA0020699	DOC Powhatan Correctional Center	VA AGG	3,284	2,509	2,066
VA	VA0004146	Dominion Virginia Power - Chesower Station	VA AGG	16,993	39,170	34,310
VA	VA0004669	E I du Pont de Nemours & Company	VA AGG	154,800	158,564	168,672
VA	VA0092134	Fairview Beach WWTP	1,827	444	564	523
VA	VA0024996	Falling Creek WWTP	VA AGG	484,599	176,307	112,615
VA	VA0083135	Farmville WWTP	VA AGG	33,630	12,074	13,797
VA	VA0025291	Fishersville Regional STP	48,729	18,129	8,339	9,444

VA	VA0068110	FMC Wastewater Treatment Facility	65,784	39,701	32,522	36,038
VA	VA0025127	Fredericksburg Wastewater Treatment	54,820	96,339	72,465	62,756
VA	VA0062812	Front Royal STP	48,729	107,025	107,964	118,502
VA	VA0077402	Georges Chicken LLC	31,065	22,902	24,561	25,048
VA	VA0021105	Gordonsville Sewage Treatment	17,177	1,940	940	1,849
VA	VA0003026	GP Big Island LLC	VA AGG	116,830	71,466	69,948
VA	VA0006408	Greif Riverville LLC - Fibre Plant	VA AGG	73,833	51,133	55,039
VA	VA0029521	Hanover County Doswell WWTP	18,273	16,854	16,771	77,568
VA	VA0089915	Hanover County Totopotomoy WWTF	182,734	37,920	50,896	49,840
VA	VA0063690	Henrico County WWTP	VA AGG	909,106	627,822	557,152
VA	VA0005291	Honeywell International Incorporated	VA AGG	846,023	1,089,072	906,524
VA	VA0066630	Hopewell WWTP	VA AGG	2,029,597	1,766,407	1,809,030
VA	VA0089338	Hopyard Farm Wastewater Treatment	6,091	1,294	733	480

VA	VA0081230	HRSD - Army Base STP	VA AGG	854,722	888,596	988,438
VA	VA0081256	HRSD - Boat Harbor STP	VA AGG	1,058,823	1,057,115	1,114,946
VA	VA0081264	HRSD - Chesapeake-Elizabeth STP	VA AGG	1,471,584	1,200,843	1,537,191
VA	VA0081272	HRSD - James River STP	VA AGG	1,069,797	699,686	259,645
VA	VA0081299	HRSD - Nansemond STP	VA AGG	1,163,360	323,184	357,319
VA	VA0081281	HRSD - Virginia Initiative STP	VA AGG	855,059	739,114	831,318
VA	VA0075434	HRSD - West Point STP	10,964	20,282	20,385	18,435
VA	VA0081302	HRSD - Williamsburg STP	VA AGG	309,885	233,296	193,445
VA	VA0081311	HRSD - York River Sewage Treatment	274,100	677,677	188,913	216,234
VA	VA0028819	HRSD Mathews Courthouse Sewage	1,827	2,422	1,046	-
VA	VA0026263	HRSD Town of Urbanna Wastewater	1,218	3,086	3,563	4,347
VA	VA0002160	INVISTA - Waynesboro	78,941	8,233	4,630	4,650
VA	VA0003263	JH Miles & Company Inc	VA AGG	125,531	91,377	44,467
VA	VA0020788	Kilmarnock Wastewater Treatment	6,091	2,342	2,141	1,726

VA	VA0024945	Lake Monticello STP	VA AGG	64,049	67,566	55,183
VA	VA0004677	Lees Carpets	VA AGG	9,128	5,967	6,872
VA	VA0092282	Leesburg Town - WPCP	121,822	103,299	62,113	67,800
VA	VA0088161	Lexington-Rockbridge Regional	VA AGG	51,361	17,069	10,045
VA	VA0076392	Little Falls Run Wastewater Treatment	97,458	33,134	33,346	36,901
VA	VA0090671	Lower Jackson Regional WWTP (formerly Clifton Forge WWTP)	VA AGG	31,608	23,381	8,532
VA	VA0062642	Luray STP	19,492	18,120	3,732	6,273
VA	VA0024970	Lynchburg City Sewage Treatment	VA AGG	276,182	240,065	219,342
VA	VA0031763	Marshall Waste Water Treatment	7,797	9,141	7,688	2,839
VA	VA0024732	Massanutten Public Service STP	18,273	20,345	24,070	21,815
VA	VA0025658	Massaponax Wastewater Treatment	97,458	59,610	62,589	70,693
VA	VA0003646	MeadWestvaco Packaging Resources	VA AGG	321,200	314,500	358,500
VA	VA0002178	Merck Sharp & Dohme Corporation	43,835	32,505	20,857	19,900

VA	VA0064793	Middle River Regional STP	82,839	58,105	35,385	29,673
VA	VA0073245	MillerCoors LLC	54,820	100,935	15,264	13,086
VA	VA0072729	Montross Westmoreland WWTP	1,584	998	1,066	955
VA	VA0025518	Moores Creek Regional STP	VA AGG	495,265	227,800	65,617
VA	VA0026441	Mt Jackson STP	8,528	4,274	3,052	6,985
VA	VA0022853	New Market STP	6,091	28,678	-	-
VA	VA0025364	Noman M Cole Jr Pollution Control Plant	612,158	654,248	505,616	492,397
VA	VA0060640	North River WWTF	253,391	96,688	65,800	49,052
VA	VA0086789	Oakland Park Sewage Treatment	1,706	3,780	3,755	2,081
VA	VA0003867	Omega Protein - Reedville	21,213	4,750	3,657	3,882
VA	VA0065552	Opequon Water Reclamation Facility	121,851	72,974	51,767	44,886
VA	VA0021385	Orange Town STP	36,547	31,816	10,928	3,871
VA	VA0088331	Parham Landing WWTP	36,547	2,737	5,207	1,138
VA	VA0075191	Parkins Mills WWTF	60,911	20,235	15,184	12,352

VA	VA0026557	Philip Morris USA Incorporated	VA AGG	34,318	37,694	41,754
VA	VA0060194	Proctors Creek WWTP	VA AGG	440,097	392,386	216,849
VA	VA0070106	Purkins Corner WWTP	1,096	6,786	6,473	2,673
VA	VA0025101	PWCSA - H L Mooney Wastewater	219,280	156,061	87,768	105,365
VA	VA0090948	Rapidan WWTP	7,309	1,980	2,056	2,869
VA	VA0060712	Reedville Sanitary District	2,436	2,117	1,565	1,326
VA	VA0076805	Remington Wastewater Treatment	30,456	11,643	10,103	9,066
VA	VA0063177	Richmond WWTP	VA AGG	2,378,027	1,299,130	764,055
VA	VA0027537	Riverside Shore Memorial Hospital	1,218	2,437	2,055	2,130
VA	VA0026212	Round Hill Town Wastewater Treatment	9,137	1,962	1,799	1,755
VA	VA0031321	Rutledge Creek WWTP	VA AGG	4,433	2,579	691
VA	VA0003115	Smurfit Stone Container Corporation	259,177	229,089	227,122	162,825
VA	VA0025437	South Central Wastewater Authority	VA AGG	394,699	404,699	481,933

VA	VA0028380	Stoney Creek Sanitary District	7,309	4,097	5,336	3,718
VA	VA0020311	Strasburg STP	11,939	42,191	38,854	41,390
VA	VA0066877	Stuarts Draft WWTP	48,729	18,581	9,085	8,998
VA	VA0067423	Tangier Town	1,218	2,469	2,142	3,212
VA	VA0002780	The Sustainability Park LLC	VA AGG	1,817	854	556
VA	VA0090263	Town of Broadway Regional WWTF	23,390	31,222	7,142	4,665
VA	VA0021253	Town of Onancock WWTP	9,137	5,198	4,771	3,364
VA	VA0071471	Town of Tappahannock	9,746	10,359	3,690	2,536
VA	VA0004049	Tyson Foods Inc - Temperanceville	22,842	265,450	41,155	8,870
VA	VA0004031	Tyson Foods Incorporated - Glen Allen	VA AGG	17,981	13,650	14,501
VA	VA0024988	UOSA - Centreville	1,315,682	1,154,997	1,177,634	1,144,234
VA	VA0032034	US Army - Fort AP Hill Operations	6,457	6,471	2,349	1,023
VA	VA0028363	US Marine Corps - MCB Quantico	20,101	47,133	10,912	3,324
VA	VA0021067	US Naval Surface Warfare Center	6,578	5,092	3,510	2,166

VA	VA0023469	VA Dept of Welfare - Haynesville Correctional Unit	2,802	6,043	3,382	2,040
VA	VA0020460	Vint Hill Farms Station WWTP	11,573	917	887	755
VA	VA0002313	Virginia Poultry Growers Coopeerative	27,410	22,425	20,122	21,766
VA	VA0021172	Warrenton Town Sewage Treatment	30,456	21,401	18,582	15,966
VA	VA0026891	Warsaw Aerated Lagoons	3,655	6,503	1,921	1,102
VA	VA0025151	Waynesboro STP	48,729	84,622	10,756	6,506
VA	VA0003018	Western Refining Yorktown Inc	167,128	237,589	83,871	5,950
VA	VA0022349	Weyers Cave STP	6,091	11,232	17,721	15,158
VA	VA0083411	Wilderness Wastewater Treatment	15,228	22,414	15,198	3,780
VA	VA0026468	Woodstock STP	24,364	7,823	4,151	2,733
WV	WV0082759	Berkeley County PSSD	89,844	129,421	106,305	83,140
WV	WV0022349	City of Charlestown	26,649	31,562	35,178	19,769
WV	WV0024392	City of Keyser	1,192	57,206	38,382	4,126
WV	WV0023167	City of Martinsburg	45,683	123,074	91,752	94,937

WV	WV0020150	City of Moorefield	9,137	40,236	31,591	37,481
WV	WV0021792	City of Petersburg	20,558	15,292	12,159	9,814
WV	WV0020699	City of Romney	7,614	12,836	13,246	13,760
WV	WV0116149	Conservation Fund	15,380	11,566	11,950	8,697
WV	WV0024775	Corporation of Shepherdstown	6,091	14,896	12,668	7,624
WV	WV0041521	Fort Ashby PSD	7,614	7,380	7,506	-
WV	WV0005495	Pilgrim's Pride Corporation - Fresh Facility	13,096	78,248	45,037	49,358
WV	WV0047236	Pilgrim's Pride Corporation - Prepared Foods Facility	7,614	11,949	10,214	13,831
WV	WV0005649	US Dept of the Interior -- Leetown Science Center	18,273	15,912	9,419	13,809
WV	WV0005525	Virginia Electric & Power Company	-	40,804	37,588	20,984
WV	WV0027707	Warm Springs PSD	26,496	3,282	5,233	2,300
WV	WV0112500	WV Division of Natural Resources - Spring Run Hatchery	65,480	16,038	35,405	69,987

Appendix C: Bay Point Sources Most Frequently Exceeding Permit Limits in 2012

PERMIT ID	FACILITY NAME	STATE	TOTAL NITROGEN PERMIT LIMIT EXCEEDANCES
MD0020265	RISING SUN WWTP	MD	116
MD0063282	HEARNE-MEADOWS,LLC.	MD	56
MD0021571	CITY OF SALISBURY WWTP	MD	41
MD0021091	NATIONAL SEASHORE ASSATEAQUE	MD	39
MD0057487	CEDAR MOBILE HOME PARK WWTP	MD	37
PA0030139	PA DEPT OF CORRECTIONS	PA	36
PA0024228	BC NATURAL CHICKEN LLC	PA	31
MD0023469	BOHEMIA MANOR HIGH SCHOOL WWTP	MD	31
WV0103161	BERKELEY COUNTY PSSD	WV	27
MD0053201	RELAX INN WWTP	MD	23
WV0101524	MOUNTAIN TOP PSD	WV	22
PA0026808	SPRINGETTSBURY TWP WWTF	PA	22
MD0020532	DELMAR WWTP	MD	22
MD0057525	SWAN POINT WWTP	MD	22

MD0052027	NORTHEAST RIVER ADVANCED WWTP	MD	19
MDDRG2294	HART MILLER	MD	18
PA0021881	WESTFIELD BORO WWTP	PA	17
MD0020605	GALENA WWTP	MD	17
MD0023108	CECO UTILITIES WWTP	MD	17
WV0105708	PANHANDLE HOMES OF BERKELEY CO	WV	16
WV0024970	FRANKLIN TOWN OF	WV	15
PA0029432	CLARKS SUMMIT STATE HOSPITAL	PA	15
PA0022209	BEDFORD WWTP	PA	15
MD0023043	SWAN HARBOUR DELL WWTP	MD	15
MD0053325	CLEAR SPRING WWTP	MD	15

PERMIT ID	FACILITY NAME	STATE	TOTAL PHOSPHOROUS PERMIT LIMIT EXCEEDANCES
MD0020532	DELMAR WWTP	MD	60
MD0021091	NATIONAL SEASHORE ASSATEAQUE	MD	35
PA0030643	SHIPPENSBURG BORO STP	PA	22
MD0020842	USDA EAST-SIDE WWTP	MD	21
PA0024040	HIGHSPIRE BORO WWTP	PA	16
NY0004308	KRAFT FOODS GLOBAL, INC	NY	16
PA0024228	BC NATURAL CHICKEN LLC	PA	15
PA0030139	PA DEPT OF CORRECTIONS	PA	14
MD0066613	EASTERN CORRECTIONAL INSTITUTI	MD	12
MD0069949	CINNAMON WOODS WWTP	MD	12
PA0086860	SPRINGFIELD TWP HOLLOW CREEK WWTP	PA	11
MD0063282	HEARNE-MEADOWS,LLC.	MD	11
MD0024589	SOUTH CARROLL HIGH SCHOOL WWTP	MD	11
MD0020281	CHESAPEAKE BEACH WWTP	MD	10
MD0057525	SWAN POINT WWTP	MD	10
MD0021555	BACK RIVER WWTP	MD	10
MD0023469	BOHEMIA MANOR HIGH SCHOOL WWTP	MD	9

PA0020036	BLOSSBURG STP	PA	9
MD0020672	TANEYTOWN WWTP	MD	8
MD0020524	LA PLATA WWTP	MD	7
PA0040835	BELLEFONTE STATE FISH HATCHERY	PA	6
MD0022586	NEW WINDSOR WWTP	MD	6
WV0082759	BERKELEY COUNTY PSSD	WV	5
MD0069582	TRACEY'S ELEMENTARY SCHOOL	MD	5
PA0020893	MANHEIM BORO AUTH WWTF	PA	5

PERMIT ID	FACILITY NAME	STATE	TOTAL TSS PERMIT LIMIT EXCEEDANCES
MD0057487	CEDAR MOBILE HOME PARK WWTP	MD	55
MD0020265	RISING SUN WWTP	MD	53
MD0020095	NAS PATUXENT RIVER - WEBSTER O	MD	39
MD0069892	WSSC - BI-COUNTY WATER TUNNEL	MD	38
MDG498002	HONEYGO RUN RECLAM.CTR.INC.	MD	34
MD0020532	DELMAR WWTP	MD	29
MD0024627	HIGHLAND VIEW ACADEMY WWTP	MD	24
MD0052256	FAIRMOUNT WWTP	MD	17
WV0005517	OX PAPERBOARD LLC	WV	16
WV0082759	BERKELEY COUNTY PSSD	WV	15
PA0022209	BEDFORD WWTP	PA	15
MD0051918	CHOPTICON HIGH SCHOOL WWTP	MD	15
PA0080519	ANTRIM TWP WWTP	PA	14
PA0020826	DOVER TOWNSHIP WWTP	PA	14
PA0021563	GETTYSBURG MUN AUTH WWTP	PA	13
PA0026361	LOWER LACKAWANNA VALLEY SAN AUTH WWTP	PA	12
PA0025933	LOCK HAVEN WWTP	PA	11

MD0069221	SHA - CHURCHVILLE SHOP	MD	11
MD0023272	SUMMER HILL MOBILE HO.PK. WWTP	MD	11
NY0107409	NATIONAL PIPE & PLASTICS, INC	NY	10
PA0007552	EMPIRE KOSHER POULTRY INC	PA	10
MDG499873	UPPER MARLBORO PLANT	MD	10
WV0027405	PAW PAW TOWN OF	WV	9
PA0021717	MARIETTA-DONEGAL JOINT AUTHORITY WWTP	PA	9
PA0027197	HARRISBURG ADVANCED WWTF	PA	9

Appendix D: Methodology

EIP assembled discharge and permit information on polluters in the Chesapeake Bay Watershed using a variety of publicly available databases. To begin, EIP requested discharge information from the EPA Chesapeake Bay Program. EPA provided EIP with the full list of NPDES-permitted facilities in the Chesapeake Bay watershed.

EIP then downloaded the full datasets from EPA's Enforcement and Compliance History Online (ECHO) database, which contains information submitted by states to EPA on NPDES permitted facilities nationwide, and extracted data for those permits in EPA's Chesapeake Bay watershed database. EIP also obtained discharge data for Virginia facilities directly from Virginia DEQ. Using these datasets, EIP analyzed various aspects of state permitting programs and individual dischargers within the watershed.

Permit Status

To determine permit status EIP identified the expiration date of permits with dates listed in EPA's databases and determined whether or not these facilities are past due for new permits. We last updated this list on November 7, 2013, and this report reflects permit status on that date. EIP relied on actual permit expiration dates rather than the description of permit status in the ECHO databases, and lists all facilities whose permit expiration dates have passed as "Administratively Continued or Expired." Some of these permits have been extended by states without a proper renewal process, while others have lapsed without any state action.

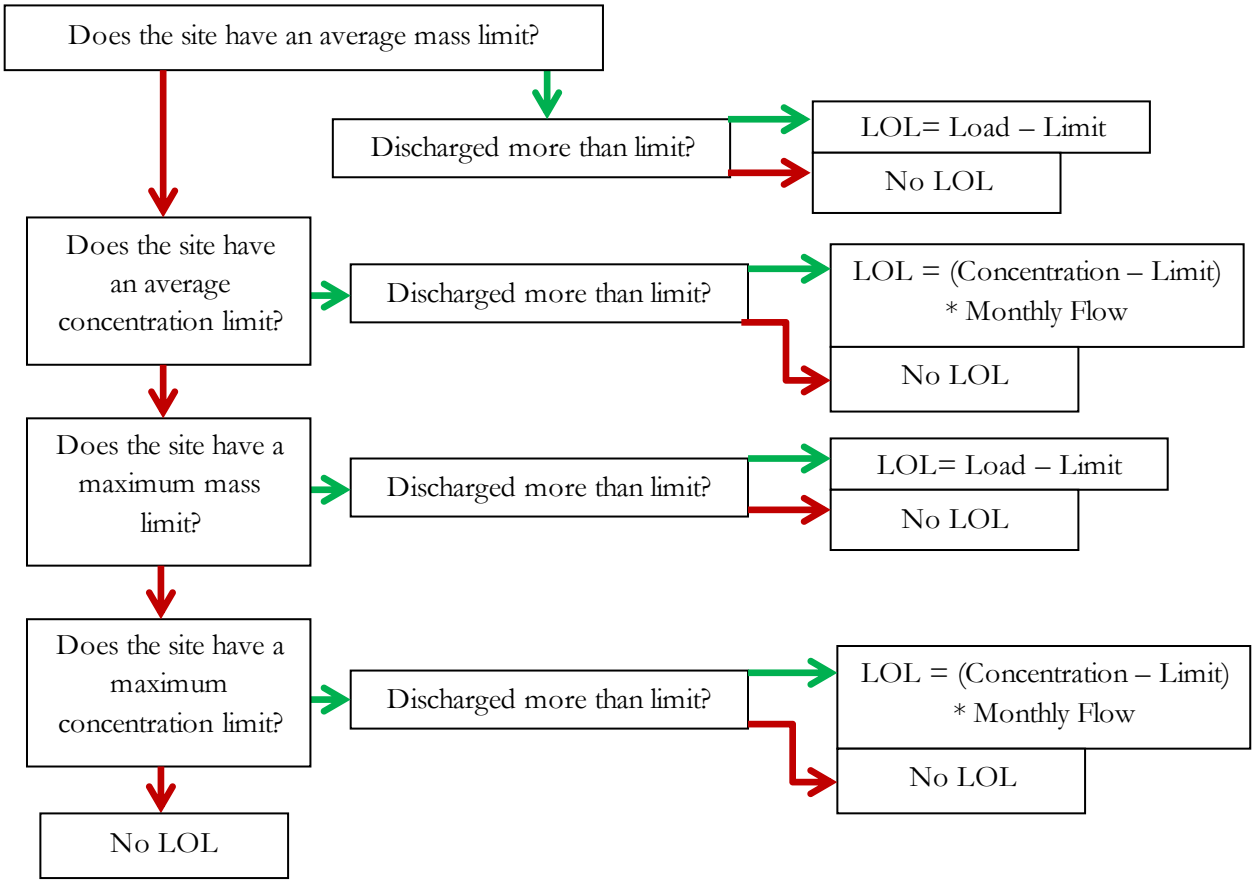
However, many of the permits in EPA's watershed database are not listed in ECHO because the Bay states have not submitted basic information on some minor sources to EPA. Moreover, some facilities that have basic information listed in ECHO do not have their permit expiration dates listed. These data limitations obscured some information about expired permits in the Bay watershed.

Loadings over Permit Limits

To estimate loadings in excess of permit limits for 2012, EIP analyzed ECHO data for significant sources, as well as available ECHO data for all nonsignificant facilities in the Bay watershed with at least one effluent violation for a TMDL pollutant. We identified effluent exceedances by comparing the value of discharges to permit limits, using a hierarchy of types of reported permit data and relying on loadings data where possible (see flow chart below). We first looked at whether facilities had violated an average loading limit in a given monitoring period. If the facility had an average load limit, but was within the limit, then it would be designated as not having a violation. However, if the facility did not have a loading limit or did not have information on the discharged mass, we looked to average concentration. Again, where a limit existed and was exceeded, we were able to calculate a load over limit. Where no data existed or no limit existed, we looked to maximum loading values, followed by maximum concentrations, using the same

methodology described above. We then aggregated annual loads over limits to determine a final annual value.

Loadings over Limits Calculation Methodology
(Green=yes; Red=no; LOL=load over limit)



2012 Loadings Estimates

To estimate 2012 loadings for significant dischargers (see Appendix B), EIP considered all available discharge monitoring report (DMR) effluent data from EPA's ECHO database. Where available, EIP used total annual loadings data. If a total annual load was not reported in DMR data, EIP aggregated monthly or quarterly mass loadings reported to calculate an annual load. If no mass loadings data was available, EIP calculated loadings by aggregating the monthly or quarterly products of concentration and flow data. EIP did not calculate 2012 loadings for dischargers with insufficient DMR data in ECHO.

Limitations of Data

EPA's ECHO and Chesapeake Bay databases have several limitations. EIP's calculations for significant facility loadings of Bay pollutants are based on values contained in EPA's ECHO database; however, some of these facilities are classified as "minor," and ECHO lacks monitoring data for most minor source discharges. After obtaining ECHO's discharge data for 2012 in June 2013, EIP aggregated the data by facility and by year to calculate estimated 2012 loadings from individual point sources. This report may not reflect changes to the ECHO database made since June. Moreover, ECHO is limited by what states choose to report to EPA.

Where possible, EIP omitted data that seemed to be the result of a reporting error, rather than an actual permit violation. Furthermore, EPA occasionally flags and revises numbers reported in ECHO that it believes may be inaccurate. As of this report's release, EPA had not flagged any relevant data points in this report for likely data quality problems, although it could flag and revise data included in EIP's analysis in the future.