US Environmental Protection Agency
Office of Enforcement and Compliance Assurance (OECA)

Chesapeake Bay
Compliance and Enforcement Strategy

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I. Introduction

The Chesapeake Bay (Bay) is North America's largest and most biologically diverse estuary, home to more than 3,700 species of plants and animals. It is approximately 200 miles long, contains more than 11,000 miles of tidal shoreline, and is fed by more than 100,000 creeks, streams, and rivers. The watershed spreads over 64,000 square miles and includes parts of six states—Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia—and the entire District of Columbia. As of 2007, approximately 17 million people lived in the Bay watershed. The Bay provides significant economic and recreational benefits, estimated to exceed $33 billion annually, to the watershed's population.[1] The Bay's waters are threatened by pollution from a variety of sources. To address non-compliance with environmental laws and associated environmental impacts to this watershed, the U.S. Environmental Protection Agency (EPA) has developed this Chesapeake Bay Compliance and Enforcement Strategy (Strategy), which guides the use of EPA's compliance and enforcement tools to target pollution sources impairing the Bay watershed and regulated by federal environmental statutes.

a. Current Health of the Bay

The current status of the Bay's health remains unacceptable. While total pollution levels have declined since 1985, most of the Bay's waters are degraded and are incapable of fully supporting fishing, crabbing, or recreational activities. Algal blooms fed by nutrient pollution block sunlight from reaching underwater Bay grasses and lead to low oxygen levels in the water. Suspended sediment from urban development, agricultural lands, and some natural sources is carried into the Bay and clouds its waters. Portions of the Bay and its tidal tributaries are contaminated with chemical pollutants that can be found in fish tissue. The Bay's critical habitats and food web are at risk. Nutrient and sediment runoff have harmed Bay grasses and bottom habitat, while disproportionate algae growth has pushed the Bay food web out of balance. The Bay's habitats and lower food web (benthic and plankton communities) are functioning at 45 percent of desired levels. Many of the Bay's fish and shellfish populations are below historical levels. The blue crab population continues to be low, and the stock is not rebuilding; oyster restoration efforts are hampered by disease, and the stock remains at low levels; American shad continues at depressed levels; the menhaden population in the Bay is low despite healthy populations along the Atlantic coast; and while striped bass are plentiful, but there is concern about disease and malnutrition. The Bay's fish and shellfish populations are at 48 percent of desired levels. Fish kills occur in a number of rivers leading to the Bay.[2]

b. Significant Pollutants and Sources

The greatest pollution threats to the Bay are from nutrients (nitrogen and phosphorus) and sediment. These pollutants come from many sources, including agricultural operations,

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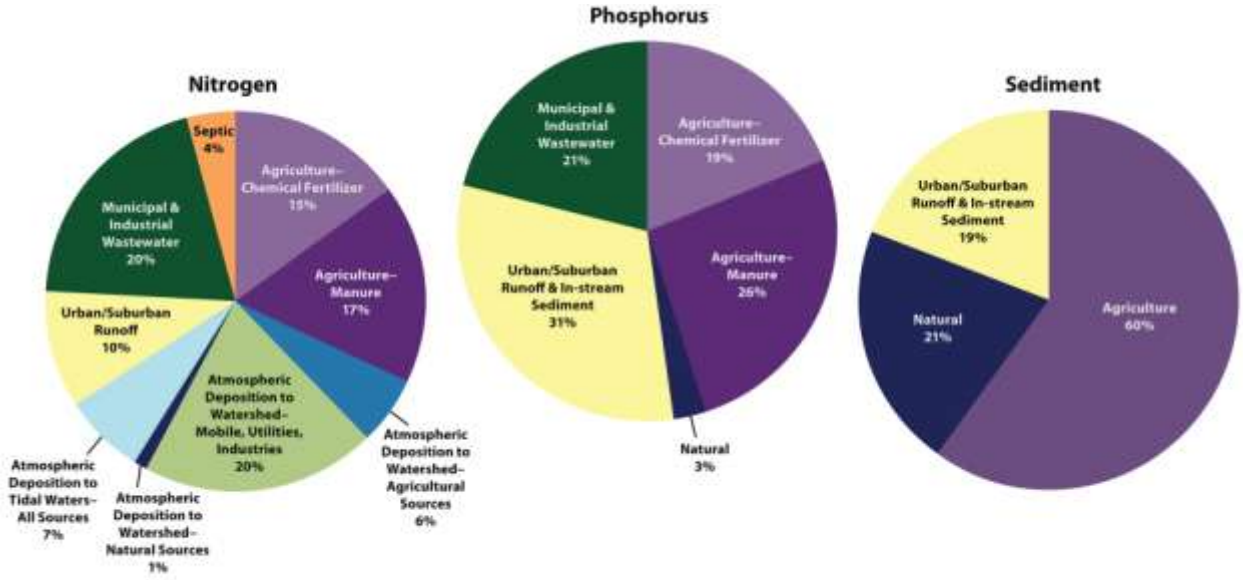
[1] EPA, Office of Inspector Gen., Rep. No. 08-P-0199, *EPA Needs to Better Report Chesapeake Bay Challenges: A Summary Report 3* (July 14, 2008), at http://www.epa.gov/oig/reports/2008/20080714-08-P-0199.pdf.

[2] Chesapeake Bay Program, *Bay Barometer: A Health and Restoration Assessment of the Chesapeake Bay and Watershed in 2008*, CBP/TRS-293-09, EPA-903-R-09-001, (March 2009), at http://www.chesapeakebay.net/content/publications/cbp_34915.pdf.

wastewater treatment facilities, urban storm water runoff, and air deposition from power plants and cars. Agricultural sources contribute the largest nutrient and sediment pollution in the watershed, accounting for approximately 38 percent of nitrogen loading, 45 percent of phosphorus loading, and 60 percent of the sediment loading. About one-half of the nitrogen from agriculture is from animal manure. Municipal and industrial wastewater treatment facilities account for approximately 20 percent of the nutrient loading to the Bay. Urban and suburban storm water runoff accounts for approximately 10 percent of the nitrogen loading, 31 percent of phosphorous loading, and 19 percent of sediment loading. Population growth and development and the rapid increase in the amount of impervious surfaces have caused storm water pollution to be a growing concern.

Air pollution contributes approximately 34 percent of the total nitrogen loading to the Bay.[3] Modeling estimates based on projected emissions for 2020 indicate that the relative contributions of different source sectors of airborne nitrogen oxide (NO_x) emissions to oxidized nitrogen deposition to the Bay watershed will be 26 percent from on-road mobile sources; 21 percent from non-road/marine/construction mobile sources; 17 percent from industrial sources; 15 percent from power plants; 12 percent from residential and commercial sources; and 9 percent from other sources.[4] Figure 1 shows the relative responsibility for pollutant loadings to the Bay.



Note: Does not include loads from tidal shoreline erosion or the ocean. Urban/suburban runoff loads due to atmospheric deposition are included under atmospheric deposition loads. Wastewater loads are based on measured discharges; other loads are based on an average hydrology year using the Chesapeake Bay Program Airshed Model and Watershed Model Phase 4.3.

Figure 1. Relative responsibility for pollution loads to the Bay.

[3] Chesapeake Bay Program, *Questions and Answers from the Senate Environment and Public Works Committee Hearing on the Chesapeake Bay on April 20, 2009* (June 3, 2009).

[4] Robin Dennis, *Report on Relative Responsibility Assessment of Sectors and States: Oxidized-Nitrogen Deposition in 2020* (final numbers), Chesapeake Bay Modeling Subcommittee Meeting, Annapolis, MD. (April 8, 2008).

Other pollutants of concern in the Bay include hazardous wastes, like polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and metals in river sediment. These contaminants can leach into the groundwater or discharge directly into the Bay from different sources in the watershed and airshed, such as industrial facilities, hazardous waste sites, landfills, urban storm water runoff, and mobile and stationary air sources.

II. Compliance and Enforcement Role

In the Bay watershed, only a portion of the nutrient and sediment pollution is regulated under the Clean Water Act (CWA) or the Clean Air Act (CAA). According to estimates by EPA's Chesapeake Bay Program Office, *only approximately 49 percent of total nitrogen, 35 percent of total phosphorus, and 4 percent of total sediment* is subject to federal regulation. The best modeling indicates that nitrogen pollution to the Chesapeake Bay must be reduced by 30 percent, and phosphorus pollution must be reduced by 8 percent to meet water quality standards. Achieving that level of reduction will require significant and sustained reductions by all source categories, including agriculture. Yet, even full compliance with existing regulations will not result in the necessary pollution reductions to restore the health of the Bay.

Agricultural sources and urban storm water runoff account for about half of the nitrogen and three-quarters of the phosphorus pollution to the Bay. Air deposition of nitrogen from stationary and mobile sources accounts for about one-third of the nitrogen pollution. EPA regulates pollution discharges from some of these sources, including concentrated animal feeding operations (CAFOs) and municipal separate storm sewer systems (MS4s), through the CWA National Pollutant Discharge Elimination System (NPDES) permitting program and regulates other sources through the CAA. Many sources, however, are not subject to federal environmental regulations, including row crop agricultural operations and suburban storm water runoff outside specific municipal storm water sewersheds.

EPA will use all available enforcement mechanisms to address significant violations, and to ensure permanent, consistent compliance with the federal environmental laws. EPA will also exercise its enforcement authority and use compliance programs where the states have either failed to act or impede action. EPA will identify where permit program improvements are needed to further ensure effective compliance and environmental protection. For example, MS4s are not typical *end-of-pipe* permits with clearly defined numeric effluent limits. Instead, permit conditions often emphasize actions that should be taken to achieve certain outcomes and are frequently written with imprecise provisions. Without expanded regulatory coverage and stronger permit requirements, compliance and enforcement cannot remedy the Bay's pollution problems.

The magnitude of resources and effort needed to improve Bay water quality is significant and requires a new generation of federal and state regulatory actions. These include: (1) finalizing total maximum daily loads (TMDLs) throughout the Bay watershed; (2) expanding the definition of CAFO to encompass smaller animal feeding operations (AFOs); (3) defining more stringent permit conditions related to the land application of animal manure; (4) expanding NPDES storm water regulations to apply to high-growth, urban/suburban areas; (5) creating more stringent permit conditions including standards for discharges of storm water from

new/redevelopment projects and retrofit criteria for large facilities with impervious surfaces such as shopping malls, roads, and parking lots; and (6) ensuring adequate, enforceable NPDES permits for MS4s.

Many of these program and regulatory improvements may require additional time to develop and implement before pollutant reductions needed for a healthy Chesapeake Bay are realized. In the interim, immediate action can be undertaken. For example, EPA can:

- Monitor compliance with major milestones for installing controls at wastewater treatment plants and take appropriate enforcement;
- Audit, inspect, and provide compliance assistance to (or take enforcement against) MS4s to improve best management practices and storm water management plans;
- Enforce storm water requirements at large construction sites to reduce sediment;
- Designate AFOs as CAFOs, making them subject to permitting requirements;
- Seek to ensure that all CAFOs that discharge obtain and comply with NPDES permits;
- With other EPA, state, and federal partners, engage in education and outreach to the CAFO/AFO community about statutory and regulatory requirements;
- Take judicial or administrative actions against livestock integrators for discharges from CAFOs;
- Enforce new source review, NSPS, and state implementation plan (SIP) requirements at stationary sources reduce NO_x emissions;
- Pursue enforcement-led cleanup activities at hazardous-waste sites identified as contributing to specific impairments to water quality in the Bay;
- Achieve pollutant reductions through strategic use of endangerment authorities; and
- Enhance effectiveness in overseeing state enforcement programs and initiate supportive federal enforcement actions, as appropriate.

Without program and regulatory improvements, EPA's use of compliance activities and enforcement actions can assure only modest nutrient and sediment pollution reductions to the Bay. However, compliance and enforcement efforts aimed at key regulated sectors and pollutants affecting the Bay will deter activities contributing to the Bay's impairment. Compliance and enforcement efforts will continue into the future after EPA develops new environmental requirements that expand coverage of existing permitting programs and establish new, enhanced standards of performance for preventing pollutants from entering the Bay's watershed. At that time, enforcement will have an even greater impact.

While EPA will continue to play an important enforcement role in the Bay states, the states are the critical *cops on the beat*, conducting a large percentage of the compliance monitoring (*.e.g.*, compliance inspections), and enforcement. As such, EPA will coordinate compliance and enforcement efforts with states (and commonwealth) partners around the Bay to ensure robust watershed and airshed-wide compliance and enforcement programs that establish clear

expectations for the public and the regulated community regarding compliance. Through our coordinated efforts, EPA and state compliance and enforcement programs will strengthen actions to ensure compliance. Our complementary enforcement and compliance efforts will identify opportunities to promote sound management practices to reduce pollution in the Bay.

To enhance transparency, EPA has developed a Chesapeake Bay compliance and enforcement Web site where this Strategy and other relevant information related to compliance and enforcement is posted. The Web site is at www.epa.gov/compliance/civil/initiatives/chesapeakebay.html.

III. Strategy

a. Overview

This is a multiyear and multistate strategy combining our water, air and waste enforcement authorities to achieve maximum protection. The Strategy is designed to augment and enhance existing work to identify and address violations of federal environmental laws resulting in nutrient, sediment and other pollution in the Bay. This is a focused and aggressive plan to address pollution sources that are violating federal environmental laws, both in the Bay's watershed and the airshed. Under the Strategy, EPA will identify and address industrial, municipal, and agricultural sources releasing significant amounts of nitrogen, phosphorus, sediment, and other pollutants to the Bay in excess of amounts allowed by applicable environmental laws. Specifically, EPA will:

- *Identify nutrient and sediment impaired sub-watersheds*. The identification of the sub-watersheds is guided by specific threats to the Bay's health, including:
    - The extent of impairments from pollutants of concern;
    - The degree of excess pollutant loads;
    - The number and types of regulated sources located in the watershed segment (or depositing pollutants to that watershed for some air sources);
    - The water quality rating (good, threatened, or impaired);
    - The number of primary contact recreation beaches;
    - The number of shellfish beds/beaches;
    - Fish consumption advisories;
    - The magnitude of wetland loss;
    - The prevalence of minority populations, populations disproportionately below the poverty line, or sensitive populations such as subsistence fishermen;
    - Urban waters; and
    - Contaminated site cleanup opportunities.

- *Identify key regulated sectors that, when in non-compliance with applicable environmental regulations, contribute significant amounts of nutrients, sediment and other pollutants to impaired sub- watersheds or that have otherwise been determined to have a detrimental impact on Bay water quality*. At this juncture, the key regulated sectors are: concentrated animal feeding operations (CAFO); municipal and industrial wastewater facilities; storm water National Pollution Discharge Elimination System (NPDES) point sources including Municipal Separate Storm Sewer System (MS4s) and storm water discharges from construction sites and other regulated industrial facilities; and air deposition sources of nitrogen regulated under the Clean Air Act, including power plants.

- *Analyze the compliance records for facilities in the key regulated sectors* including: the pattern and seriousness of noncompliance; the occurrence of un-permitted discharges; ownership status/relationships and location (across states); and the volume and nature of the facility's discharges.

- *Investigate and inspect facilities in the key regulated sectors*, pursue appropriate enforcement actions to ensure compliance, and estimate pollutant-loading reductions for nitrogen, phosphorous and sediment related to those completed actions. Investigations and inspections of the highest priority include:

    - CAFO operations located in the Delmarva peninsula, south-central Pennsylvania and the Shenandoah Valley;

    - Significant wastewater treatment plants as designated by the Bay states based on design flow or nitrogen and phosphorus loading, which are in noncompliance with nutrient-related requirements;

    - Geographic areas with high nitrogen and phosphorus loadings and counties with high rates of growth and development for storm water NPDES point sources; and

    - Large sources of nitrogen oxide and ammonia emissions located within the Bay airshed.

- *Identify appropriate opportunities for compliance and enforcement activities related to other sources of pollution* affecting the Bay including the Clean Water Act wetland protection program, federal facilities, and Superfund sites, including remedial action and removal sites, and Resource Conservation Recovery Act (RCRA) corrective action facilities.

- *Explore opportunities to use imminent and substantial endangerment authorities* under the Clean Water Act, Safe Drinking Water Act, Resource Conservation Recovery Act, Superfund, and the Clean Air Act to address significant pollution problems affecting the Bay.

- *Continuous and comprehensive review of ongoing water and air protection work impacting the Bay*, much of which addresses some of the most significant discharges of pollutants to the Bay, to ensure a constant focus on sources that have not yet been addressed.

- *Leverage EPA and states' limited compliance and enforcement resources* through close coordination with the states on targeting strategies to pursue the most serious contributors to Bay impairment. Specific projections of enforcement and compliance activities will be developed, monitored, and readjusted as the work goes forward.

b. Sector Strategies

i. Municipal and Industrial Wastewater

Overview

Wastewater treatment facilities discharge approximately 20 percent of total nitrogen and 21 percent of total phosphorus to the Bay. Over 3,000 wastewater facilities discharge to the Bay watershed. Using design flow and nutrient loading as the criteria, the Bay states designated 483 of these wastewater facilities as "significant" as determined by their water quality affects on the Bay. More than 90% of the nitrogen and phosphorous added to the Bay from wastewater treatment facilities comes from these 483 significant facilities.

Due largely to treatment plant upgrades and pollution prevention measures, nitrogen and phosphorus loads discharged by significant wastewater treatment facilities have decreased by 40 percent and 65 percent, respectively, since 1985. Many of the significant municipal and industrial wastewater treatment plants in the Bay watershed will require additional treatment upgrades or process changes and either are already subject to, or may be placed on, enforceable schedules to meet more stringent annual nutrient limits for total nitrogen and total phosphorus. EPA and Bay states will monitor compliance with major milestones for this work and with the new annual nutrient limits. EPA and the Bay states will also ensure that facilities with permit violations receive appropriate enforcement.

Goal

EPA is focusing on significant wastewater facilities with permit schedules for upgrading nutrient treatment, with the goal of ensuring those facilities remain on schedule and addressing emerging non-compliance. To achieve these goals, EPA is working with states to implement the NPDES program, using the full breadth of EPA and state compliance programs and enforcement responses. EPA will (1) continue its oversight of authorized state NPDES enforcement programs; (2) work closely with the Bay states to ensure timely and appropriate enforcement action is initiated in response to identified violations of compliance schedules and permit limits; and (3) provide technical assistance to the states where needed.

ii. Storm water

Municipal Separate Storm Sewer Systems (MS4)

Overview

Urban and suburban storm water discharges account for approximately 10 percent of nitrogen, 31 percent of phosphorus, and 19 percent of sediment discharged to the Bay. However, most of the nutrients and sediment discharged to the Bay in urban/suburban storm water runoff are discharged through storm water outfalls that are not in designated MS4 areas regulated by the NPDES program. *Only approximately 2 percent of the nitrogen, 6 percent of the phosphorus, and 4 percent of sediment delivered to the Bay through urban/suburban storm water discharge outfalls are regulated by EPA and the Bay states under the NPDES MS4 program*.

The NPDES permitting program requires MS4s to develop and implement storm water management programs to minimize the discharge of pollutants to the maximum extent practicable. Components of an adequate storm water management plan include programs to oversee construction activities, eliminate illegal discharges to the storm sewer system, educate the public about pollution prevention, and manage storm water discharges from areas of new development and redevelopment. Large and medium MS4 programs determined by population size must also develop and implement a program for overseeing industrial and commercial facilities that have a significant effect on water quality.

EPA relies primarily on audits and inspections to identify non-compliance with MS4 permits. Common deficiencies documented include inadequate construction oversight programs and poor assessment of storm water management practices to assure protection of water quality standards. Furthermore, permit quality remains a concern for MS4 enforcement efforts. Results from audits and inspections will continue to inform needed improvements to these permits and EPA will work with Bay states to improve MS4 permit quality.

Goal

EPA and the Bay states will review and evaluate MS4 storm water programs, strengthen permits as needed, and address MS4s that are in significant non-compliance with their permits. In the Bay watershed, there are approximately 450 MS4s most of which are located in Maryland, Virginia, and Pennsylvania. The location of the MS4s coincides with areas with high nutrient loadings and counties experiencing high rates of growth and development. To achieve this goal, EPA will focus compliance monitoring and enforcement efforts on all MS4s in the Bay watershed with initial focus on larger MS4s and on clusters of smaller MS4s located within the same watersheds.

Storm water Industrial (including Construction)

Overview

Storm water runoff from several industrial sectors, including construction sites equal to or greater than one acre are regulated by the NPDES program. At these sites, industrial processes and material handling and storage are often exposed to precipitation. As storm water

runoff or snowmelt comes into contact with these processes, pollutants can be transported to nearby storm drains or directly to surface waters. Pollutants can include sediment, oil and grease, and chemical and/or biological oxygen demand. Concrete and asphalt operations, such as ready-mix concrete facilities, and mineral extraction have been identified as industrial storm water potential sectors of concern in the Bay.

The construction sector is one of the 10 industrial sectors regulated under the NPDES program for industrial storm water discharges. Clearing, grubbing, grading, and other construction activities disturb and expose the soil surfaces, allowing significant amounts of sediment transport through storm water runoff into storm drains and other discharge points into waterbodies. In addition, the loss of vegetation, soil compaction, and increase in the amount of impervious surface result in increased storm water flow amounts and velocity. Such increases, contribute to streambed and bank scour and erosion, channel widening, and stream bank undercutting, which, in turn, increase the amount of sediment discharged to the Bay.

The Chesapeake Bay Program Office has identified the 20 fastest growing counties in the Bay watershed. Previous inspection targeting by EPA also found that much of the recent residential construction in the greater Chesapeake Bay watershed has occurred in and around the population centers of York, Pennsylvania; Baltimore, Maryland; Washington, D.C.; Wilmington, Delaware; and Richmond, Virginia. The priority areas for targeting construction site and industrial facility inspections will generally be within these high growth and development areas with one notable exception – New York. Because none of the 20 fastest growing counties identified by the Chesapeake Bay Program Office are located in New York, the focus within this state will be construction activities located near sediment impaired waters.

Goal

For construction sites and other priority industrial sectors, EPA will address, through the appropriate enforcement mechanism, construction sites and industrial facilities that are in significant non-compliance. To achieve this goal, EPA will focus in areas experiencing high rates of growth and development and those near sediment impaired water bodies. In addition, EPA will gather information to determine if currently unregulated priority urban/suburban separate storm sewer systems should be covered by CWA requirements.

iii. Concentrated Animal Feeding Operations

Overview

Agriculture is the single largest source of nutrients to the Chesapeake Bay. Agricultural operations deliver nitrogen and phosphorus to the Bay accounting for 38 percent of nitrogen and 45 percent of phosphorus.[5] Seventeen percent of the nitrogen and 26 percent of phosphorus from agriculture is from animal manure, and an additional 6 percent of nitrogen delivered to the Bay comes from livestock and fertilized soil emissions. *About one-third of animal manure is regulated (contributing 6 percent of nitrogen and 8 percent of phosphorus delivered to the Bay). The remaining nitrogen and phosphorus from agriculture is from non-animal agriculture (e.g., rowcrops) and smaller animal feeding operations or emissions which are not subject to the*

[5] This estimate assumes that these sources are in full compliance with their current NPDES permit requirements.

regulatory restrictions imposed on CAFOs. Thus, EPA can only address a portion of nutrients from animal agriculture pursuant to existing regulatory authority.

Three areas represent the greatest contributions of manure-based agricultural nutrient loads to the Bay: (1) *Delmarva Peninsula*: Delaware, and the Eastern Shores of Maryland and Virginia; poultry—broiler chickens—is the dominant industry sector; (2) *South-central Pennsylvania*: Susquehanna River watershed/Lancaster and York counties; dairy is the dominant industry sector; to a lesser extent, swine and poultry (broiler and egg-laying chickens) also operate in this priority area; and (3) *Shenandoah Valley*: Virginia and West Virginia; poultry—broiler chickens and turkeys—is the dominant industry sector; small- and medium-dairies and to a lesser extent, swine and beef cattle facilities also operate in this priority area. The watersheds in those areas suffer from significant nutrient imbalances and nutrient-related, local water quality impairments. Densely populated animal agriculture operations in these areas cause the highest agricultural nutrient loads to the Bay by comparison to other areas. Inconsistent implementation of sound nutrient management practices has resulted in manure over-application and nutrient loading.

Goal

The goal is to reduce nutrient loads to the Bay by addressing non-compliance and by focusing compliance and enforcement activities on facilities in three key areas—the Delmarva Peninsula, South-central Pennsylvania, and the Shenandoah Valley. EPA will initially focus its CAFO compliance and enforcement activities on facilities in these three geographic areas. However, EPA will also maintain its CAFO compliance and enforcement presence throughout the Bay watershed. After addressing facilities in the initial three areas, EPA will build on its existing presence and expand its CAFO compliance and enforcement activities to facilities in other Bay watershed areas with CAFO-related nutrient impairments.

To achieve this goal, EPA will prescribe actions calculated to increase CAFOs' regulatory compliance and reduce their nutrient loads to the Bay. EPA will achieve deterrence in the watershed by targeting enforcement actions and remedies at facilities located in watersheds impaired for nutrients that are critical to the restoration of the Bay. Specifically, EPA will work with states to target implementation of the CAFO program to minimize CAFO nutrient effects on the Bay, by investigating and inspecting facilities that pose the most risk to the Bay watershed and taking enforcement actions to compel compliance. EPA will maximize the extent to which current state CAFO programs are achieving their intended water quality benefits by working with states to expand the permitted facility universe and issue sufficiently stringent permits. Permits should, at a minimum, require that nutrient management plans be based on existing soil saturation levels. EPA will also work with states to build sustainable programs for compliance monitoring and enforcement (*e.g.*, undertake universe-identification and information-gathering activities, conduct joint and oversight inspections with state partners to ensure appropriate implementation of federal standards). Finally, EPA will seek to address CAFO air emissions and develop appropriate remedies to reduce emissions and their adverse water quality effect on the Bay.

iv. Air Deposition

Overview

Nitrogen emissions from sources within the Chesapeake Bay airshed contribute approximately 75 percent of the nitrogen deposition to the Bay watershed. The remaining 25 percent of the nitrogen deposition is from long-range transport of emissions from sources outside the airshed, including emissions from portions of southeastern Canada. Of the inorganic nitrogen deposited to the Chesapeake Bay watershed from air emission sources, approximately 67 percent is from air emissions of NO_x. The remaining 33 percent is from emissions of ammonia (NH_3). The contributions from any single facility in the long-range emissions transport category are unlikely to be significant. Sources of NO_x include electric generating units, other industrial stationary sources, on- and off-road mobile sources (cars, trucks, ships, tractors), lightning, and soil. Sources of ammonia include AFOs, fertilized fields, mobile sources, and industrial stationary sources.

Goal

The goal is to reduce nitrogen air deposition by addressing non-compliance with existing air pollution control requirements. Coal-fired power plants, acid, glass, and cement manufacturing are already national enforcement priorities for the Agency because of the substantial emissions of NO_x and other pollutants from those industries. EPA is pursuing a coordinated, integrated compliance and enforcement strategy to address CAA New Source Review compliance issues at the nation's coal-fired power plants. Many of these cases have already resulted in settlements that will reduce nitrogen deposition to the Bay, such as the settlement with American Electric Power, which when fully phased in, will reduce NO_x emissions from the company's power plants in the Chesapeake airshed by more than 150,000 tons per year. EPA also intends to seek additional NO_x reductions through enforcement of New Source Performance Standards (NSPS) and SIP provisions governing NO_x emissions. EPA will continue to vigorously pursue these priorities but with a new emphasis on sources that contribute to nitrogen pollution in the Bay.

To achieve this goal EPA will target enforcement actions at sources in the Chesapeake Bay airshed, which includes Pennsylvania, West Virginia, Virginia, Maryland, Delaware, New York, North Carolina, South Carolina, Tennessee, Kentucky, Indiana, Michigan, Ohio, New Jersey, and the District of Columbia. EPA will focus on achieving reductions in NO_x to reduce nitrogen loading to the Bay. Specifically, EPA will seek reductions from stationary sources of NO_x emissions by enforcing New Source Review, NSPS, and SIP requirements pertaining to NO_x emissions and obtaining either judgments or enforceable settlement agreements to install pollution control technology and incorporate best management practices. Enforcement actions designed to reduce nitrogen deposition to the Chesapeake Bay could also result in substantial reductions in sulfur dioxide, mercury, and other pollutants if the Agency and its state partners are successful in obtaining binding commitments from utilities and other sources to install pollution-control technologies. Such additional pollution reductions, in turn, could yield significant public health and welfare benefits, including reduced respiratory problems and fewer fish consumption advisories.

v. Toxics Cleanup

Overview

In addition to nutrients and sediments other serious contaminants are negatively affecting water quality in the Bay, such as PCBs; PAHs; and metals—such as mercury, endocrine disruptors, and pesticides. The U.S. Geological Survey estimates that 72 percent of the Bay segments are impaired by contaminants. Such contaminants can leach into the groundwater or directly into the Bay from sources in the watershed, such as industrial facilities, hazardous waste sites, landfills, urban storm water runoff, and mobile and stationary air sources.

Goal

EPA will look broadly at the sources of toxic contamination to the Bay and work with the states and other federal agencies to reduce the effect of hazardous substances on the Bay. In particular, EPA will address on toxics in three geographic areas in the watershed and closely tied to the Bay: (1) the Elizabeth River; (2) the Anacostia River; and (3) Baltimore Harbor/Patapsco River. Those areas have been identified as the waters most affected by toxic contaminants and contain current and/or historical RCRA facilities, federal facilities, and Superfund sites. To achieve this goal, EPA will use Superfund and RCRA authorities and partner with other federal departments/agencies and states. We will seek to access and leverage resources, authorities and compliance and enforcement strategies to address contaminants in these three areas. Over time, EPA will continue to look for opportunities to use its Superfund, RCRA corrective action and Toxic Substances Control Act authorities to address sources of hazardous substances within the Bay watershed.

In addition, actions taken pursuant to other parts of this Strategy are likely to also have an impact on toxics in the Bay. For example, air enforcement actions designed to reduce nitrogen deposition to the Bay could also result in reductions in mercury; improvements in wastewater treatment and MS4 permits, facilities, and practices could also result in reduced toxics; and better management of chicken litter from CAFOs could reduce the amount of arsenic entering the Bay. Finally, ongoing efforts to reduce toxic contaminants entering the Bay and its tributary waters, for example, for new TMDLs for local streams and larger-scale TMDLs for listed chemical impairments (*e.g.*, PCBs in the Potomac Basin) will also have a positive effect on toxic levels in the Bay. EPA will continue to look for opportunities to address nutrients, sediments, and contaminants together.