An aerial photograph of a river delta, likely the Chesapeake Bay, showing a complex network of waterways branching out from a larger body of water. The water is a deep blue, and the surrounding land is green. The sky above is a bright blue with wispy white clouds. The year '2002' is overlaid on the left side of the image in a large, green, 3D-style font with a yellow outline.

2002

MARYLAND
ATTORNEY GENERAL'S OFFICE

CHESAPEAKE BAY WATERSHED
ENVIRONMENTAL AUDIT

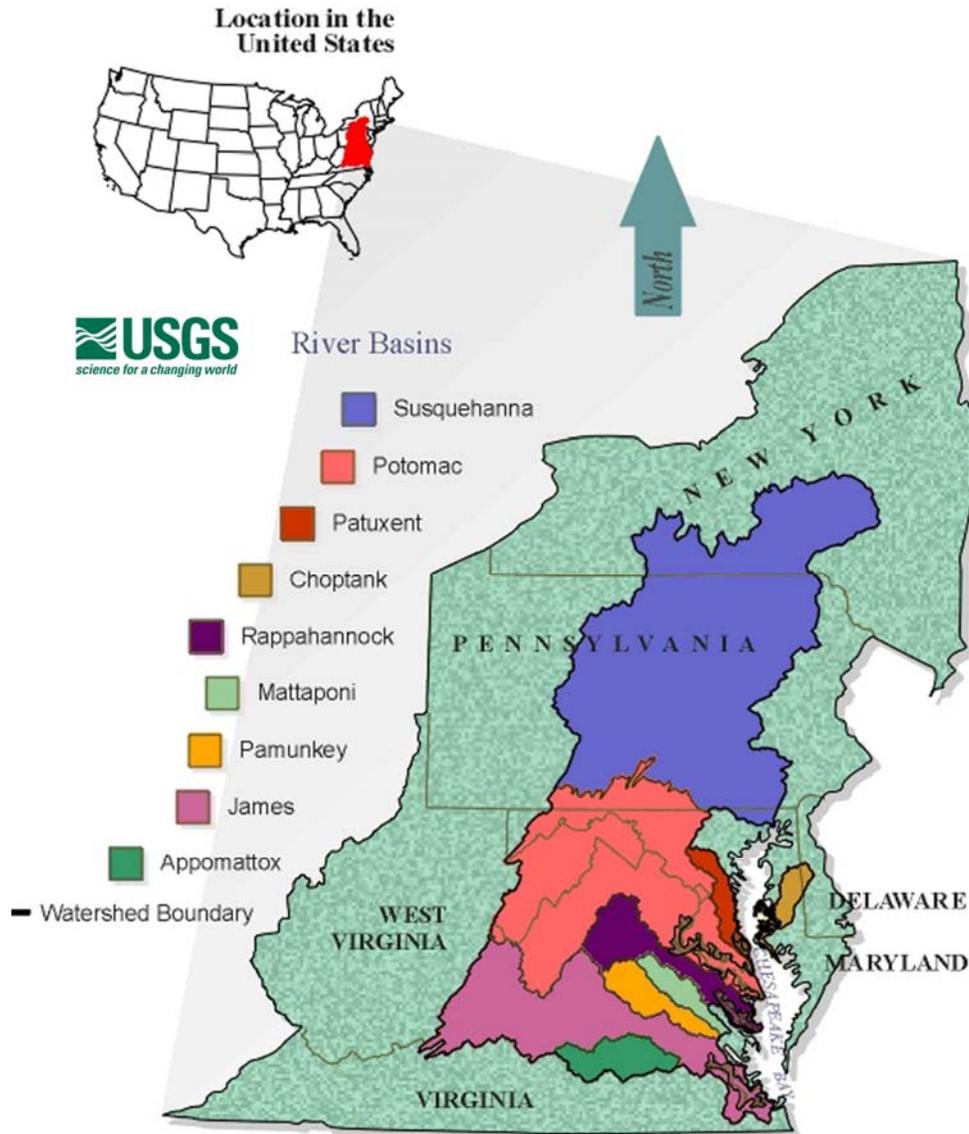
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This report is available on the web at
<http://www.oag.state.md.us/reports/2009EnvironmentalAudit.pdf>

INTRODUCTION

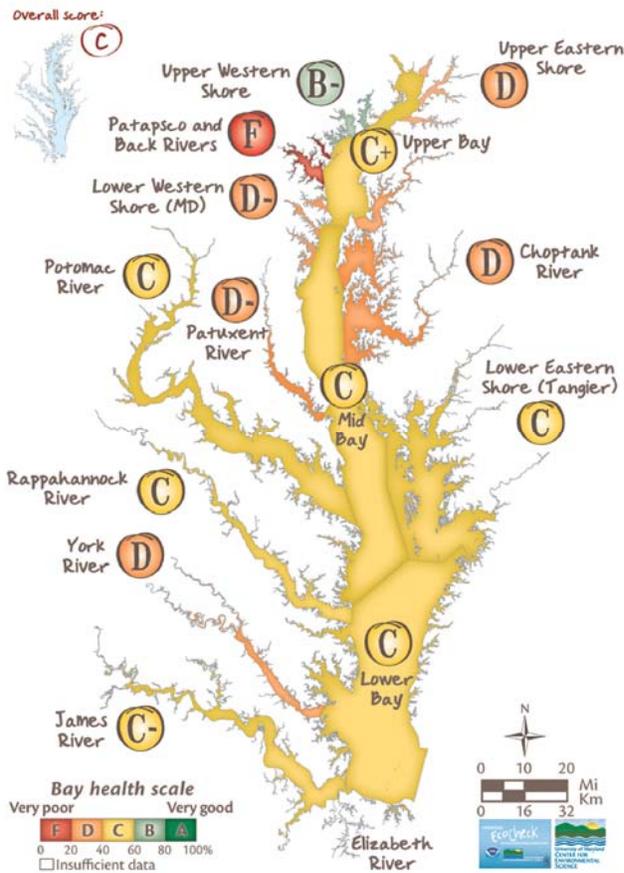
The Chesapeake Bay is North America's largest estuary. Supplied by water from the Atlantic Ocean and from some 150 rivers, streams and creeks, the Bay contains more than 15 trillion gallons of water and has about 11,700 miles of shoreline.¹ The Chesapeake Bay watershed encompasses more than 64,000 square miles and includes parts of six states – New York, Pennsylvania, Delaware, Maryland, West Virginia and Virginia – and all of the District of Columbia.²



¹ <http://www.chesapeakebay.net/factsandfigures.aspx?menuitem=14582>.

² *Id.* A watershed is an area of land that drains to a particular river, lake, bay or other body of water. Watersheds are also called “basins” or “drainage basins.” <http://www.chesapeakebay.net/watersheds.aspx?menuitem=14603>.

Bay Health Index 2009



www.eco-check.org/reportcard/chesapeake/2009/

For centuries, the Bay was the most bountiful and productive bay on the continent, providing the perfect natural habitat for thousands of different species. When John Smith explored the region in 1607 and 1608, he described the Bay's incomparable beauty and marveled at an abundance of fish in greater numbers and variety than he and his men had ever seen.³ Today, however, the health of the Chesapeake Bay is poor, the result of hundreds of years of stress and pollution.

The decline of the Bay is linked directly to population growth within the watershed, which has doubled since 1950. As of 2008, approximately 16.9 million people live in the watershed, a number that is expected to climb above 20 million by 2030.⁴ This growth and attendant development are associated with three of the biggest problems endangering the health of the Bay: excess nitrogen, phosphorus and sediments.⁵ Urban and suburban stormwater runoff, which contains significant quantities of these pollutants, is now the fastest-growing source of pollution to the Bay.⁶ The agriculture industry supplies this growing population, and agricultural runoff is the single largest source of pollution to the Chesapeake Bay.⁷

³ <http://www.chesapeakebay.net/captainjohnsmith.aspx?menuitem=19591>.

⁴ http://www.chesapeakebay.net/content/publications/cbp_50513.pdf (p. 4).

⁵ See <http://dnr.maryland.gov/bay/pdfs/LESbasinsum8505FINAL2007.pdf> (p. 1).

⁶ See http://www.chesapeakebay.net/landuse_urbansuburban.aspx?menuitem=19557; see also <http://www.chesapeakebay.net/stormwater.aspx?menuitem=19515> (explaining stormwater pollution).

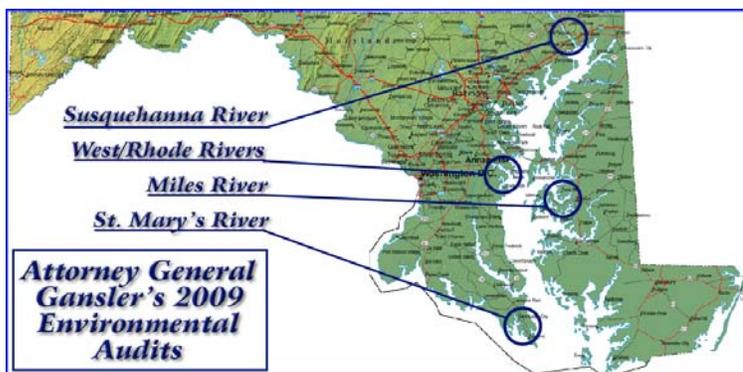
⁷ Agricultural runoff contributes 38% of the Bay's total nitrogen pollution, 45% of its phosphorus pollution, and 60% of its sediment pollution. See http://www.chesapeakebay.net/status_nitrogensources.aspx?menuitem=19797 (nitrogen); http://www.chesapeakebay.net/status_phosphorusloads.aspx?menuitem=19801 (phosphorus); and http://www.chesapeakebay.net/status_sedimentsources.aspx?menuitem=20800 (sediment). In Maryland, manure and waste from commercial chicken production also play a large role in nitrogen pollution to the Bay. On Maryland's Eastern Shore, chickens outnumber people approximately 1,000 to 1. <http://www.cbf.org/Page.aspx?pid=913>. It is estimated that Maryland chickens create more than 1.5 billion pounds of manure annually, based on 2008 production numbers. See http://www.dpichicken.org/faq_facts/docs/factsmd2008.doc (on the number of chickens in Maryland in 2008; 298,600,000); J. Ronald Miner et al., *Managing Livestock Waste to Preserve Environmental Quality* (Iowa State University Press, 2000) (on the pounds of manure per chicken; approximately 5.88).

The University of Maryland Center for Environmental Science (“UMCES”) releases an annual assessment of the health of the Chesapeake Bay habitat. The assessment measures a variety of indicators that are combined into a single index to grade each of the 15 Bay regions. In the 2009 report card released on May 18, 2010, the Bay regions received grades ranging from B- to F, with the Bay receiving an overall grade of C.⁸

The Chesapeake Bay Program also reports annually on the health of the Bay. The most recent report, issued on April 7, 2010, found that the health of the Bay remains poor, despite improvements in some criteria, most notably, populations of blue crab and underwater grasses.⁹ The report indicated that the Bay continues to struggle against too much nitrogen, phosphorus and sediments, which deplete oxygen, cloud water clarity, and harm aquatic life.¹⁰

Beginning in April 2008, the Office of the Attorney General (“OAG”) embarked on a river-by-river environmental audit to identify problems at their source and formulate solutions that will benefit the Bay. Communities and local activists in these rivers’ watersheds are in the best position to know where problems exist, and the residents can offer practical and innovative solutions. This approach is central to the Attorney General’s environmental audits. Traveling into communities, river by river, the Attorney General is learning first-hand from those who know, use, and love the State’s rivers. Each year, the Attorney General visits four of the Bay’s tributaries, meetings with citizens, environmental leaders and elected officials to learn about the specific problems in each individual watershed, as well as pollution issues common throughout the greater Chesapeake Bay watershed.

This report contains the results of the Attorney General’s 2009 environmental audits, which brought him to the St. Mary’s River, the West and Rhode Rivers, the Miles River, and the Lower Susquehanna River.¹¹ In each watershed, the Attorney General spent a full day meeting with local elected officials, environmental leaders, students and citizens. He traveled by boat and walked the shores of the waterways to learn about the watersheds, their problems and ongoing restoration efforts, and also to identify unique sources of pollution. River-by-river, the Attorney General’s focus is on gathering information from those most intimately familiar with the rivers in order to develop solutions and enhance enforcement of those environmental laws that serve to protect the rivers and the Chesapeake Bay. The Attorney General’s ultimate goal is to improve the health of the Bay.



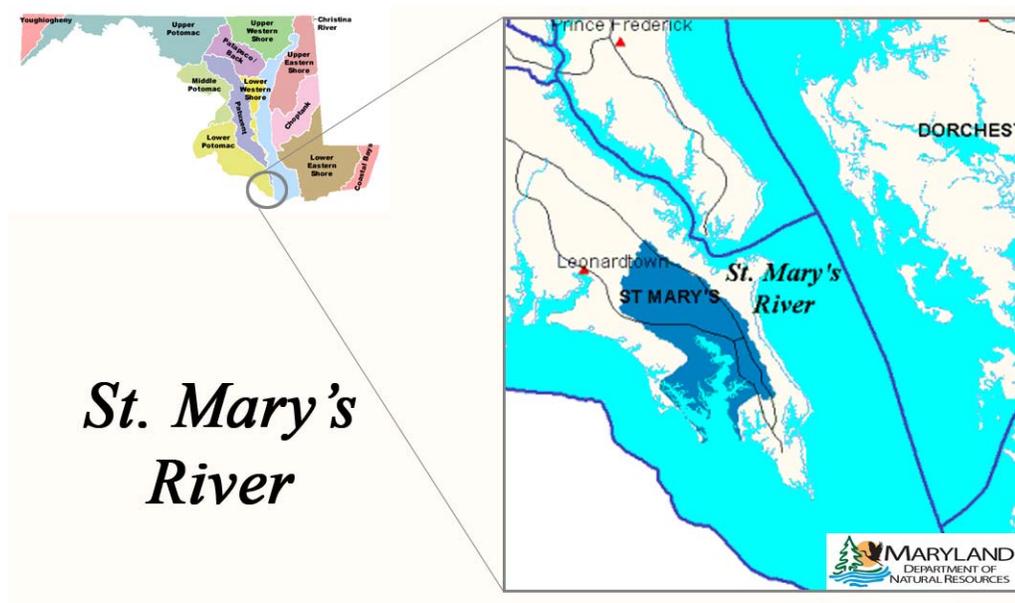
⁸ http://www.baystat.maryland.gov/current_health.html. The Bay received a C- in 2008 and 2007 and a D+ in 2006. These report cards can be accessed at <http://www.eco-check.org/reportcard/chesapeake>.

⁹ http://www.chesapeakebay.net/content/publications/cbp_50513.pdf (p. 5).

¹⁰ *Id.*

¹¹ In 2008, the Attorney General’s environmental audits included the Chester River, the Pocomoke River, the Monocacy River, and Great Seneca Creek. The report of those audits can be seen at <http://www.oag.state.md.us/Reports/2008EnvironmentalAudit.pdf>.

CHAPTER ONE: ST. MARY'S RIVER



I. Background

The St. Mary's River watershed is located entirely within St. Mary's County, which is situated on a peninsula in Southern Maryland.¹² It is part of the Lower Potomac River basin, which includes the St. Mary's, Wicomico and Port Tobacco Rivers.¹³

The St. Mary's River originates and ends in St. Mary's County. The river flows approximately 10 miles from the head of tide to the mouth and has more than 84 miles of shoreline.¹⁴ The watershed extends south from the intersection of Routes 4 and 235 to St. George's Island and Kitt's Point at the mouth of Smith Creek. Over 100 miles of streams drain into the river before it becomes tidal at Tippity Witchity Island. From that point, the river extends downstream another eight miles and eventually empties into the Potomac River.¹⁵ At its mouth on the Potomac, near the Chesapeake Bay, the St. Mary's River is approximately 12 meters deep.¹⁶

The St. Mary's River watershed can be divided into 11 sub-watersheds: the Upper St. Mary's River, Western Branch, Eastern Branch, Pembroke Run, Hilton Run, Johns Creek, Craney Creek, Fishermans Creek, Church Creek, Middle St. Mary's River, and Lower St. Mary's

¹² http://mddnr.chesapeakebay.net/eyesonthebay/documents/St_Marys_newsletter.pdf (p. 2).

¹³ <http://dnr.maryland.gov/streams/pubs/lowerpotomac.pdf>.

¹⁴ <http://www.smrwa.org/StateOfRiver2007/slide07.html>.

¹⁵ http://www.smrwa.org/pub_AnnualReport2006_p3.html.

¹⁶ <http://www.stmarysriver.org/pdfdocs/SynopticSurvey.pdf> (p.1).

River.¹⁷ The watershed covers more than 70 square miles¹⁸ and consists of 45,198 acres, more than half of which is forested.¹⁹ Urban use accounts for 6,012 acres, and the remainder is primarily agricultural, forest, and wetlands.²⁰ As of 2006, about 46,000 people, nearly half of the county's population, lived within the St. Mary's River watershed.²¹

The St. Mary's River is on the "impaired waters" list maintained by the Maryland Department of the Environment ("MDE"),²² and is within the Potomac River watershed, which received a C on the 2009 UMCES Chesapeake Bay Report Card.²³ In April 2008, St. Mary's County government, in partnership with St. Mary's College of Maryland and the St. Mary's River Watershed Association, began the preparation of a Water Restoration Action Strategy ("WRAS") for the St. Mary's River watershed. The data collection phase of the project was completed in September 2008.²⁴

The study showed that many of the undeveloped areas of the St. Mary's River watershed remain pristine. For the most part, water quality in the watershed is good under normal, low flow conditions. However, storm events, carrying nutrients and sediment downstream, have a major impact on the river. Nutrients stimulate the growth of algae, which, as they decompose, create zones of little or no dissolved oxygen in bottom waters, to the detriment of bottom-dwelling organisms. Stream and estuarine habitats are also adversely affected by sediments borne downstream by stormwater runoff.²⁵

The St. Mary's River watershed is endangered by rapid urban development, particularly in the vicinity of the Lexington Park development district and along the Route 235 corridor, a major highway that has been extensively widened.²⁶ This development has brought a sharp increase in paved or other impervious surfaces. Such hardened surfaces channel water into

¹⁷ <http://www.stmarysriver.org/pdfdocs/WaterQualityAssessment.pdf> (Table 1, p. 35). The watershed is also occasionally divided into as many as 17 sub-watersheds and 22 sub-watersheds. See

<http://www.smrwa.org/StateOfRiver2007/slide02.html>; <http://www.smrwa.org/StateOfRiver2007/slide07.html>.

¹⁸ http://www.smrwa.org/pub_AnnualReport2006_p3.html.

¹⁹ <http://www.stmarysriver.org/pdfdocs/WaterQualityAssessment.pdf> (p. 14).

²⁰ <http://mddnr.chesapeakebay.net/wsprofiles/surf/prof/wsprof.cfm?watershed=02140103>.

²¹ http://www.smrwa.org/pub_AnnualReport2006_p3.html.

²² [http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters\(1\).pdf](http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters(1).pdf) (p. 45). The Clean Water Act, 33 U.S.C. § 1251 *et seq.* (1972), requires states, territories and tribes to develop lists of impaired waters, that is, waters that are too polluted or otherwise degraded to meet the water quality standards set by the states, territories or tribes. The St. Mary's River was first listed in 1996 as impaired by bacteria, nutrients and sediment, and in 2002, portions of the river were also listed for biological and metals impairments.

http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/ApprovedFinalTMDL/TMDL_final_stmarysriver_fc.asp.

²³ <http://www.eco-check.org/reportcard/chesapeake/2009>. The Potomac River received a C- in 2008 and a D+ in 2007 and 2006. See <http://www.eco-check.org/reportcard/chesapeake/2008/>, <http://www.eco-check.org/reportcard/chesapeake/2007/> and <http://www.ecocheck.org/reportcard/chesapeake/2006/>, respectively.

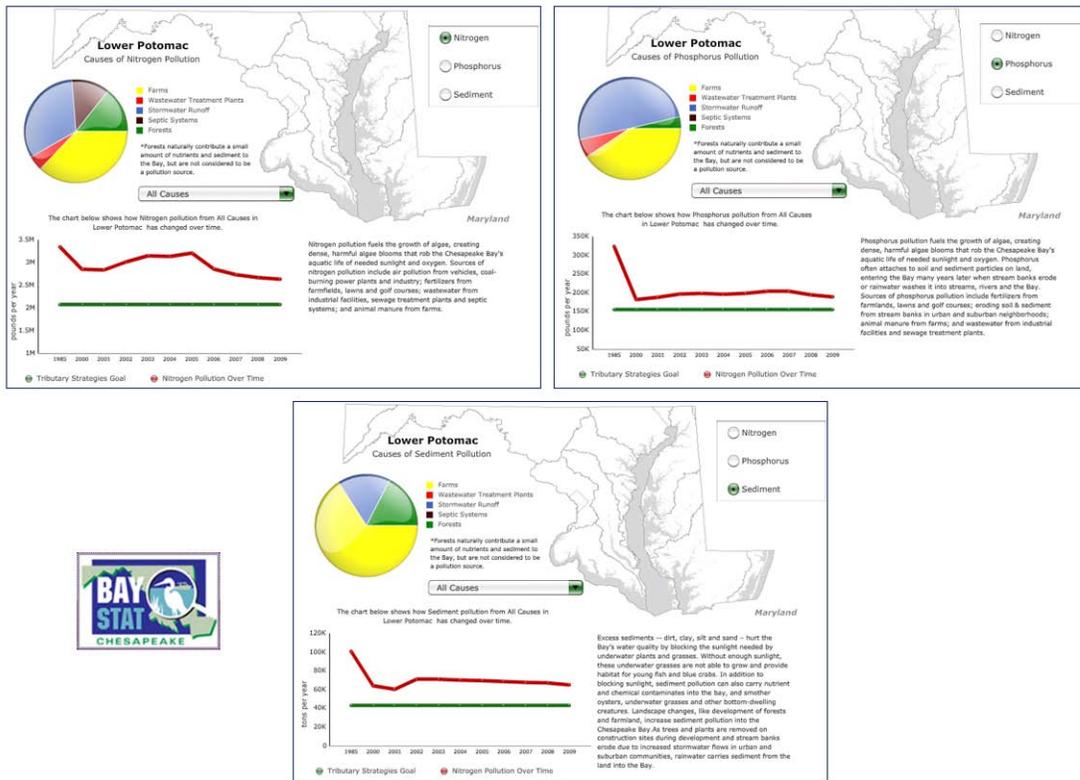
²⁴ The final reports released in September 2008 include a Stream Corridor and Tidal Shoreline Survey (<http://www.stmarysriver.org/pdfdocs/StreamCorridorAssessment.pdf>), a Synoptic Survey (<http://www.stmarysriver.org/pdfdocs/SynopticSurvey.pdf>) and a Water Quality Assessment (<http://www.stmarysriver.org/pdfdocs/WaterQualityAssessment.pdf>). There is also a draft Watershed Characterization (<http://www.stmarysriver.org/pdfdocs/DraftCharacterization2009-05-11.pdf>).

²⁵ <http://www.stmarysriver.org/pdfdocs/WaterQualityAssessment.pdf> (p. 2).

²⁶ *Id.* at p. 9.

smaller areas, which in turn helps to increase flow velocities, frequently resulting in accelerated erosion of streambanks.²⁷ As impervious surfaces are reaching critical thresholds in many areas, the degradation of soils and stream water quality are cause for concern.²⁸

The charts shown below depict the major pollution sources for nitrogen, phosphorus and sediment load in the Lower Potomac, including agriculture, wastewater treatment plants, stormwater runoff, septic systems and forests.²⁹



²⁷ Impervious surfaces include areas covered by roofs, roads, parking lots and other materials which keep rainfall and snow from penetrating the ground. Watersheds with a high percentage of impervious surface area are more susceptible to increased stormwater runoff and decreased water quality in nearby surface waters.

http://www.dnr.state.md.us/watersheds/surf/indic/md/descrip/md_pctimp_des.html.

²⁸ See <http://www.stmarysriver.org/pdfdocs/WaterQualityAssessment.pdf> (p. 10). According to a 2008 study of the stream corridor, there are 174.9 stream miles in the watershed. The study identified 119 potential problem sites; the most frequently observed environmental problem was erosion (29 sites), followed by channel alteration (22 sites). In addition, there were 19 fish barriers, 14 inadequate stream buffers, 13 trash dumping sites, 8 pipe outfalls, 8 unusual conditions, 4 exposed pipes, and 2 construction sites. Most problems were classified as moderate or minor in severity. See <http://www.stmarysriver.org/pdfdocs/StreamCorridorAssessment.pdf> (p. 14).

²⁹ <http://www.baystat.maryland.gov/sources2.html>.

II. Active Enforcement Efforts and Pending Matters

Prior to conducting the St. Mary's River watershed audit, the Office of the Attorney General identified the following ongoing restoration efforts, enforcement efforts, and matters in the St. Mary's River watershed:

St. Mary's College, River Center and Rowing Center. Since 2002, St. Mary's College has developed ongoing shoreline improvement projects to protect its shoreline and prevent erosion.³⁰ In 2007, the College, a state-owned institution not subject to county zoning requirements, applied directly to the Maryland Critical Area Commission ("CAC")³¹ for approval of a project to replace an existing boathouse with two new buildings: a River Center to support tidal river studies, sailing programs, and general recreation, and a Rowing Center to house crew shells, kayaks, student water related clubs and other recreational gear.³² After the CAC approved the project, local controversy arose over lack of sufficient public notice,³³ as well as the size of the structures, which many residents feel block the view of the river.³⁴ Because the River Center, the Rowing Center and the shoreline projects are in the buffer area,³⁵ the Critical Area Commission required the College to develop a mitigation planting plan, which was due for submission to the CAC in the summer of 2009.

Wind Turbines in the Buffer. The St. Mary's County Commissioners approved an ordinance to permit installation of wind turbines for residential and farm use. The ordinance requires approval by the CAC as an amendment to the county's Critical Area program. The CAC Program subcommittee looked at the ordinance on April 1, 2009, and raised a number of concerns, including placing structures in the buffer and lack of provisions for mitigation for forest clearing. The full Commission did not vote, and the CAC was to decide about the proposed change to the county's Critical Area program by July 2009.

³⁰ See <http://www.smcm.edu/facilities/capitalprojects/buffermanagement1.html>.

³¹ A "Critical Area" is an area along Maryland's shorelines that is given special environmental protection, in order to reduce, among other things, adverse impacts on water quality resulting from pollutants. In 1984, the legislature passed the Critical Area Act, which identified the "Critical Area" as all land within 1,000 feet of the Mean High Water Line of tidal waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries. See MD. CODE ANN., NAT. RES. § 8-1801 *et seq.* (2010). The law also created a statewide Critical Area Commission ("CAC") to oversee the development and implementation of local land use programs directed towards the Critical Area. See *id.* §§ 8-1803–8-1806.

³² See <http://www.smcm.edu/facilities/capitalprojects/muldoonrivercenter.html>.

³³ At the time the project was approved, there was no requirement that the CAC provide notice and opportunity for public comment for proposed state and local development projects in the Critical Area. The 2008 amendments to the Critical Area Act, which the Attorney General supported, specifically empowered the CAC to adopt regulations concerning public notice and opportunity for public comment for such projects. See MD. CODE ANN., NAT. RES. § 8-1806(b)(1)(xiv)(3) (2010). Those regulations have been adopted. See Code of Maryland Regulations ("COMAR") 27.01.01.01–27.01.09.01 (2010).

³⁴ See <http://www.stmarystoday.com/News/TownMeetingPlannedtoTearDownBoathouse.html> (describing the controversy and depicting the old boathouse and new Rowing Center). Many residents also felt that it was inequitable that the College was permitted to build in the buffer (see n. 35, *infra*), something private citizens can rarely do.

³⁵ The Critical Area Act requires the establishment of a minimum buffer of 200 feet of natural vegetation landward from tidal waters or tidal wetlands and 100 feet from tributary streams. See MD. CODE ANN., NAT. RES. §§ 8-1802(a)(4) & 8-1808.10(b) (2010).

St. Inigoes and New Towne Neck. In January 2009, the Maryland Board of Public Works approved \$56,900,000 in Program Open Space³⁶ funds for the acquisition of 4,473 acres of ecologically and historically significant land stretching across Cecil, Charles and St. Mary's counties. There are two parcels in St. Mary's County – St. Inigoes and New Towne Neck. St. Inigoes is a peninsula five miles south of historic St. Mary's City, containing eight miles of shoreline, separating the St. Mary's River and Smith Creek. With more than seven miles of shoreline, New Towne Neck is a 776-acre peninsula of woodlands, wetlands and agricultural fields surrounded by Breton Bay, the Potomac River, and St. Clements Bay. Both properties were purchased from the Society of Jesus, which had acquired them in the 1600s.³⁷

Marrick Homes, LLC. MDE filed an administrative complaint against Marrick Homes, a contractor, for water pollution, sediment pollution, and sediment control violations that occurred during construction of two subdivisions in St. Mary's County – Cecil's Mill and Ben Oaks.³⁸ The violations impacted Persimmon Creek and another, unnamed tributary of the St. Mary's River. The complaint, which was scheduled to be heard at the Office of Administrative Hearings after the Attorney General's audit, sought the maximum penalty of \$170,000.

Chopticon High School Wastewater Treatment Plant – Morganza, St. Mary's County. On February 6, 2009, the Maryland Department of the Environment ("MDE") issued a consent order as a result of the discharge of pollutants (ammonia) in excess of the permit effluent limits at Chopticon High School's wastewater treatment plant. The consent order required upgrade of the plant to meet the permit limits and payment of a \$2,250 penalty to resolve past effluent violations. The consent order also established stipulated penalties for future effluent violations.

Agriculture. The Maryland Department of Agriculture ("MDA") currently estimates that the St. Mary's watershed has 28 agricultural operations, comprising about 8,119 acres, which are required to implement nutrient management plans ("NMPs") to manage the application of animal waste and fertilizer to prevent pollution.³⁹ Although most of these farms are in compliance, MDA has taken enforcement action against five farms.⁴⁰

³⁶ Established under the Department of Natural Resources in 1969, Program Open Space helps conserve Maryland's natural resources by acquiring outdoor recreation and open space areas for public use. See <http://www.dnr.state.md.us/land/pos/index.asp>.

³⁷ See http://conservationfund.org/news/landmark_conservation_deal_celebrates_maryland_history.

³⁸ See <http://www.marrickinc.com/directions.html>.

³⁹ Maryland's Water Quality Improvement Act of 1998 ("WQIA"), MD. CODE ANN., AGRIC. § 8-801 *et seq.* (2010), requires all Maryland farmers grossing \$2,500 or more annually or raising 8,000 pounds or more of live animal weight to run their operations using a nutrient management plan that addresses both nitrogen and phosphorus inputs. See http://www.mda.state.md.us/resource_conservation/nutrient_management/index.php. NMPs are submitted to the MDA.

⁴⁰ This information was provided to the Office of the Attorney General by the MDA.

III. The St. Mary's River Audit, April 29, 2009: What the Attorney General Learned

The St. Mary's River audit was conducted on April 29, 2009. Eight members of the OAG, including the Attorney General's special assistant for the environment and MDE Counsel, accompanied the Attorney General to Leonardtown and St. Mary's City, St. Mary's County, Maryland.

The Attorney General began the day in Leonardtown meeting with elected officials from St. Mary's County, including members of the Board of Education, the county attorney, and the state's attorney, as well as town officials from Leonardtown. Following that meeting, the Attorney General and staff went to St. Mary's City, where they boarded the *Dee of St. Mary's* skipjack for a briefing and tour of the St. Mary's River. Local biologists and watershed community members accompanied the group to identify areas of interest and concern. The Attorney General then had lunch with a group of faculty and students at the St. Mary's College of Maryland ("SMCM") Center for Democracy.



Attorney General Gansler is briefed by St. Mary's College staff and environmental activists.

In the afternoon, the Attorney General met with a group of environmental leaders from the St. Mary's River Watershed Association, Clean Water Action, the Potomac River Association, St. Mary's County Soil Conservation District, St. Mary's Commission on the Environment, the Dr. James A. Forrest Career and Technology Center, and the SMCM Biology Department. Finally, the Attorney General held a town hall meeting hosted by the SMCM Center for Democracy.

During the daylong visit, the Attorney General heard from these individuals, organizations and local residents about a variety of environmental issues and concerns in the St. Mary's watershed.

Growth and Development. It was reported that St. Mary's County is one of the most rapidly growing counties in the State. Community members reported concern about increased development and the attendant rise in impervious surfaces. Much of the growth is centered in the Lexington Park Development District, a designated growth area through which about two thirds of the St. Mary's River flows. Local residents expressed the view that growth should be directed inland, away from the shoreline.

Stormwater Management, Sediment and Erosion Controls. Stormwater management, sediment and erosion controls are issues primarily related to construction sites.⁴¹

- **Inadequate Enforcement.** In St. Mary's County, stormwater complaints and alleged violations of sediment and erosion control practices are inspected and regulated by the Maryland Department of the Environment.⁴² Apparently, there is only one inspector for the area, which covers St. Mary's County and two other counties as well. Although local residents reported that the MDE inspector was responsive when contacted, they worried that complaints become backlogged at the state level. They also expressed dissatisfaction with the penalties assessed against violators, reporting that the fines are low and therefore considered a "cost of doing business," and that many are never even collected.
- **Redevelopment Projects.** Redevelopment promotes growth and development in already existing urban areas and infrastructure, thereby maintaining or even improving area water

⁴¹ See <http://www.mde.maryland.gov/Programs/WaterPrograms/SedimentandStormwater/home/index.asp>. In 2007, the legislature passed the "Stormwater Management Act of 2007" ("Act"), MD. CODE ANN., ENVIR. § 4-201.1 *et seq.* (2010), effective on October 1, 2007. Prior to the Act, environmental site design ("ESD") was encouraged through a series of credits found in Maryland's Stormwater Design Manual. The Act requires that ESD, through the use of nonstructural best management practices and other better site design techniques, be implemented to the maximum extent practicable. Under the Act, the State establishes technical requirements and provides a Model Ordinance, and county governments are required to adopt an ordinance that meets these regulatory requirements. A municipality may either adopt its own local ordinance or rely on the county program. In each case, MDE must review and approve the local stormwater management ordinances.

MDE adopted new regulations implementing the Act, which became effective on May 4, 2009. They appear in the Code of Maryland Regulations. COMAR 26.17.02 (2010). These regulations stated that, unless final approval for erosion and sediment control and stormwater management plans for a project was granted by May 4, 2010, the project would be required to comply with the new regulatory requirements. See <http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/swm2007.asp>.

In March 2010, to address recent concerns regarding the absence of grandfathering provisions to allow certain types of development to continue through local approval processes and the difficulty of implementing ESD for redevelopment projects, MDE proposed emergency regulations and provided implementation guidance to those localities responsible for stormwater management program administration. See <http://www.mde.state.md.us/assets/document/Stormwater%20Guidance%20Document.pdf>. These new regulations allow local governments to issue waivers for projects that have received preliminary approval by May 4, 2010, in order for those projects to proceed under the old regulatory scheme, provided they receive final approval by May 4, 2013 and are completed by May 4, 2017. COMAR 26.17.02.01 *et seq.* (2010).

The Administrative, Executive, and Legislative Review committee ("AELR") held a public hearing on these emergency regulations on April 6, 2010. Despite significant opposition from many in the environmental community, the grandfathering and local government waiver provisions were adopted that same day. See <http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/swm2007.asp>. The emergency regulations took effect on April 7, 2010, for six months, during which time MDE must propose final regulation changes and provide for public input. MDE will also develop Model Ordinance language that will be used by counties and municipalities that choose to modify their stormwater management ordinances to include grandfathering and the additional redevelopment policy. *Id.* MDE has revised the 2009 Model Stormwater Management Ordinance to reflect the recently enacted emergency regulations. See <http://www.mde.state.md.us/assets/document/Model%20Stormwater%20Ordinance%20w%20emerg%20reg%20revisions%2004-12-2010.pdf>.

⁴² In some counties, local government has the responsibility for inspection and regulation. See <http://www.mde.maryland.gov/Programs/WaterPrograms/SedimentandStormwater/erosionsedimentcontrol/index.asp>.

quality through conservation and stormwater management practices.⁴³ During the audit, community members voiced concerns about the application of stormwater measures and soil and erosion practices for redevelopment projects. In particular, they were troubled that under current regulations redevelopment projects are subject to less stringent standards than new development.⁴⁴

- **Sediment and Erosion Control “Responsible Personnel” Certification.** Maryland law requires that any foreman, superintendent or project manager in charge of sediment control at a construction site (“responsible personnel”) must have a certificate of attendance at an MDE-approved training program for the control of sediment and erosion before the project begins. These certificates are valid for a three-year period and are generally renewed automatically without additional training.⁴⁵ During the audit, environmental leaders expressed concern over this automatic renewal. In St. Mary’s County, the Soil Conservation District hosts regular “Green Card” classes and encourages past participants to attend a class every two to three years.⁴⁶

Critical Area. The St. Mary’s River watershed falls within the scope of environmental protections set forth in the Critical Area Act.⁴⁷ During the audit, the Attorney General heard about the tensions between property rights of land owners and environmental conservation and water quality protections that frequently arise during application of the Critical Area law. Community members also reported repeated inconsistent applications of the Critical Area Act, as well as inadequate enforcement and resources with which to enforce it.

Concerned residents described activities within the Critical Area, such as the clearing of trees, which occur on the weekends and without oversight or penalty. They requested a hotline telephone number to report alleged Critical Area violations. They also suggested the use of boats to facilitate maritime enforcement of the Critical Area Act.

- **Dennis Point Marina and Campground.** At the town hall meeting, a community member alerted the Attorney General to concerns about improper sewage disposal at the Dennis Point Marina and Campground, a large portion of which is in the Critical Area.

Shoreline Conservation. The Attorney General was told that the boating speed limit in Carthagena Creek, a tributary to the St. Mary’s River, was recently lowered to 6 miles per hour, a change that area waterfront property owners expect to prevent further shoreline erosion and loss of property. Residents suggested implementation of a statewide boating speed limit for all narrow waterways and small creeks, for safety precautions as well as for shoreline conservation and improved water quality. They also expressed a need to have greater enforcement of boat wake requirements. One individual recommended the installation of jetties as a way to manage sediment problems along the shoreline and suggested that sand would accumulate after installation, creating more beach area and assisting with erosion problems.

⁴³ See http://www.mde.state.md.us/assets/document/Urban_redevelopment%202005.pdf.

⁴⁴ See <http://www.mde.state.md.us/assets/document/Stormwater%20Guidance%20Document.pdf> (pp. 5-6).

⁴⁵ MD. CODE ANN., ENVIR. § 4-104(b) (2010).

⁴⁶ See http://www.calvertsoil.org/Workshop_July%20Green%20Card%20Class.pdf.

⁴⁷ See n. 31, *supra*.

Agriculture. The Attorney General was advised that animal waste is a problem in the St. Mary's River watershed. Although there are few poultry farms in the watershed, community members spoke about poorly stored poultry manure and agricultural runoff impairing water quality. They also addressed the need for a means to dispose of horse manure. Apparently, many horse farmers are interested in having the manure taken away and composted, but there is currently nothing in place to do so. Additionally, area residents voiced concern that some horse farmers may not be familiar with the proper manure storage and management practices required to protect nearby waterways.

Land Application of Effluent. Local officials expressed concern over attempts to apply effluent from area wastewater treatment plants⁴⁸ to easement lands protected under the Maryland Agricultural Land Preservation Foundation⁴⁹ and Rural Legacy programs.⁵⁰ Currently state agencies are not in favor of approving the practice. ,



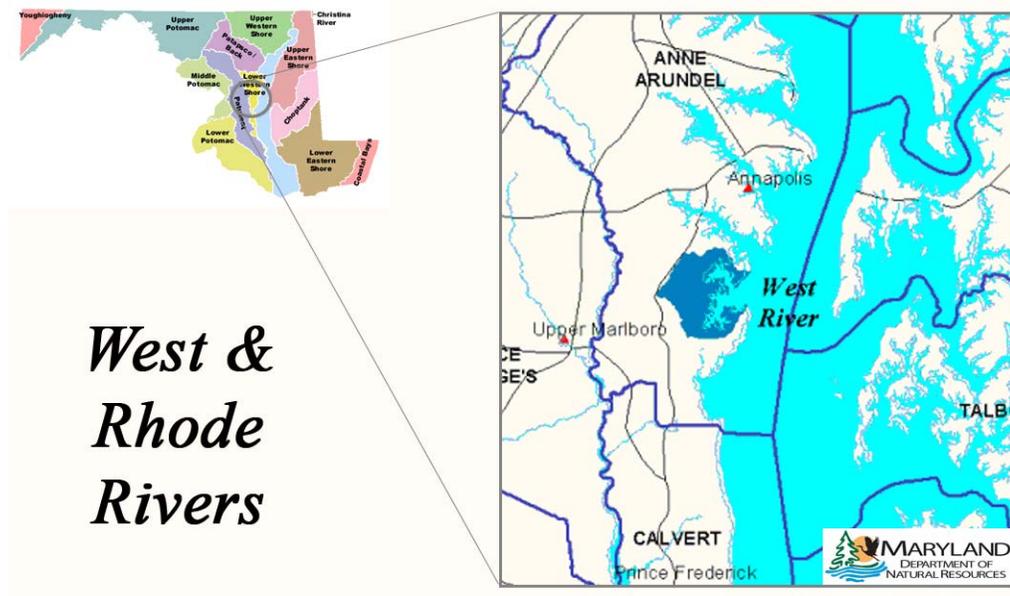
Attorney General Gansler leads a town hall meeting at St. Mary's College.

⁴⁸ Wastewater effluent from treatment plants is one of the major contributors of nitrogen discharge into the Chesapeake Bay. See <http://www.mde.maryland.gov/researchcenter/publications/general/emde/vol2no12/wwtp.asp>.

⁴⁹ In existence since 1977, the Maryland Agricultural Land Preservation Foundation primarily seeks to preserve sufficient agricultural land to maintain a viable local base of food and fiber production for the present and future citizens of Maryland. See <http://www.malpf.info/facts.html>.

⁵⁰ The Rural Legacy Program provides funding to protect large, contiguous tracts of land and other strategic areas from sprawl development and to enhance natural resource and agricultural, forestry and environmental protection through cooperative efforts among states and local governments and land trusts. See <http://www.dnr.state.md.us/land/rurallegacy/index.asp>.

CHAPTER TWO: WEST AND RHODE RIVERS



I. Background

The West and Rhode Rivers are located in Anne Arundel County, Maryland. The Rhode River empties into the West River, which drains directly into the Chesapeake Bay, and the two rivers are often referred to as the West/Rhode watershed.⁵¹ The watershed is part of the Lower Western Shore basin, which includes the Magothy, Severn, South, West and Rhode Rivers.⁵²

The West/Rhode watershed covers 31 square miles⁵³ consisting of 16,280 acres.⁵⁴ The watershed is largely forested and agricultural lands, with some residential areas.⁵⁵ Seven creeks drain into the Rhode River: Bear Neck Creek, Sellman Creek, Fox Creek, Boathouse Creek, Muddy Creek, Whitmarsh Creek and Cadle Creek. Twelve creeks empty into the West River: Cheston Creek, Scaffold Creek, Popham Creek, Cox Creek, Tenthouse Creek, Lerch Creek, Smith Creek, Johns Creek, Upper West River/Ford's Creek, Parish Creek, Lafayette Creek and South Creek.⁵⁶

⁵¹ http://www.westrhoderiverkeeper.org/images/stories/PDF/West_River_Tech_Memo.pdf (p. 2). The Maryland Department of Natural Resources (“DNR”) treats the West and Rhode rivers as a single watershed, the West River watershed. See http://dnr.maryland.gov/watersheds/surf/prof/pdf/02131004_wp.pdf. For purposes of clarity, we refer to the combined watersheds as the West/Rhode watershed.

⁵² http://www.westrhoderiverkeeper.org/images/stories/PDF/West_River_Tech_Memo.pdf (p. 2).

⁵³ *Id.*

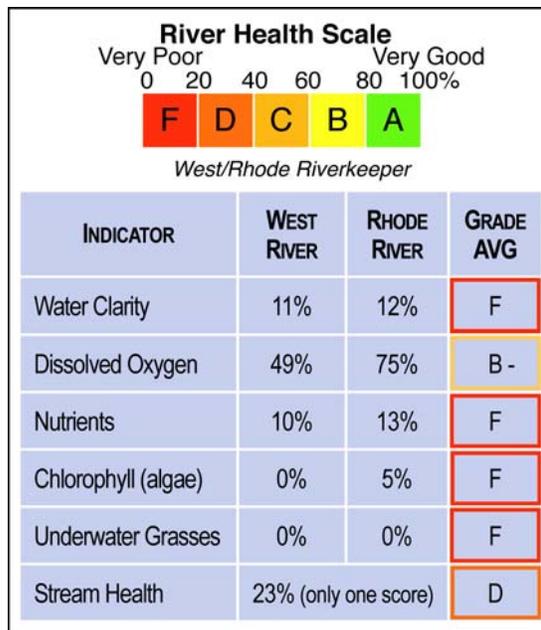
⁵⁴ http://dnr.maryland.gov/watersheds/surf/prof/pdf/02131004_wp.pdf.

⁵⁵ *Id.*

⁵⁶ See http://www.westrhoderiverkeeper.org/images/stories/PDF/wrr_wq_rpt_2008.pdf (p. 6).

The West and Rhode Rivers are on the “impaired waters” list maintained by MDE,⁵⁷ and are within the Lower Western Shore, which received a D- on the 2009 UMCES Chesapeake Bay Report Card.⁵⁸ In April 2009, the West/Rhode Riverkeeper issued a report card on the current health of both rivers.⁵⁹

For the most part, the health of the rivers was found to be poor. The report card identified six indicators of water quality and assigned grades by averaging the rivers’ results: Water Clarity, F⁶⁰; Dissolved Oxygen, B-⁶¹; Nutrients, F⁶²; *Chlorophyll a* (Algae), F⁶³; Underwater Grasses, F⁶⁴; and Stream Health, D⁶⁵. The poor condition of the rivers is the combined result of runoff from agriculture, construction and stormwater.⁶⁶ In addition, the Rhode River is being endangered by non-native invasive species, which disrupt the local ecosystem. Finally, much of the shoreline in the watershed is hardened with bulkhead or stone rip-rap, rather than being a healthy, living shoreline.⁶⁷



⁵⁷ [http://www.mde.maryland.gov/assets/document/2008_IR_Category_5_Waters\(1\).pdf](http://www.mde.maryland.gov/assets/document/2008_IR_Category_5_Waters(1).pdf) (pp. 32-33). See n. 22, *supra*. The West/Rhode watershed was first identified in 1996 as impaired by nutrients, sediments and fecal coliform in the tidal regions, with listings of biological impairments in the non-tidal portions in 2002. In 2004, the fecal coliform impairment was clarified with the identification of four specific restricted shellfish harvesting areas within the basin. See

http://www.mde.maryland.gov/Programs/WaterPrograms/TMDL/ApprovedFinalTMDL/tmdl_final_westriver_fc.asp

⁵⁸ <http://www.eco-check.org/reportcard/chesapeake/2009/>. The region received an F in 2008, and a D- in 2007 and in 2006. See <http://www.eco-check.org/reportcard/chesapeake/2008/>, <http://www.eco-check.org/reportcard/chesapeake/2007/> and <http://www.ecocheck.org/reportcard/chesapeake/2006/>, respectively.

⁵⁹ <http://www.westrhoderiverkeeper.org/images/stories/PDF/ReportCard-2009.pdf>. The Riverkeeper also released reports about aquatic water health in the West and Rhode Rivers in 2007 and 2006. See

http://www.westrhoderiverkeeper.org/images/stories/PDF/wrr_wq_rpt_2008.pdf;

<http://www.westrhoderiverkeeper.org/images/stories/PDF/West-River-Final-Report-2007.pdf>.

⁶⁰ Water clarity measures how far sunlight, which underwater grasses need to grow, can travel through the water. See <http://www.westrhoderiverkeeper.org/images/stories/PDF/ReportCard-2009.pdf> (p. 3).

⁶¹ Dissolved oxygen, which fish and aquatic life need to breathe, is added to rivers by plant life. *Id.* at p. 4.

⁶² Excess nutrients, such as nitrogen and phosphorus, can lead to algae blooms and adversely affect underwater grasses. *Id.* at p. 5.

⁶³ The amount of algae, which can adversely affect water clarity and underwater grasses (see nn. 60 and 62, *supra*), is measured by *chlorophyll a* concentration. *Id.* at p. 6.

⁶⁴ Underwater grasses are important for water quality, shoreline protection and habitat for aquatic life. *Id.* at p. 7.

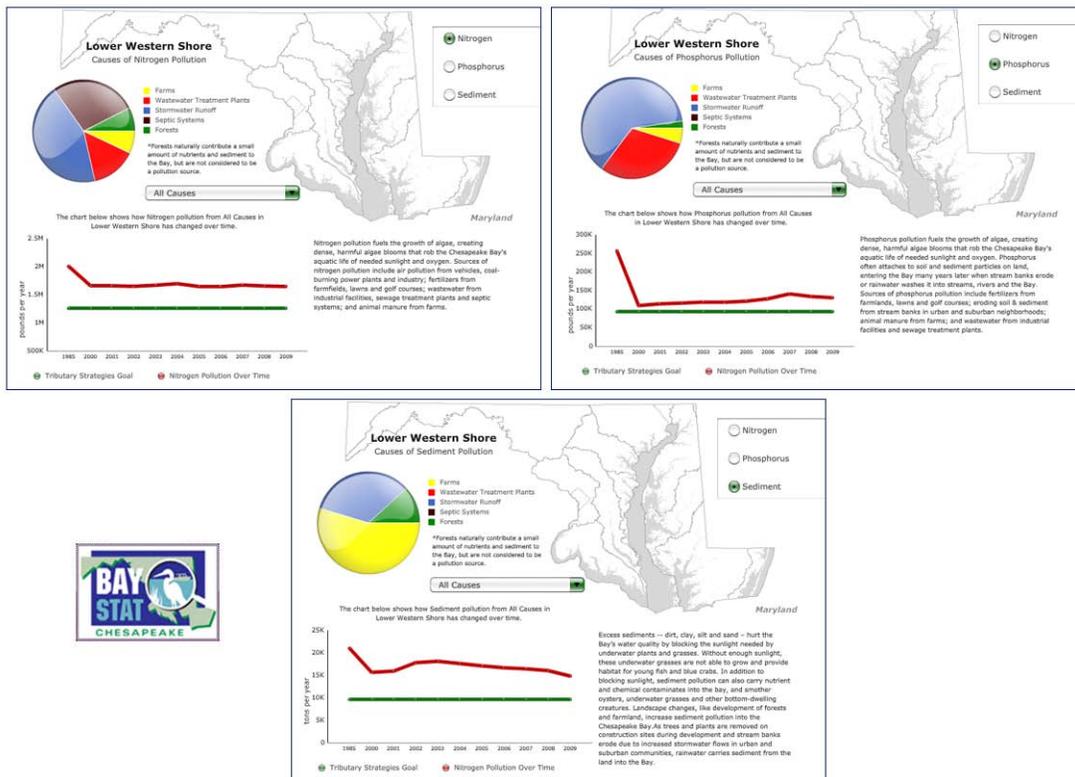
⁶⁵ Streams naturally move sediment and water. When healthy, streams support habitat for aquatic life. However, streams can be adversely impacted by forest clearing, residential development and agriculture. *Id.* at p. 8.

⁶⁶ See *id.* at pp. 3 and 5. Bacteria harmful to human health from pet waste, illegal boat discharge and sewer overflow are also a concern. *Id.* at p. 10.

⁶⁷ *Id.* at p. 9. When the shoreline is hardened, the natural habitat is disturbed and the natural ebb and flow of sediments is disturbed. The movement of these sediments is critical to maintaining stable shorelines and beaches and productive shallow water habitat.

In 2008, a major fish kill occurred in each river. On September 5, 2008, approximately 6,000 fish were killed in a small cove on the western shore of South Creek, a tributary of the West River. The suspected cause was low oxygen, likely brought about by an algae bloom.⁶⁸ On September 23, 2008, more than 40,500 Atlantic menhaden were killed in the upstream half of Bear Neck Creek, a tributary of the Rhode River in Mayo, Anne Arundel County.⁶⁹ MDE classified this fish kill as the year's third largest fish kill in Maryland. Again, low levels of dissolved oxygen were the suspected cause.⁷⁰

The charts shown below depict the major pollution sources of nitrogen, phosphorus and sediment load on the Lower Western Shore, including agriculture, wastewater treatment plants, stormwater runoff, septic systems, and forests.⁷¹



II. Active Enforcement Efforts and Pending Matters

Prior to visiting the West and Rhode Rivers, the Attorney General identified the following significant matters in the West/Rhode watershed:

⁶⁸ This information was provided to the OAG by the West/Rhode Riverkeeper.

⁶⁹ http://www.mde.maryland.gov/Programs/MultimediaPrograms/enviro_n emergencies/FishKills_MD/index.asp.

⁷⁰ *Id.*

⁷¹ <http://www.baystat.maryland.gov/sources2.html>.

State v. Thomas. This criminal case arose out of a joint endeavor between the Environmental Crimes Unit (“ECU”) of the Office of the Attorney General and the Department of Natural Resources to address the problem of the many abandoned boats littering Anne Arundel County. In this case, the defendant, Edgar Lee Thomas, owns a marina on his private property that had a number of boats that were sinking into the water and falling apart. DNR located the vessels’ owners, all of whom said they had given their boats in compensation to the defendant when they were unable to keep up with slip fees. From 2005 to 2007, DNR made repeated attempts to get Thomas to remove the abandoned vessels. The defendant took no action, claiming he was in the process of selling the property. He was originally charged by the Anne Arundel County State’s Attorney’s Office, but those charges were dismissed when a witness failed to appear for trial. In 2007, the State’s Attorney’s Office referred the case to the ECU, which was then working with DNR to develop a solution to the county’s abandoned boat problem. On June 5, 2009, the OAG filed a criminal information in the Circuit Court for Anne Arundel County charging Edgar Lee Thomas with 11 counts of abandoning a vessel and 11 counts of littering. The court issued a bench warrant for the defendant’s arrest on June 30, 2009; that warrant remains outstanding.⁷²

Private Boat Moorings. Boat owners sometimes use mooring buoys to secure boats in the waterways, rather than at a dock. There has been a proliferation of private boat moorings in the West and Rhode Rivers.⁷³ Although neither the State of Maryland nor the federal government requires a permit for single recreational mooring buoys, there are restrictions on where they may be placed.⁷⁴

By contrast, the Department of Natural Resources registers group boat moorings. In the West and Rhode Rivers, there are four registered group boat moorings that anchor about 90 boats. Two local jurisdictions, Kent County and the City of Annapolis, have delegation from DNR to manage boat moorings within their locale. To manage group moorings, as well as the tens of thousands of private moorings that DNR estimates are established statewide, DNR supports management by local jurisdiction, with each local boat mooring plan to be approved by DNR.⁷⁵

No-Discharge Zone. It is currently against federal law to discharge untreated sewage into the waters of the United States.⁷⁶ Commercial and recreational boats may be equipped with marine sanitation devices (installed boat toilets or heads). Some of these devices are holding tanks that are emptied at pumpout stations and some treat boat sewage and then discharge the effluent into the water. These latter devices primarily treat for bacteria from the sewage,⁷⁷ but are only moderately effective in removing phosphorus and nitrogen.⁷⁸

⁷² The defendant, who still owns the property, apparently moved to North Carolina in 2007.

⁷³ The West/Rhode Riverkeeper provided this information to the OAG.

⁷⁴ For example, the buoys may not be placed so that the arc of swing extends into a marked or unmarked channel; may not be placed where they interfere with the operation of bridge access; and may not be established in public or private shellfish beds. See <http://dnr.maryland.gov/boating/srmbuoys.asp>.

⁷⁵ DNR provided this information to the OAG.

⁷⁶ 33 U.S.C. § 1322 (2010).

⁷⁷ http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdmsd.html.

⁷⁸ See, e.g., *Performance Evaluation of Type I Marine Sanitation Devices*, EPA, Jan. 2010, at p. 4-33, available at http://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=219263.

The West/Rhode Riverkeeper requested the State to establish the West and Rhode Rivers as a No-Discharge Zone (“NDZ”) to prohibit the discharge of boat sewage and effluent.⁷⁹ DNR had been working with the Riverkeeper on this proposal at the time of the audit.

Aquaculture Enterprise Zones. In 2009, the General Assembly passed the Aquaculture Shellfish Leasing bill, designed to make it easier for commercial watermen, farmers and others to grow shellfish in the Chesapeake Bay.⁸⁰ The law provides for the creation of aquaculture enterprise zones for aquaculture leasing and submerged land aquaculture leases, as well as incentives to spur private investment in leasing operations and encourage commercial fishery experts to transition into aquaculture. DNR has the responsibility to establish the zones. In 2009, the Department considered locations in the Patuxent and the West and Rhode Rivers, and held a public hearing at North Beach in Calvert County on June 22, 2009.⁸¹

Agriculture. The farms in the watershed are horse and crop farms, rather than poultry and dairy. The Department of Agriculture regulates 14 farms in the watershed, covering 1,976 acres. All 14 farms have filed the required nutrient management implementation report. Since 2006, MDA has conducted three nutrient management implementation reviews and found one violation for over application of nutrients. The farmer received a warning.⁸²

MDE General Construction Permit Challenge. A general construction permit issued by MDE and renewed every five years regulates the runoff of silt and other pollutants from construction sites. In 2008, after MDE proposed to renew the permit, 12 Maryland Waterkeeper organizations and the Waterkeeper Alliance, including the West/Rhode Riverkeeper, filed a challenge seeking to strengthen provisions of the permit. In May 2009, MDE and the Waterkeepers reached a settlement under which MDE agreed to make significant changes in the way it requires developers to prevent polluted runoff and to update the State’s erosion and sediment control standards, which specify measures that must be taken on construction sites to prevent water pollution.⁸³

III. The West and Rhode Rivers Audit, July 7, 2009

What the Attorney General Learned:

The Attorney General’s West and Rhode Rivers audit took place on July 7, 2009. The Attorney General’s special assistant for the environment, principal counsel for DNR, and deputy

⁷⁹ A No-Discharge Zone is an area of a body of water or an entire body of water into which the discharge of sewage, treated or untreated, is completely prohibited. Maryland currently has two NDZs: Herring Bay in Anne Arundel County and the Northern Coastal Bays (Ocean City Inlet; Ocean City commercial fish harbor, which includes Swordfish Basin; Isle of Wight Bay; St. Martins River; and Assawoman Bay) in Worcester County. <http://www.epa.gov/reg3wapd/nodischarge/maryland.htm>.

⁸⁰ See SB 271 (<http://mlis.state.md.us/2009rs/billfile/SB0271.htm>); HB 312 (<http://mlis.state.md.us/2009rs/billfile/hb0312.htm>).

⁸¹ This information was provided to the OAG by DNR.

⁸² MDA provided this information to the OAG.

⁸³ See <http://www.westrhoderiverkeeper.org/images/stories/news/newsletters/PDF/2009/wrr-nl-0906.pdf> (p. 4).

counsel for MDE accompanied him to Anne Arundel County, Maryland for the audit, as did six other members of the Office of the Attorney General.



Attorney General Gansler is briefed by Smithsonian Environmental Research Center staff.

The day began with the Attorney General meeting in Annapolis with local elected officials from Anne Arundel County, including state legislators, the county executive, register of wills, and officials from the Anne Arundel County Department of Public Works. Following that meeting, the Attorney General visited the Smithsonian Environmental Research Center (“SERC”), located in Edgewater on the Rhode River, where he received a briefing and met with children attending SERC summer camp.

In the afternoon, the Attorney General boarded the *Blue Mist* for a tour of the West and Rhode Rivers. During the tour, he heard about the various environmental problems plaguing the watershed. After the river briefing, the Attorney General met with environmental leaders from the West/Rhode Riverkeeper, SERC, Chesapeake Environmental Protection Association, POWeR-Project Oyster, South Arundel Citizens for Responsible Development, Discovery Village, Anne Arundel County Soil Conservation District, and the Western Lower Shore Tributary Team. Finally, in order to hear directly from members of the community about their environmental concerns, the Attorney General held a town hall meeting hosted by SERC.

Throughout the audit, the Attorney General was advised by participants on a number of environmental matters and concerns, including:

Growth and Development. During the day, concerned leaders and community members consistently expressed apprehension over increasing development within the watershed.

- **Mayo Water Reclamation Facility.** The Mayo Water Reclamation Facility, a wastewater treatment plant, is at capacity. As a result, in August 2008, Anne Arundel County declared a building moratorium on Mayo Peninsula until a new facility is constructed.⁸⁴ However, an elected official noted that when the new plant is built in three to five years, there will be substantial development, which many citizens do not want.

⁸⁴ http://www.aacounty.org/DPW/Resources/Mayo_Fact_Sheet.pdf.

- **Nitrogen Loads from Septic Tanks.** Approximately 6.7% of nitrogen pollution in Maryland is due to contributions from septic systems.⁸⁵ According to local officials, however, nitrogen released from septic systems is a larger problem in Anne Arundel County overall and in the West/Rhode watershed. There are currently two options for dealing with septic systems: connecting private homes to public sewage systems or putting in place nitrogen-removal systems for private septic systems. An elected official commented that many homes are already on public sewer systems in the area. There are funds available to repair or replace antiquated or failing septic systems from the Anne Arundel County Well and Septic System Assistance Program as well as the State's Bay Restoration Fund.⁸⁶

A request and payment is required to connect septic systems to a public system. The County has unsuccessfully attempted to secure Bay Restoration Fund monies.⁸⁷ A strong concern was raised that connecting to a public system may encourage more dense development.

Critical Area Act Violations. Many participants cited Critical Area violations, along with easily obtained variances and inconsistent county enforcement, as a large problem contributing to the decline of the rivers' health. Throughout the day, the Attorney General heard that the county has a difficult time refusing property owners who claim they have a right to build on their own property. In addition, violations often occur on weekends, with many developers beginning work on Friday afternoons because they do not fear enforcement on weekends.

More than one community member suggested that DNR police should patrol the waterways to enforce the Critical Area laws and boating speed limits, as well as to check on unlawful boat discharge.

Sod Farms. Elected officials and environmental leaders complained about sod farms, which were described as an industrial use of agricultural land. To fertilize, sod farmers use sludge injected into the soil that eventually results in runoff to the waterways. Creeks running through or near these farms reportedly have extremely high sediment levels; however, accurate sampling is difficult without access onto what is largely private property. Environmental leaders recommended MDE investigations at these sites, particularly at a sod farm located on Muddy Creek Road.

⁸⁵ <http://www.baystat.maryland.gov/sources2.html>.

⁸⁶ See <http://www.aahealth.org/a2z.asp?id=28> (describing the Well and Septic System Assistance Program); <http://www.aahealth.org/a2z.asp?ID=208> (describing the Bay Restoration Fund). See also n. 87, *infra*.

⁸⁷ Established in 2004 by the General Assembly, the Bay Restoration Fund is a dedicated source of funds, financed by wastewater treatment users, to upgrade the State's wastewater treatment plants with enhanced nutrient removal technology. One source of funding comes from the so-called "flush fee" which is a \$2.50 monthly fee, collected from each home served by a wastewater treatment plant. Commercial and industrial users also pay \$2.50 per EDU (equivalent dwelling unit). Septic users pay a \$30 annual fee that is used for septic system upgrades and cover crops. See <http://www.mde.state.md.us/Water/CBWRF/index.asp>. Presently, because of high demand, Bay Restoration Fund monies are available only for failing systems in the Critical Area. See <http://www.aahealth.org/a2z.asp?ID=208>. MDE has waitlisted other applications and will reassess the availability of funding for other priorities by July 1, 2010. <http://www.mde.state.md.us/Water/CBWRF/osds/>.

Lack of Funding and Resources. The Attorney General was repeatedly told that lack of funding for environmental priorities and lack of resources to enforce the laws contribute to environmental problems within the watershed. According to one local official, part of the funding deficiency stems from insufficient enforcement. By way of example, he mentioned that in 2008, Anne Arundel County imposed more than \$88,000 in fines for zoning violations, however, only \$11,350 were actually collected.

Public Awareness, Education and Involvement. The community expressed a general concern that many citizens simply do not understand the complex collection of laws designed to protect the waterways. In particular, they cited the following:

- **Horse Owners and Hobby Farmers.** Apparently, horse owners and hobby farmers often lack environmental awareness and education, resulting in overuse of land, overgrazing, and erosion.

- **Boat Discharge.** Several participants felt that some boaters are not aware that marine sanitation devices that treat human waste for bacteria do not remove nutrients that can be harmful to aquatic life.



Private boat mooring on the West River

- **Swimming Conditions.** The Anne Arundel County Department of Health recommends against swimming in rivers and creeks within 48 hours after a rainfall, when bacteria levels from runoff can be high.⁸⁸ During the town hall meeting, community members worried about inadequate warning of such potentially harmful conditions. An individual suggested posting warning signs on beaches to inform the public.
- **Community Involvement and Investment.** Efforts to involve the community are important to foster public investment in the rivers and their health. For example, the West/Rhode Riverkeeper sponsors free kayaking at Discovery Village during the summer.⁸⁹

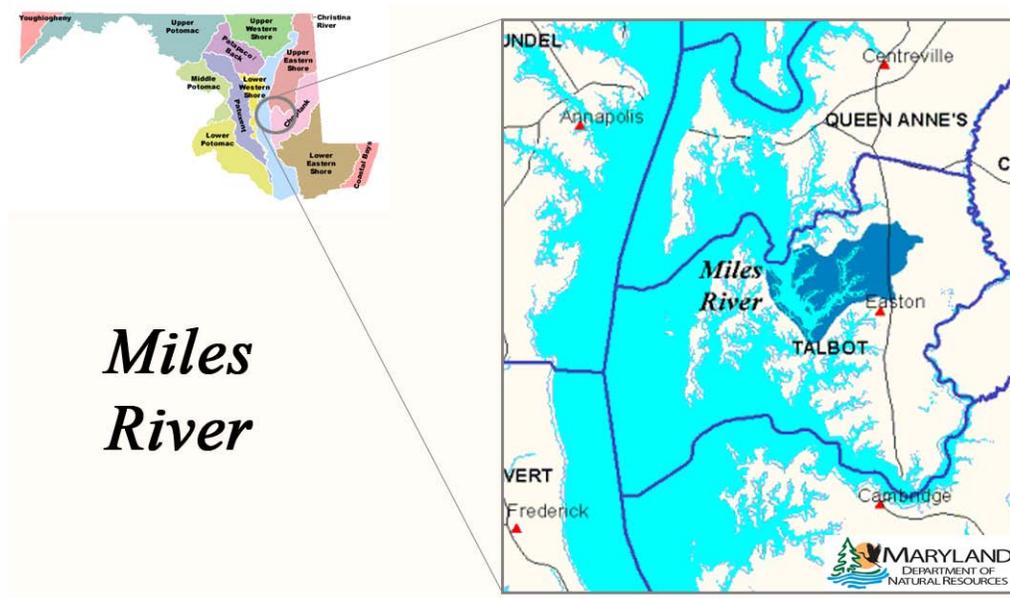
⁸⁸ See <http://www.aahealth.org/a2z.asp?id=110>.

⁸⁹ See <http://www.westrhoderiverkeeper.org/images/stories/news/newsletters/PDF/2009/wrr-nl-0903.pdf> (p. 6).

Concerned citizens who want to become involved often do not know where to report environmental and zoning violations. A participant at the town hall meeting suggested a central call-in number to direct callers with complaints or tips to the appropriate agency.

Anne Arundel County investigates anonymous zoning complaints.⁹⁰ In June 2009, a county council member introduced a bill to eliminate the ability to file a complaint anonymously.⁹¹ Many local residents worry that such a measure would discourage citizen reporting.

CHAPTER THREE: MILES RIVER



I. Background

The Miles River watershed is located in southern Talbot County, Maryland. It is part of the Upper Eastern Shore watershed basin,⁹² which includes the Miles, Chester, Elk, Bohemia, Sassafras, and Northeast Rivers.⁹³

The Miles River watershed consists of 34,560 acres covering 54 square miles of land and water in the Coastal Plain of Maryland.⁹⁴ The Miles River watershed has approximately 96 miles of streams with 39 miles of land bordering streams covered by forest, wetlands, and brush;

⁹⁰ See

<http://www.aacounty.org/IP/FAQs/ZoneEnforcement.cfm?CATID=38418&DISPLAYMODE=SubPage#38445>.

⁹¹ See, e.g., <http://www.eyeonannapolis.net/2009/06/15/zoning-for-dollars/>.

⁹² <http://mddnr.chesapeakebay.net/wsprofiles/surf/prof/wsprof.cfm?watershed=02130502>.

⁹³ http://dnr.maryland.gov/bay/tribstrat/upper_east/up_east_shore.html.

⁹⁴ <http://www.dnr.state.md.us/irc/docs/00013835.pdf> (p. 2).

about 16 miles covered by development; and 41 miles covered by agricultural land.⁹⁵ About 60 percent of the land in the Miles River watershed is agricultural; 32 percent is forest and brush; and seven percent is developed. There are currently only about 326 acres, or one percent of the watershed, of remaining wetlands.⁹⁶ Approximately 3,029 acres of land within the Miles River watershed are within the 100-year floodplain, which extends the full length of the Miles River. Floodplains present conditions that limit intensive use, as well as opportunities for maintenance or restoration of natural vegetation, habitat and water quality.⁹⁷ Several creeks empty into the Miles River, including Leeds Creek, Hunting Creek, Goldsborough Creek, Glebe Creek, and Potts Mill Creek.⁹⁸

Although UMCES does not issue an independent report card for the Miles River, the Miles, as previously noted, is within the Upper Eastern Shore, which received a D in the 2009 UMCES report card.⁹⁹ In 2008, the Talbot County Creekwatchers issued a Water Quality Monitoring Report that identified seven indicators of water quality and found the Miles River “Unsatisfactory” in every category surveyed: Water Clarity, Total Nitrogen, Total Phosphorus, Dissolved Oxygen, Oxygen Saturation, Acidity, and *Chlorophyll a* levels.¹⁰⁰

In 1998, as part of Maryland’s 1998 Clean Water Action Plan, the State identified the Miles River watershed as one of the State’s bodies of water that did not meet water quality standards. Thereafter, MDE and Talbot County formed a partnership to develop a Watershed Restoration Action Strategy. A 2005 Stream Corridor Assessment Survey conducted as part of that strategy found 66 potential environmental problem sites, including inadequately forested stream buffers, pipe outfalls, erosion sites, channel alterations, and fish barriers.¹⁰¹

The Miles River has been and continues to be a major shellfish harvesting area.¹⁰² However, due to high levels of nutrients, sediments, and fecal coliform, the river has been on the “impaired waters” list maintained by MDE since 1996.¹⁰³ In 2004, fecal coliform impairment prompted MDE to identify restricted shellfish harvesting areas in the mainstem of the river, and in 2006, the restricted area was extended downstream due to fecal coliform impairment.¹⁰⁴

⁹⁵ <http://www.dnr.state.md.us/irc/docs/00012410.pdf> (p. 20).

⁹⁶ *Id.* at p. 14, Table 6. The percentages of agricultural and forest land use are reported elsewhere to be about 53.6 and 26.7 percent, respectively. *See*

[http://www.mde.maryland.gov/assets/document/Miles%20River_071905_final\(2\).pdf#Miles_River_Final_TMDL](http://www.mde.maryland.gov/assets/document/Miles%20River_071905_final(2).pdf#Miles_River_Final_TMDL) (p. 5).

⁹⁷ <http://www.dnr.state.md.us/irc/docs/00012410.pdf> (pp. 19-20).

⁹⁸ *See* Miles River Watershed Characterization, MDE, April 2006, at p. 53, *available at* <http://www.dnr.state.md.us/irc/docs/00012410.pdf>.

⁹⁹ *See* <http://www.eco-check.org/reportcard/chesapeake/2009/>. The region received a D in 2008 and 2007, and a D+ in 2006. *See* <http://www.eco-check.org/reportcard/chesapeake/2008/>, <http://www.eco-check.org/reportcard/chesapeake/2007/> and <http://www.ecocheck.org/reportcard/chesapeake/2006/>, respectively.

¹⁰⁰ <http://www.talbotrivers.org/creekwatchers2008.pdf> (p. 13).

¹⁰¹ <http://www.dnr.state.md.us/irc/docs/00013835.pdf> (p. 13).

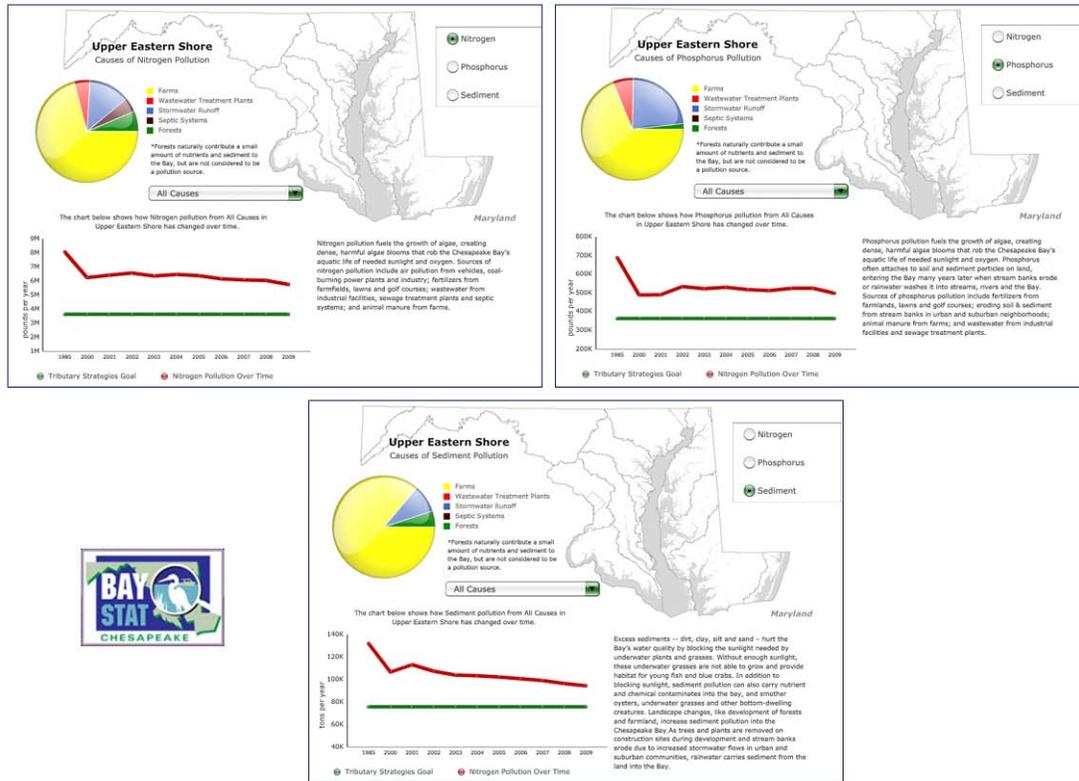
¹⁰² <http://www.dnr.state.md.us/irc/docs/00012410.pdf> (p. 11).

¹⁰³ [http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters\(1\).pdf](http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters(1).pdf) (p. 14). *See* n. 22, *supra*.

¹⁰⁴ *See*

http://www.mde.maryland.gov/Programs/WaterPrograms/TMDL/Pub_Notice/TMDL_PN_MilesExtended_FC.asp.

The charts shown below depict the major pollution sources of nitrogen, phosphorus and sediment load on the Upper Eastern Shore, including agriculture, wastewater treatment plants, stormwater runoff, septic systems, and forests.¹⁰⁵



II. Active Enforcement Efforts and Pending Matters

Prior to conducting the Miles River watershed audit, the Office of the Attorney General identified a number of significant environmental matters, including the following:

Development Projects. Several proposed developments in the watershed have attracted considerable public attention. These include:

- Miles Point.** Miles Point is a proposed development on the western end of the town of St. Michaels. As planned by the developer, the project would have 10,000 square feet of commercial space and 350 to 380 residential units, including live-work units with ground floor retail and townhomes. It would also have a bed and breakfast inn, a performing arts center, a clubhouse with a pool, a public park, and a pond.¹⁰⁶ The plan also included a controversial marsh creation project, which was vocally opposed by local residents. Only

¹⁰⁵ <http://www.baystat.maryland.gov/sources.html>.

¹⁰⁶ <http://www.dpz.com/pdf/9739-Project%20Description.pdf>.

the marsh creation project was subject to the Wetlands Act and Board of Public Works (“BPW”) approval.¹⁰⁷ After a nearly 17-month application review process, including two public informational hearings, MDE submitted a favorable Report to the BPW on November 29, 2006, and the Board issued the license. MDE and the BPW concluded that the proposed project will protect the shoreline of Miles Point, as well as improve water quality by stopping sedimentation from shoreline erosion and provide additional habitat diversity at the same time. However, in response to citizens’ concerns about the new marsh allowing houses to be built closer to the water, MDE and the Critical Area Commission required the Miles Point developer to delineate the mean high water mark based on pre-marsh creation and measure the Critical Area buffer from that mark.

The project has been on hold as a result of ongoing litigation. Concerned neighbors filed separate legal challenges to the Town’s approval of the growth allocation and to the CAC’s approval of the same growth allocation as a refinement to the Town’s Critical Area program.¹⁰⁸ In the first case, the Circuit Court for Talbot County affirmed the Town’s action; in the second, it granted the CAC’s motion to dismiss the complaint for failure to state a claim upon which relief may be granted. Both cases have been appealed to the Court of Special Appeals.

- **Chesapeake Reach.** Chesapeake Reach is a 2.99 acre, nine-lot residential subdivision located within the Town of St. Michaels. The developer requested a growth allocation to change the Critical Area designation from “Limited Development Area” to “Intensely Developed Area.”¹⁰⁹ There was some controversy over the potential for flooding and about the stormwater management proposed for the project. The request for growth allocation was approved by the town commissioners on March 25, 2009,¹¹⁰ and thereafter reviewed by the CAC. The CAC approved the growth allocation after holding a panel hearing in St. Michaels, which was attended by concerned citizens, and a meeting of the full commission.
- **Hattons’ Garden Farm.** Hattons’ Garden Farm is a larger project involving a growth allocation request to change 39.5 acres of Critical Area land use designation from “Resource Conservation Area” to “Limited Development Area.” This project had substantial citizen input, which the developer heeded, and it was approved without controversy.

MDE v. Primitive Wood Design, LLC. In December 2008, following an anonymous tip, MDE conducted an inspection of the Primitive Wood Design facility in Talbot County. Inspectors found stockpiles of old, rusted 55-gallon drums and cans, some of which were open, punctured and leaking. There were spillage and waste residues found throughout the site. All of the containers appeared to have been onsite for years, and none was marked with the

¹⁰⁷ When construction occurs in environmentally sensitive state wetlands, the Board of Public Works must approve the project and issue a license. COMAR 23.02.04.00 *et seq.* (2010).

¹⁰⁸ See n. 109, *infra*; see also n. 31, *supra*.

¹⁰⁹ The Critical Area Act imposes restrictions on the number of acres a local jurisdiction may allow for growth allocation in the Critical Area. See MD. CODE ANN., NAT. RES. § 8-1808.1 (2010).

¹¹⁰ See <http://www.townofstmichaels.com/docs/land/Windward%20Investments%20Decision%20-%20203-25-09.pdf>.

required dates of accumulation or with hazardous waste labels. Testing confirmed that the substances were controlled hazardous substances. MDE filed an administrative complaint against the defendants, a wood refurbishing business and its owner, for various hazardous waste disposal and solid waste disposal violations. That complaint was pending at the time of the Attorney General's audit.¹¹¹

Allen Family Foods. This ongoing MDE matter involves the spray irrigation of effluent, in violation of the industrial National Pollution Discharge Elimination System ("NPDES") permit.¹¹²

Wastewater Treatment Plants. MDE permits, regulates and inspects wastewater treatment facilities. Several wastewater treatment plants that discharge into the Miles River were recently found to be in violation of their permits.¹¹³ These included:

- **St. Michaels.** In June 2009, the Talbot County Region II Wastewater Treatment Plant in St. Michaels exceeded its monthly fecal coliform limitation. The cause was attributed to possible contamination of the effluent trough or deterioration of the ultra violet disinfection bulbs. The bulbs were replaced in July 2009 and the plant has since been compliant with its permit limits.¹¹⁴
- **Hog Neck Golf Course.** Located in Easton, the Hog Neck Golf Course¹¹⁵ has been in violation of the spray irrigation buffer requirements of its discharge permit. MDE is seeking a consent order with Talbot County that would require the upgrade of the Hyde Park treatment plant, which discharges to the Hog Neck storage lagoons. The minimal upgrade would include tertiary treatment that would allow Hog Neck to spray irrigate in compliance with its permit.
- **Calhoon MEBA.** The Calhoon MEBA Engineering School is a private maritime educational institution located in Easton. At a recent inspection, its wastewater treatment facility was found in violation of pH and fecal coliform limits. In addition, although the permit specified sampling of monitoring wells, the facility instead sampled observation wells around the lagoon/holding pond structure. The school has now installed a recirculation line from the holding pond to allow for sampling in compliance with permit limits.

¹¹¹ The Environmental Crimes Unit of the OAG also initiated a criminal investigation. See Chapter V, *infra* at p. 47.

¹¹² The industrial surface water discharge permit is a combined state and federal permit issued under the National Pollutant Discharge Elimination System ("NPDES") for industrial facilities that discharge to state surface waters. The permit is designed to meet federal effluent guidelines and to ensure the discharge satisfies state water quality standards. See <http://www.mde.maryland.gov/assets/document/permit/2008PermitGuide/WMA/3.01.pdf>.

¹¹³ Because wastewater treatment plants discharge into state waters, they must have permits which impose limits on nutrients and other pollutants, including fecal coliform bacteria. See <http://www.mde.maryland.gov/assets/document/permit/2008PermitGuide/WMA/3.04.pdf>.

¹¹⁴ The St. Michaels wastewater treatment plant was operated under a contract with the Maryland Environmental Service ("MES"). It was upgraded to an Enhanced Nutrient Removal ("ENR") system in early 2008. See http://www.talbotcountymd.gov/index.php?page=PW_Wastewater_Treatment. This was the first violation since the new plant went online. On June 30, 2009, plant operations were turned over to Talbot County.

¹¹⁵ <http://www.hogneck.com/golf/proto/hogneck/index.htm>.

- **Martingham Utilities Cooperative.** The Martingham Utilities Cooperative (“MUC”) is a privately owned water and wastewater treatment facility serving the Harbourtown Golf Resort near St. Michael’s. In 2008, after arsenic levels in drinking water exceeded acceptable limits, MUC installed a new arsenic removal system.¹¹⁶

The wastewater treatment process uses a lagoon treatment system, and then MUC uses the treated wastewater to spray irrigate the golf course. During an inspection in 2009, MDE found vegetation growing on the sides of the lagoons, which are elevated above residences. In August 2009, after a meeting between MDE and Talbot County officials, the county agreed to remove the vegetation, quarterly inspect the lagoons for seepage, and perform a semi-annual inspection.

Agriculture. The Department of Agriculture reports that most of the farms in the Miles River watershed are grain operations that do not keep animals and therefore are not required to implement nutrient management plans. There are 19 large agricultural operations, covering 18,937 acres, which are subject to the nutrient management law. Although most of these farms are in compliance, MDA is pursuing three current violations, two involving expired plans and the other faulty record keeping.¹¹⁷

III. The Miles River Audit, September 23, 2009: What the Attorney General Learned

The Attorney General’s audit of the Miles River watershed was conducted on September 23, 2009. Nine members of the Office of the Attorney General, including the special assistant for the environment and the principal and deputy counsel for the Maryland Department of the Environment accompanied the Attorney General to Easton and St. Michaels, Maryland.

The day began with the Attorney General meeting in Easton with elected officials from Talbot County, including members of the legislative delegation, the state’s attorney, clerk of the court, register of wills, sheriff and county commissioners, as well as town officials from St. Michaels, Oxford, and Easton. After that meeting, the Attorney General boarded the *Mr. Jim* at the Chesapeake Bay Maritime Museum (“Museum”) in St. Michaels and travelled downstream along the Miles River. He viewed the site of the proposed Miles Point development project before heading back upstream to see Hunting Creek.



Attorney General Gansler is briefed by a member of the Maritime Museum staff.

¹¹⁶ See <http://www.mde.state.md.us/assets/document/watersupply/2009ccr/Talbot/0200004%20Martingham.pdf> (p. 2). The facility was operated by the MES until July 31, 2009, when Talbot County took over operations.

¹¹⁷ MDA provided this information to the OAG.

In the afternoon, the Attorney General visited an environmental science class at St. Michaels Mid-High School. From there, he returned to the Museum, where he saw a living shoreline project and was briefed on the environmental benefits of a living shoreline. The Attorney General then met with a group of environmental leaders from the Choptank River Eastern Bay Conservancy, the Choptank Riverkeeper, the Talbot Preservation Alliance, the Talbot Soil Conservation District, Talbot County Creekwatchers, Talbot Rivers Protection Association, Environmental Concern, Bay Hundred Foundation, and the Natural Resources Conservation Service. Lastly, the Attorney General held a town hall meeting hosted by the Museum that was attended by approximately 60 interested citizens.

During the course of the day, the Attorney General heard about a wide range of environmental issues and concerns, including those listed below.

The Chesapeake Bay Nitrogen Reduction Act of 2009. During the 2009 legislative session, the General Assembly passed the Chesapeake Bay Nitrogen Reduction Act of 2009.¹¹⁸ The Attorney General supported this bill, which requires all new and replacement septic systems installed in the Critical Area to use nitrogen removal technology. The act also authorizes MDE to assist home owners in paying the difference between the cost of a conventional system and the cost of a nitrogen-removing system using available monies from the Chesapeake Bay Restoration Fund.¹¹⁹ During the meeting with elected officials, the Attorney General heard that the implementation of the program has experienced some setbacks. A key concern is that the contractors performing the septic upgrade are not receiving payment. One official inquired whether MDE could bypass the homeowner and pay the contractor directly.

There is also a concern about the overall funding for the septic upgrades program.¹²⁰ Specifically, Talbot County was uncertain whether it would receive any funding for 2010 because of a five to six month backlog with the program.

Oyster Harvesting Violations. The oyster population in the Miles River watershed has been seriously depleted. In 1974, the watershed boasted an annual oyster harvest of half a million bushels. In 2004, only 50 bushels were harvested from the Miles River. The Attorney General heard that oyster restoration reefs are poached in the middle of the night, and local residents expressed concern about the lack of enforcement and prosecution of these oyster violations. Apparently, there is a new program still in the planning stages that will train local prosecutors to effectively prosecute offenders and educate area judges about these types of cases.

Fertilizer as a Road Deicer. Local residents are concerned that fertilizers are being used on roads to melt snow as an inexpensive alternative to salt.¹²¹ In some instances, urea has

¹¹⁸ See <http://mlis.state.md.us/2009rs/bills/sb/sb0554t.pdf>, effective October 1, 2009.

¹¹⁹ See nn. 86-87, *supra*.

¹²⁰ See n. 87, *supra*.

¹²¹ Salt and other deicers also contain chemicals and nutrients that can be harmful to the environment. MDE has outlined sensible snow and ice management strategies on its website. See http://www.mde.maryland.gov/assets/document/WINTER_2.pdf.

been applied to frozen ground. Runoff from these applications, which are rich in nutrients and chemicals, can pollute waterways.

Compliance Assistance. When a minor infraction is discovered during an MDE inspection, the inspector may recommend a way to correct the violation, or the facility may voluntarily make the correction. If the facility corrects the minor violation without a formal enforcement action and an inspector documents the correction, this constitutes “compliance assistance.”¹²² A number of participants voiced concern about MDE’s approach to enforcement actions and an apparent decrease in compliance assistance. While MDE has begun implementing a vigorous enforcement initiative, inspectors continue to write detailed reports and tell facilities how to get back into compliance. There was a general feeling that greater assistance with coming into compliance would be more beneficial than increased enforcement, particularly with respect to municipal wastewater treatment plants.

Wastewater Treatment Plant Equipment Failures and Spills. Members of the community complained about chronic spills and overflows at area wastewater treatment plants caused by major rainstorms and equipment failure. In some situations, a municipality or private owner is the permit holder and the Maryland Environmental Service is the facility operator.¹²³ The Attorney General was asked whether MES could be held responsible for these discharges, along with the municipality or owner. While there are no exempt violators, it is more common for MDE to enforce against the permit holder rather than the facility operator. Accordingly, it is thought that municipalities face a much lower penalty structure than do other violators.

Living Shorelines. The Chesapeake Bay Maritime Museum, located on the banks of the Miles River in St. Michaels, is home to a successful, new living shoreline, which the Attorney General observed. The museum’s living shoreline replaced a traditional impervious surface that dumped stormwater runoff directly into the Miles River. In the past, a rock culvert would have been used to drain the runoff. Instead, the grasses in the living shoreline filtration system act like a sponge, filtering water running off from the impervious parking lot and walkways before it migrates into the river. The filtration system is so effective because



Living shoreline at the Chesapeake Bay Maritime Museum

¹²² http://www.mde.maryland.gov/assets/document/enforcement_compliance_process_faq.pdf.

¹²³ Prior to 2009, MES operated several wastewater treatment plants in the Miles River watershed. However, at the time of the audit, MES operated only one plant, the Hyde Park Mobile Home Park near the Easton Airport.

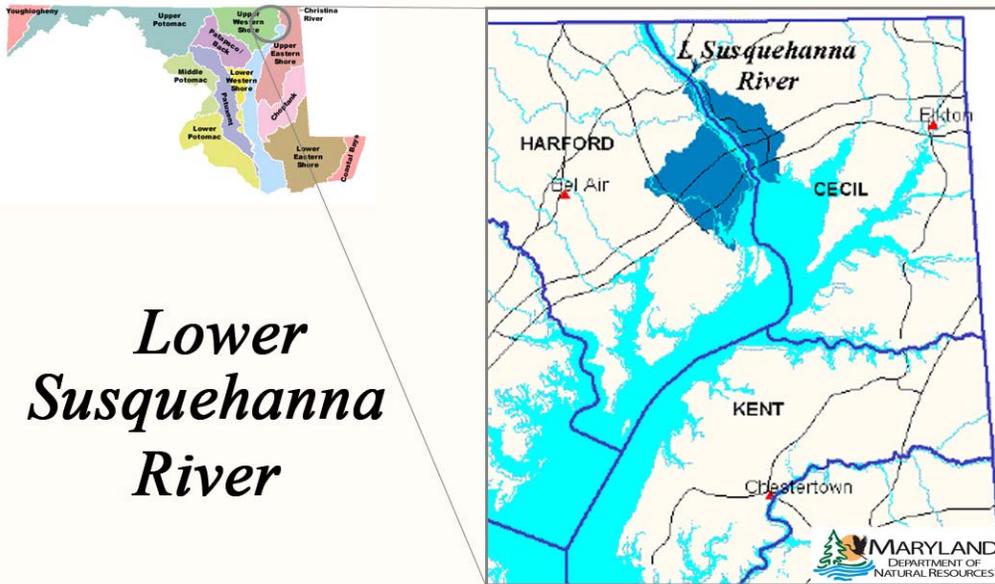
there is six times more biomass underground than what is actually visible above ground. With such a strong foundation, the living shoreline's tall grasses withstand both wave and storm activity. In just one season, the living shoreline has shown immediate signs of shoreline habitat restoration for menhaden, blue crabs and even a green heron.

Wildlife and Water Quality. The Attorney General was advised that geese and other wildlife play a role in the degradation of the Miles River. Both MDE and the Talbot County Creekwatchers use tools to distinguish between domestic, wild and human feces found in surface waters. In order to target particular sources of pollution, it was suggested that it may be helpful to further distinguish between cow, poultry and horse manure.

Lawn Fertilizer and Critical Area Buffers. There is a disparity between the regulation of lawn fertilizers and farm fertilizers. The Critical Area Act requires farmers to have at least a 25 foot buffer between fertilized land and surface waters. However, residential homeowners are under no limitation for how, when and where their lawns are fertilized, despite the fact that lawn fertilizers are known to contain nutrients that can be harmful to the Bay. A participant suggested that lawns and farms in the Critical Area should be regulated in the same way.

Conowingo Dam. Located in northeast Maryland on the Susquehanna River, the Conowingo Dam collects enormous quantities of silt, sediment and debris that flow down the river. After a heavy rainfall and when the floodgates are opened, some of this debris and sediment flows over the dam and into the Chesapeake Bay and its tributaries. The Dam is reaching capacity and local residents are concerned about the adverse impact of downstream water quality should the build-up be released during a major storm event.

CHAPTER FOUR: THE LOWER SUSQUEHANNA RIVER



Lower Susquehanna River

I. Background

The Lower Susquehanna River flows from Pennsylvania into northern Maryland and then south from the Conowingo Dam into the headwaters of the Chesapeake Bay.¹²⁴ The Lower Susquehanna River basin is located in Cecil and Harford counties in Maryland,¹²⁵ and includes Octoraro Creek, Deer Creek, and Broad Creek.¹²⁶

The Lower Susquehanna River is part of the Susquehanna River, which originates near Cooperstown, New York and flows 444 miles through Pennsylvania and Maryland before emptying into the Chesapeake Bay at Havre de Grace, Maryland.¹²⁷ The Susquehanna is the largest tributary of the Bay and annually provides about 45 percent of the freshwater, 40 percent of the sediment, 39 percent of the nitrogen, and 24 percent of the phosphorus entering the Bay.¹²⁸ The Susquehanna River basin includes the Upper Susquehanna, Chemung, Middle Susquehanna, West Branch Susquehanna, Juniata, and Lower Susquehanna sub-watersheds.¹²⁹ In 2005, the Susquehanna River was designated the nation's "Most Endangered" river, threatened by aging sewer systems and dam construction along the river.¹³⁰ Each day, the Susquehanna River adds

¹²⁴ http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/ApprovedFinalTMDL/WQA_final_lowersusquehanna_Cd.asp.

¹²⁵ The watershed also includes very small portions of Carroll and Baltimore counties. See <http://www.lowerSusquehannariverkeeper.org/publications/SubbasinDescription.pdf>.

¹²⁶ <http://dnr.maryland.gov/streams/pubs/susquehanna.pdf>. Deer Creek has been designated a "Scenic and Wild River." See MD. CODE ANN., NAT. RES. § 8-401 *et seq.* (2010).

¹²⁷ http://www.americanrivers.org/assets/pdfs/mer-past-reports/AR_MER_20054625.pdf.

¹²⁸ <http://www.dnr.state.md.us/irc/docs/00001984.pdf> (p. 5).

¹²⁹ See <http://www.srb.net/subbasin/subbasin.htm>.

¹³⁰ http://www.americanrivers.org/assets/pdfs/mer-past-reports/AR_MER_20054625.pdf.

22 to 25 billion gallons of water containing pollutants to the Chesapeake Bay, all of which passes through the Lower Susquehanna River.¹³¹

The Maryland portion of the Lower Susquehanna River is approximately 10 miles in length.¹³² The watershed covers 282 square miles¹³³ consisting of approximately 19,885 acres.¹³⁴ About 45 percent of the land in the Lower Susquehanna watershed is agricultural, 36 percent is forested, 16 percent is urban, and 3 percent is wetlands.¹³⁵ Of the six sub-basins in the Susquehanna River watershed, the Lower Susquehanna basin, including the portion in Pennsylvania, is the most developed.¹³⁶ Within the Maryland portion, urban development is a minor component, but it is the most agriculturally developed area in the State.¹³⁷

The Lower Susquehanna River is on the “impaired waters” list maintained by MDE,¹³⁸ and is part of the Upper Western Shore, which received a B- on the 2009 UMCES report card.¹³⁹ In 1999, the Department of Natural Resources issued a comprehensive Biological Stream Survey of the Lower Susquehanna basin.¹⁴⁰ The results of the survey showed that the streams in the watershed ranged in quality from degraded to relatively healthy, and although all the streams sampled met water quality standards, there was evidence of elevated nutrient levels, including nitrogen, and biological impairment.¹⁴¹

In late 2008, DNR confirmed the presence of zebra mussels,¹⁴² a non-native, invasive species, in the Lower Susquehanna River. Free-swimming zebra mussel larvae readily stick to any hard surface and begin to grow. As they grow, the mussels can clog water systems, encrust boat bottoms, damage power plant intakes, and kill native mussels, including endangered species.¹⁴³

¹³¹ See http://www.lowersusquehannariverkeeper.org/geo_pop.html.

¹³² http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/ApprovedFinalTMDL/WQA_final_lowersusquehanna_Cd.asp.

¹³³ <http://dnr.maryland.gov/streams/pubs/susquehanna.pdf>. Elsewhere, this figure is reported to be 275 square miles. See <http://www.dnr.state.md.us/irc/docs/00001984.pdf> (p. 5).

¹³⁴ <http://mddnr.chesapeakebay.net/wsprofiles/surf/prof/wsprof.cfm?watershed=02120201>.

¹³⁵ *Id.*

¹³⁶ <http://www.srb.net/subbasin/lowersus.htm>.

¹³⁷ See <http://dnr.maryland.gov/streams/pubs/susquehanna.pdf> (p. 5).

¹³⁸ [http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters\(1\).pdf](http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters(1).pdf) (p. 1). See n. 22, *supra*. In 1996, the river was first identified as impaired by nutrients, suspended sediments, and cadmium, and in 2002, by polychlorinated biphenyls (“PCBs”) and impacts to biological communities. http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/ApprovedFinalTMDL/WQA_final_lowersusquehanna_Cd.asp.

¹³⁹ See <http://www.eco-check.org/reportcard/chesapeake/2009/>. The region received a B- in 2008, a B in 2007 and a D+ in 2006. See <http://www.eco-check.org/reportcard/chesapeake/2007/> and <http://www.ecocheck.org/reportcard/chesapeake/2006/>, respectively.

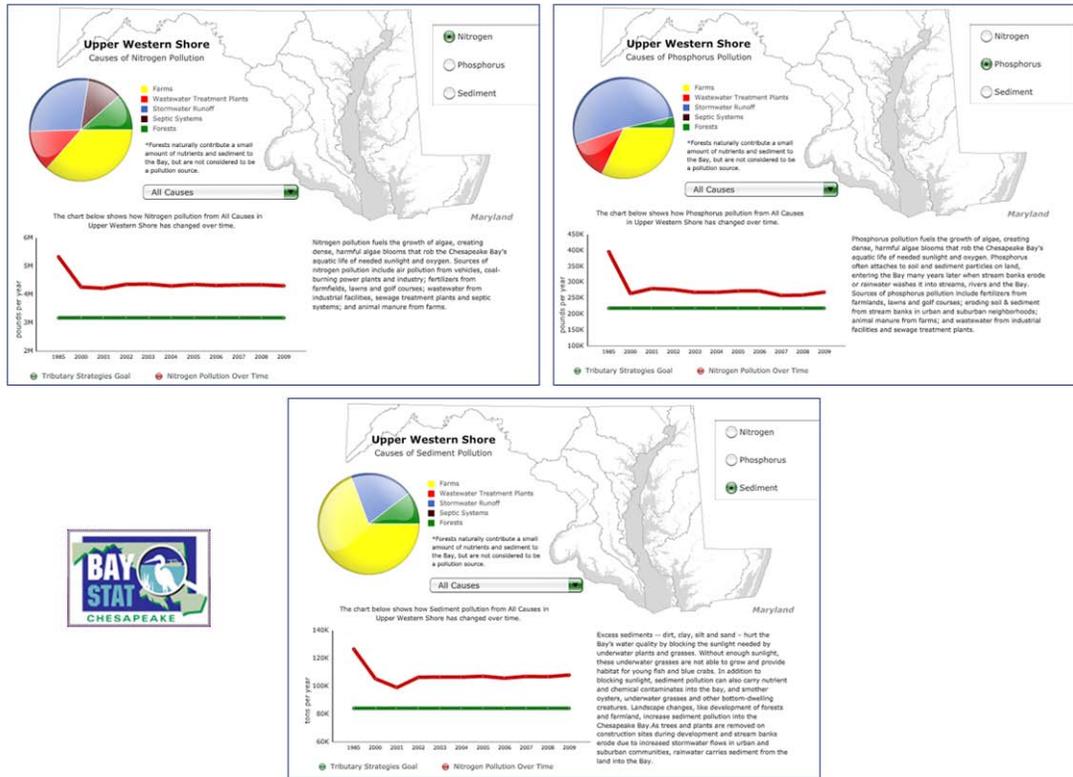
¹⁴⁰ See <http://www.dnr.state.md.us/irc/docs/00001984.pdf>.

¹⁴¹ *Id.* at p. 23.

¹⁴² Native to Eastern Europe, zebra mussels were introduced to the Great Lakes region in the 1980s through ballast water discharges, where they have caused great economic and environmental harm. <http://dnr.maryland.gov/irc/zebra/zmussell1.html>.

¹⁴³ <http://dnr.maryland.gov/dnrnews/pressrelease2008/120908.html>.

Sewage overflows, agricultural runoff, and development of forests and farmlands have contributed to the pollution in the Lower Susquehanna River watershed.¹⁴⁴ The charts below depict the major pollution sources of nitrogen, phosphorus and sediment load in the Upper Western Shore, including agriculture, wastewater treatment plants, septic systems, and forests.¹⁴⁵



II. Active Enforcement Efforts and Pending Matters

Prior to conducting the Lower Susquehanna River audit, the Office of the Attorney General identified a number of significant ongoing matters in the watershed, including the following:

State v. Sanders. Prosecuted by the Attorney General’s Environmental Crimes Unit, this criminal case arose out of the illegal burning of scrap tires and other solid waste by a farmer in Earleville in Cecil County. The farmer, William Sanders, had received a site complaint from MDE to remove scrap tires, abandoned house trailers and other solid waste to a permitted solid waste acceptance facility. In July 2008, when MDE inspectors visited the site, they discovered that large amounts of solid waste had been burned instead of removed. Sanders, who had a permit to burn only hedgerow, admitted to the burning. On July 30, 2009, he pleaded guilty in the District Court for Cecil County to illegally causing an open fire and burning scrap tires and

¹⁴⁴ See http://www.lowerSusquehannariverkeeper.org/geo_pop.html.

¹⁴⁵ <http://www.baystat.maryland.gov/sources2.html>.

other solid waste without a permit. Sanders was placed on probation, and ordered to pay \$942,000 to the Clean Air Fund and to assist in the removal of remaining solid waste to a permitted facility.

City of Havre de Grace Dump. The Havre de Grace Dump is located on the southwest bank of the Susquehanna River.¹⁴⁶ For many years, the site has been used as a disposal site, dumping soil, concrete and green waste.¹⁴⁷ On August 14, 2009, MDE filed a notice of violation¹⁴⁸ notifying the City that it was in violation of its NPDES permit¹⁴⁹ and sediment and erosion control plan, relating to grading and filling operations.

Monmouth Meadows. Monmouth Meadows is a subdivision in Abingdon in Harford County. In early 2009, a number of sediment pollution violations were discovered throughout the construction site, including lack of erosion and sediment controls, sediment traps filled without permission, and no logbook maintained for the more than 10 years the project has been in development. Although the developer was making some progress toward compliance, additional inspections in October and November 2009 revealed ongoing deficiencies.

David Lawrence Farm. Located in Whiteford in Harford County, the David Lawrence farm is subject to an existing consent order for violations of sediment pollution and erosion and sediment controls. The consent order also required an illegally constructed pond to be reconstructed to specification. In performing the pond reconstruction, the property owner failed to install appropriate sediment and erosion controls and caused sediment pollution of a stream that runs through the property.

Perryville Wastewater Treatment Plant. The Maryland Environmental Service supervises the water supply facility in Perryville, Cecil County. On March 6, 2009, when the plant was under construction, a town employee noticed that an old transformer was missing; the next evening, oil was smelled across the tracks from the plant. MDE's Emergency Response Program cleaned up the spilled oil and notified the Environmental Protection Agency ("EPA"). The EPA determined that a contractor working at the plant had removed the old transformer, which contained PCB oil, drained it at the plant, and sent the body of the transformer to a scrap metal recycler. The contractor was required to pay for the cleanup of the site of the plant.

McHale v. Rollins. This matter involves the construction of a swimming pool in the Critical Area buffer. On July 28, 2009, the Cecil County Board of Zoning Appeals granted a variance for the pool, which the Critical Area Commission, represented by the OAG, has appealed to the Cecil County Circuit Court.

¹⁴⁶ http://www.mde.maryland.gov/assets/document/brownfields/havre_de_grace_dump.pdf.

¹⁴⁷ Green waste is biodegradable, organic waste, including lawn clippings, garden plants and weeds, hedge and tree trimmings, branches, and leaves.

¹⁴⁸ A notice of violation is an enforcement action that provides the violator with the opportunity to take corrective action before more serious measures are undertaken by MDE.

¹⁴⁹ See n. 112, *supra*.

Agriculture. The Department of Agriculture regulates 144 farms in the watershed, covering 31,857 acres and supporting 2 million chickens, 4,755 dairy cows, 2,424 beef cows, and 694 horses. MDA has taken enforcement action against 38 operations for violations of the nutrient management plan requirements.¹⁵⁰

III. The Lower Susquehanna River Audit, December 9, 2009: What the Attorney General Learned

The Attorney General’s Lower Susquehanna River watershed Audit was conducted on December 9, 2009. Eleven members of the OAG including his special assistant for the environment, the Principal Counsel to the Maryland Department of the Environment, the Principal Counsel to the Department of Natural Resources and the Maryland Environmental Service accompanied the Attorney General to Port Deposit in Cecil County, Maryland and Darlington in Harford County, Maryland to visit the Conowingo Dam – which straddles Harford and Cecil Counties – and to learn about environmental issues related to the Lower Susquehanna River.

The Attorney General began the day at the University of Maryland’s Donaldson Brown Conference Center in Port Deposit, meeting with elected officials from Cecil and Harford counties, including a state senator and state delegate, members of the Cecil County Commission and Harford County Council, several mayors, the Cecil County State’s Attorney, and other city officials. Following that meeting, the Attorney General met with the Executive Director of PennFuture and the Lower Susquehanna Riverkeeper to discuss the persistent problem of downriver pollution into the Lower Susquehanna River caused by polluters in Pennsylvania. Then he departed Port Deposit for Darlington, where he and his staff were given a tour of the Conowingo Dam by Exelon Power Corp., which owns and operates the dam.



Attorney General Gansler tours Conowingo Dam.

After returning to the Donaldson Brown Conference Center, the Attorney General was briefed by the Executive Director of the Susquehanna River Basin Commission (“SRBC”). He then met with a broad cross-section of environmental leaders and conservationists, including representatives from PennFuture, SRBC, Cecil County Land Trust, Cecil County Soil

¹⁵⁰ This information was provided to the OAG by MDA.

Conservation District, Cecil County Office of Economic Development, Cecil County Board of Public Works, Public School Superintendents Association of Maryland, ACB on Deer Creek, NorthBay Adventure, and Eden Mill Nature Center. Finally, the Attorney General presided over a town hall meeting for local residents.

During the course of the day, the Attorney General heard from all of the above individuals and associations about environmental issues and concerns, many of which are unique to the Lower Susquehanna River watershed.

Conowingo Dam and the Threat of Episodic Pollution Events. Since initiating his environmental audits in April 2008, the Attorney General has heard concerns about the Conowingo Dam. Because it is strategically located just 10 miles from the headwaters of the Chesapeake Bay, the dam poses enormous environmental risks to the health of the Bay and its Maryland tributaries.

- **Conowingo Dam’s Energy and Water Output.** Conowingo Dam is one of the largest hydroelectric stations on the East Coast, with 11 power-generating turbines that produce over 550 megawatts of electricity annually, enough to power over 200,000 homes.¹⁵¹ Powering these turbines is the water of the Susquehanna River, the flow of which is controlled by the dam’s 50 crest gates.¹⁵² In addition to being a major power generator, Conowingo Dam also operates as a source of drinking water.¹⁵³ Baltimore City withdraws some of its drinking water from Conowingo Pond, the reservoir behind the dam.
- **Sediment Containment and Removal.** Because Conowingo Dam is located near the mouth of the Susquehanna River, sediment and debris that wash down the river from as far away as New York collect behind the dam’s north wall. Exelon estimates that roughly two thirds of the sediment that travels down the Susquehanna River is trapped behind the wall. This accumulated sediment passes through the dam at a large volume during major episodic pollution events like hurricanes. During Hurricane Agnes in 1972, for example, all of the dam’s crest gates were opened, and massive amounts of sediment and debris were released into the Chesapeake Bay, creating an environmental impact that was seen and felt for years. One of the reasons high-volume sediment release has such an impact on the Chesapeake Bay ecosystem is that it contains compounds that put marine plant, animal, and human life at risk. For example, the Susquehanna River Basin Commission conducted a study of the make-up of the sediment behind the Conowingo Dam, in partnership with the University of Maryland and the U.S. Geological Survey (“USGS”), and found high quantities of coal waste in the sediment (from coal mines in Pennsylvania), which raises serious environmental concerns.¹⁵⁴

¹⁵¹ See <http://www.exeloncorp.com/powerplants/conowingo/Pages/profile.aspx>.

¹⁵² A crest gate is akin to a flood gate. It operates to control the maximum surface elevation – or “crest” – of water being stored behind a dam wall or routed through a dam’s spillway. See, e.g., <http://www.enel.it/northamerica/BoottCrestGateHome.asp#1>.

¹⁵³ The Conowingo Dam is also on the “impaired waters” list maintained by MDE. [http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters\(1\).pdf](http://www.mde.state.md.us/assets/document/2008_IR_Category_5_Waters(1).pdf) (p. 1). See n. 22, *supra*.

¹⁵⁴ See *Comprehensive Analysis of Sediments Retained Behind Hydroelectric Dams of the Lower Susquehanna River*, SRBC, February 28, 2006, available at http://www.srb.net/pubinfo/techdocs/Publication_239/

Sediment behind the Conowingo Dam is currently at very high levels. This high level of built-up sediment is of particular concern when one considers that the Susquehanna River is one of the most flood-prone river basins in the United States, with devastating floods hitting it on average once every 14 years, the last in 1996. Moreover, the three dams upriver from the Conowingo Dam have reached their saturation points for sediment containment, so they do not have an ability to prevent sediment from traveling down toward the Bay. All of these factors point to the need for major environmental steps to be taken to prevent, or at least reduce, devastating impacts from a future episodic pollution event.

The Attorney General learned that one major logistical problem with sediment removal efforts is determining where to put the removed sediment. Even if Exelon had the capacity to remove all of the sediment behind the dam, it would need to find a place to put all of it, and there is an enormous amount of it. Exelon estimates that it would need to remove 20,000 rail cars of sediment per year – or 55 rail cars per day, 365 days per year – in order to keep up with the flow of sediment downriver. Moreover, the problem of sediment deposits behind the dam is an indefinite one; until sources of sediment can be combated, the Conowingo Dam will always be faced with problems of sediment build-up.



September 2004 sediment plume from the Susquehanna River enters the Chesapeake Bay.

Another issue with sediment removal is determining exactly how much sediment needs to be removed. Many experts think that the removal does not need to be 100 percent; after all, some level of sediment washing down rivers and streams is a natural occurrence, and in some ways helpful to the Chesapeake Bay. One participant in the day's discussions estimated that it would take \$2.5 million simply to figure out what to do with the sediment, and suggested that the Attorney General apply pressure on Exelon and other interested stakeholders, such as Baltimore City and the Chester Water Authority – two Dam beneficiaries – to fund such a study.

techreport239.htm. The SRBC notes that there are over 1,100 miles of streams in abandoned Pennsylvania coal mines that drain nitrogen-rich water directly into the Susquehanna River and, ultimately, the Chesapeake Bay.

- **FERC Relicensing.** In order to operate, Conowingo Dam must be licensed by the Federal Energy Regulatory Commission (“FERC”),¹⁵⁵ and its current license is set to expire in September of 2014. The SRBC views relicensing as a major opportunity to push Exelon to achieve more ambitious environmental goals. The last relicensing process was the impetus for the installation of fish lifts at the dam in order to help protect the local population of American shad, which migrate up the Susquehanna River to breed. For this relicensing round, the SRBC has recommended to FERC that it require Exelon to study sediment containment and removal in the next two years, as it gears up to renew its FERC license in 2014. Since the FERC license is a 30-year license, it is critical to build major environmental advances into its renewal; after license renewal, Maryland will lose its environmental leverage with Exelon for another 30 years.
- **Exelon’s Outlook on the Conowingo Dam’s Environmental Role.** Exelon officials take the view that environmental problems like sediment build-up behind the dam are “a watershed issue, not a dam issue.” Regarding sediment in particular, Exelon stresses that it did not cause the sediment to be built up behind the dam; the build-up is an accidental by-product of the dam’s location near the mouth of the Susquehanna River. Because the dam’s management of sediment happens near the end of that sediment’s journey from points north, Exelon thinks that environmental enforcement efforts should be focused on the contributors to pollution north of the dam, such as farms with unsustainable sediment output. Moreover, without the dam, much more sediment would have already traveled down into the Chesapeake Bay, so in a way it is fortunate that the dam exists where it does.

Regarding flooding more generally and the related problems that flooding causes, Exelon points out that the Conowingo Dam was not put in place to be a flood-control dam, but rather to be a run-of-the-river dam. Thus it does not and cannot hold back flood waters (as doing so would break the dam). Exelon notes that water levels can rise around the dam simply from power generation (*i.e.*, not just from storm events).

Pollution Related to Residential Development. Throughout the day, several community leaders and residents raised concerns about pollution related to residential development. These included concerns about over-use of fertilizer, over-use of water resources, and defects with current storm water management practices.

- **Water Resource Management.** The SRBC alerted the Attorney General to its concern that the rapid growth of certain communities, *e.g.*, in and around Aberdeen, Maryland, may eventually strain the water resources of nearby farmers. The SRBC developed a

¹⁵⁵ The Federal Energy Regulatory Commission is the federal agency in charge of interstate electricity sales and licensing, including licensing for hydroelectric power plants like the Conowingo Dam. Certain environmental standards must be met in order for a FERC license to be granted or renewed. *See* <http://www.ferc.gov/industries/hydropower/gen-info/licensing/guidance.pdf>. DNR also conducts reviews of existing power plants operating in Maryland, assessing their environmental impact. These reviews are performed by DNR’s Power Plant Research Program (“PPRP”). *See* <http://esm.versar.com/pprp/bibliography/sec4.htm> (listing PPRP reviews related to the Conowingo Dam); *see generally* http://www.dnr.state.md.us/bay/pprp/pp_brochure.html.

water resources management plan in 2006 for the Conowingo Pond,¹⁵⁶ but more can be done.

- **Stormwater Management.** Some residents noted that only certain counties, like Harford and Cecil counties, have stormwater management codes¹⁵⁷ and that if more were done to incentivize counties along the Susquehanna River and the Bay to develop similar codes, that could ensure more environmentally responsible residential development. Given that nitrogen from urban and suburban runoff into stormwater drains is an ever-present problem, such codes could at least help contain the problem. One environmental leader also recommended that the Attorney General work with MDE to achieve more rigorous compliance with stormwater permits.¹⁵⁸

Pollution from Out of State. As the Attorney General was reminded in his briefing by the Executive Director of the SRBC, Maryland contains only 1 percent of the land area connected to the Susquehanna. Most of the 4.2 million people who live in the Susquehanna River Basin live north of the Mason-Dixon Line. This means that most of the human-driven pollution into the Susquehanna River comes from people living in Pennsylvania and, to a lesser extent, New York. Accordingly, during the day the Attorney General was encouraged to consider ways of pursuing litigation against out-of-state polluters into the Susquehanna River. In his briefing by the Executive Director of PennFuture and the Lower Susquehanna Riverkeeper, the Attorney General learned about ongoing efforts to file lawsuits against industrial plants for violating their federal pollution permits¹⁵⁹ and against concentrated animal feeding operations (“CAFOs”) for violating their CAFO permits.¹⁶⁰ PennFuture’s efforts involving CAFO pollution are helped, in part, by their ability to pull entire CAFO records to make sure that CAFO permits are being timely renewed, and by their ability – unmatched in Maryland – to view the CAFOs’ nutrient management plans.¹⁶¹

- **Plain Sect Farms.** PennFuture and the Lower Susquehanna Riverkeeper view Plain Sect (Amish, Mennonite, etc.) farms as posing a unique pollution problem. Because Plain Sect farmers do not wish to participate in government programs, they are less likely to respond to government-backed incentives to be environmentally responsible, for instance by submitting NMPs. Many of these farmers practice old-fashioned drainage techniques, which include locating pastures near waterways and not fencing in livestock, such that

¹⁵⁶ <http://www.srbc.net/planning/conowingo.htm>.

¹⁵⁷ See <http://www.ccgov.org/uploads/PublicWorks/WaterSewer/stormwater.pdf> and <http://www.ecode360.com/?custId=HA0904> Chapter 214.

¹⁵⁸ See http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/storm_gen_permit.asp; n. 41, *supra*.

¹⁵⁹ See <http://cfpub.epa.gov/NPDES/>; n. 112, *supra*.

¹⁶⁰ See <http://www.epa.gov/guide/cafo/>. In October 2008, the EPA issued a rule requiring CAFO owners to apply for a permit if they discharge or propose to discharge directly to U.S. waters and to submit NMPs to control manure application as part of the permit application. See <http://yosemite.epa.gov/opa/admpress.nsf/dc57b08b5acd42bc852573c90044a9c4/eafce2ca2b2eedef300607fef!OpenDocument>.

¹⁶¹ See n. 39, *supra*. In Maryland, nutrient management plans submitted to MDA are considered largely confidential. The law requires MDA to maintain a summary of each plan for 3 years “in a manner that protects the identity of the individual for whom the plan was prepared.” MD. CODE ANN., AGRIC. § 8-801.1(b)(2) (2010).

the livestock's waste is deposited along the banks and directly into Susquehanna River tributaries. Many of these farmers also operate in Lancaster County, which borders both Maryland and the Susquehanna River.

- **Legal and Regulatory Issues.** While agricultural permitting is generally good in Pennsylvania, there is an overabundance of manure produced by many Pennsylvania farmers. These farmers may use the “manure export loophole,” which allows them to produce a lot of manure as long as they haul some of it away. Unfortunately, much of this manure gets exported to other places within the same watershed. Thus, the problem of overabundant manure is simply getting moved around, not reduced.

Another loophole used by farmers along the Susquehanna River Basin is the “headcount loophole.” A farm is required to meet more stringent environmental standards when it is designated as a CAFO, but CAFO designations are tied to a headcount of the number of heads of cow, hog, etc., at a farm. Apparently farms routinely evade the CAFO requirements by deliberately raising a number of animals just shy of that headcount figure. One Pennsylvania hog farm was singled out as a terrible polluter that currently goes unregulated as a CAFO because it maintains 2,499 hogs instead of 2,500, and a hog farm needs at least 2,500 hogs to be considered a CAFO (and not simply an AFO) for regulation purposes.¹⁶²

Additionally, Pennsylvania has a very strong right-to-farm law – the strongest in the nation, in fact – and so its farmers are protected from any and all nuisance suits unless they are violating the Pennsylvania Clean Streams law or the federal Clean Water Act. This Pennsylvania law, known as Act 38,¹⁶³ makes it much more difficult to hold polluting farmers accountable through traditional methods of law enforcement. It even goes so far as to allow farm owners or operators to ask the state Attorney General to review local ordinances that they feel restrict normal agricultural operation or ownership, thus restricting legislative methods of regulating farm pollution.

- **Geographic Issues.** Out-dated agricultural practices in the Susquehanna River Basin are more problematic for water pollution than they would be elsewhere because several parts of the basin are limestone-rich. Because limestone prevents seepage, water in such areas tends to drain directly into the nearest river or tributary, rather than dissipate into the immediate environment. The Conestoga River watershed, which drains into the Susquehanna River, is one such area. Farms along this River and its tributaries, such as Lititz Run, produce large quantities of animal waste, little of which dissipates locally. The Lower Susquehanna Riverkeeper estimates that the water draining into the Susquehanna River from Lititz Run contains nitrogen levels 50 percent above the maximum acceptable level.¹⁶⁴

¹⁶² See <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=50000CL2.txt> (p.2) (discussing the minimum number requirement). One citizen at the town hall meeting also raised concerns about the human health risks from large hog farms and other CAFOs. He pointed to a major risk to children from their proximity to such farms, documented by institutions like Johns Hopkins University. See <http://www.jhu.edu/jhumag/0609web/farm.html>.

¹⁶³ <http://www.dep.state.pa.us/dep/deputate/minres/oilgas/cslawuc.htm>.

¹⁶⁴ See *SRBC Issues Report on Nutrient Pollution Levels and Sources in the Conestoga River Watershed*, SRBC, Aug. 19, 2008, available at <http://www.srbc.net/pubinfo/press/2008PressReleases.htm>.

- **Threats to Marine Species from Out-of-State Pollution.** At the town hall, the Attorney General learned that pollution in waters near the Pennsylvania border has been causing gender-bending, or inter-sex, fish.¹⁶⁵ It was reported that this gender-bending has been occurring mainly in rivers with significant agricultural runoff.

Environmental Enforcement Problems. As he had in several previous audits, the Attorney General heard various concerns participants had about environmental enforcement.

- **Perceived Under-Enforcement of Environmental Violations.** One concern that came up repeatedly during meetings with elected officials and environmental leaders, as well as during the town hall meeting, was about known environmental violations that appear to be going unpunished. One leader mentioned an environmental violation that had occurred in Perryville, Maryland several months prior to the Attorney General’s visit that MDE was appearing reluctant to prosecute.

Several environmental leaders also pointed to the problem of the many wastewater treatment plants along the Susquehanna River that are discharging effluent into the river beyond their maximum allowable amount under state permits, and asked for there to be better enforcement of these violations. One environmental leader reported that he was aware of several wastewater treatment violators in his county but had not seen any MDE enforcement actions taken against them. Another leader mentioned that wastewater treatment overflows harm the health of oyster beds, in addition to contributing to pollution generally.

CAFOs were also discussed as a major problem, with many leaders and town hall participants expressing their belief that many CAFOs are not complying with their environmental permits, and that MDE is not doing enough to hold these non-compliant CAFO operators accountable. One farmer stressed to the Attorney General, however, that some CAFOs do a commendable job, citing a CAFO in Cecil County that had just had its wastewater upgraded to a “high quality” ranking by MDE.¹⁶⁶ Thus, in that farmer’s view, the solution to the environmental problems created by CAFOs is not pursuit of enforcement actions against CAFOs en masse.

Finally, one participant expressed disappointment over the lack of enforcement of Comprehensive Master Plans for towns and counties, which are supposed to hold towns and counties to specific developmental and environmental targets, but which contain environmental targets that are going unmet.¹⁶⁷

¹⁶⁵ Cf. <http://www.npr.org/templates/story/story.php?storyId=112888785>.

¹⁶⁶ MDE ranks water quality in three tiers, with Tier I being waters that meet minimum water quality standards, Tier II being “high quality waters,” and Tier III being “outstanding natural resource waters.” See http://www.mde.maryland.gov/assets/document/wqm_tier_ii_narrative_082809.pdf.

¹⁶⁷ In 1992, the General Assembly passed the Economic Growth, Resource Protection, and Planning Act, which articulates the State’s growth policy through seven visions centered on concentrating development in suitable areas, protecting sensitive areas, and establishing funding mechanisms to achieve these goals. The Act is codified at Md. Code Ann., State Fin. & Proc., § 5-7A-01. All local jurisdictions are required to incorporate these goals into their comprehensive plans. See <http://www.mde.maryland.gov/assets/document/planningtoolbox.pdf>.

- **Perceived Over-Enforcement of Environmental Violations.** Some participants in the environmental audit felt that MDE was doing too good a job enforcing environmental violations by individual residents, and that these enforcement actions actually prevented the individuals from becoming compliant. For instance, many residents are getting fined by MDE for excursions¹⁶⁸ by their home wastewater treatment systems where their excursions are due simply to their current inability to pay for the necessary upgrades. The fines further stymie their efforts to upgrade.

Other Sources of Pollution in the Lower Susquehanna River Watershed.

In addition to the foregoing discussions about pollution and environmental threats to the Lower Susquehanna River watershed, the Attorney General also heard about the following pollutants:

- **Fly Ash.** At the town hall meeting, a participant mentioned that a proposal is being considered to store fly ash¹⁶⁹ in a quarry very near the currently pristine Furnace Bay, located in Perryville, Maryland. The Attorney General was urged to explore with MDE why it would allow fly ash to be stored in a location so close to the waters of the Chesapeake Bay, in the Critical Area. He was told that even the best technology for storing fly ash is largely untested, so its storage near the Bay creates a major environmental hazard, and that alternative storage sites are available that pose less of an environmental risk.
- **Sewage Sludge.** Sludge is a by-product of wastewater treatment. Each year, more than 700,000 tons of wet sewage sludge are generated in Maryland. MDE is the primary agency that regulates the utilization of sewage sludge. About 50 percent of Maryland's sludge is applied to agricultural land, a practice MDE promotes as a means of recycling nutrients, preserving landfill space, saving money, and helping reduce nutrient pollution in the Chesapeake Bay.¹⁷⁰ Several citizens at the town hall meeting voiced their disapproval of MDE's decision to allow sewage sludge to be spread as manure, and to go so far as to pay farmers to do it. They worried about the harmful environmental contents of sewage sludge – such as its high, unregulated nitrogen levels – and the risks posed to human health. Some citizens asked the Attorney General to look into ways to rid Maryland of permitted sewage sludge use.

Environmental Incentives. Maryland has established a number of assistance programs to encourage and assist participants to comply with environmental legislation and reduce pollution. Several people who attended the audit shared their ideas about additional environmental incentives.

¹⁶⁸ Excursions are wastewater discharges into the sewer system that deviate from the prescribed numerical limits set out in the permit. See http://www.mde.maryland.gov/assets/document/enforcement_compliance_process_faq.pdf (p. 2).

¹⁶⁹ Fly ash is a fossil fuel combustion by-product that contains metals like lead and that, if improperly stored, may seep into groundwater. See http://www.mde.state.md.us/assets/document/AA_Fly_Ash_QA.pdf.

¹⁷⁰ See *Sewage Sludge Utilization in Maryland Fact Sheet*, MDE, Nov. 18, 2009, at p. 1, available at <http://www.mde.maryland.gov/assets/document/factsheets/sewagesludge.pdf>.

- **Green Energy Funding.** The Attorney General learned that neighboring states have effective economic incentives for environmental action, and was encouraged to look into ways to bring such incentives to the State of Maryland. One example that was given was Pennsylvania’s “Growing Greener” grant, which allows counties to apply for funding to address local environmental priorities.¹⁷¹ Lancaster County, Pennsylvania is currently using money from that grant to invest in new wastewater digesters.¹⁷² The Attorney General was also encouraged to revisit implementing a system of credits for nutrient trading among point and non-point sources of pollution in Maryland, Pennsylvania, and Delaware.¹⁷³ The Maryland Department of Natural Resources and the Maryland Department of Agriculture had advocated for this idea in recent years.
- **Wastewater Treatment Plant Upgrade Funding.** In light of changing communities and related changes in population density, some participants in the environmental audit inquired whether the Attorney General could explore ways to revise the original list of 66 wastewater treatment plants targeted for environmental upgrades with monies from the Chesapeake Bay Restoration Fund, also known as the “flush fee.”¹⁷⁴ A revisiting of this list would also be beneficial to those towns that are paying a flush fee but are not currently slated for an upgrade to their wastewater treatment plants. On this topic, the Attorney General learned that there is confusion in some municipalities over just who gets charged a flush fee. For instance, MDE apparently says that individuals in apartments do not need to pay a flush fee, yet some municipalities are telling them that they do.



View of the Susquehanna from a bluff below Port Deposit

¹⁷¹ See

http://www.depweb.state.pa.us/portal/server.pt/community/growing_greener/13958/what_is_growing_greener_ii_/588900 (a description of the current “Growing Greener II” grant package).

¹⁷² Digesters are machines that break down biodegradable material as part of the wastewater treatment process.

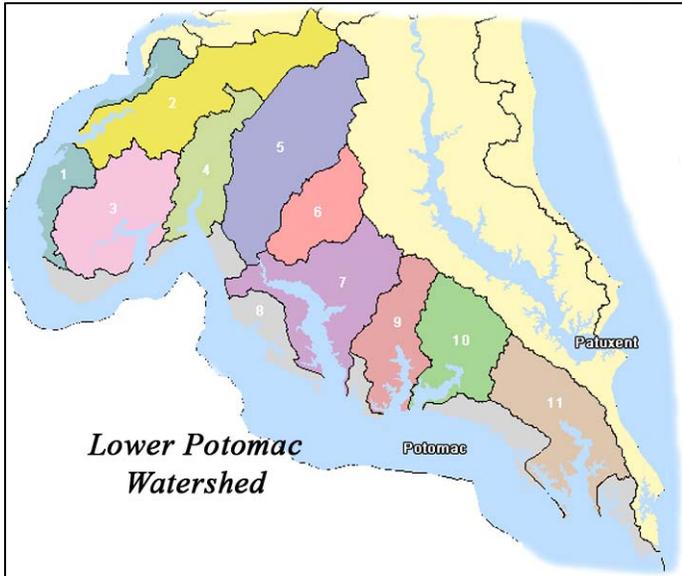
¹⁷³ For more information on this issue, see http://mdnutrienttrading.org/docs/Phase%20II-B_Crdt%20Purchase.pdf.

¹⁷⁴ See <http://www.chesapeakebay.net/wastewatertreatment.aspx?menuitem=14747> and n. 87, *supra*.

CHAPTER FIVE: UPDATES AND FOLLOW-UP

The Attorney General is pleased to report the following updates and actions taken since the 2009 audits began on April 29, 2009.¹⁷⁵

I. St. Mary's River



St. Mary's College, River Center and Rowing Center. The College submitted its required mitigation planting plan for the River Center, Rowing Center, and shoreline projects to the Critical Area Commission, which approved the plan on June 3, 2009. The CAC required implementation of the planting to be completed by December 31, 2009.¹⁷⁶

Wind Turbines in the Buffer. In July 2009, the Critical Area Commission approved St. Mary's County's ordinance to permit wind turbines in the buffer as an amendment to

the county's Critical Area Program. The CAC imposed mitigation planting requirements as a condition of its approval.

Marrick Homes, LLC. After MDE filed an administrative complaint against this developer for water pollution, sediment pollution and sediment control violations at two construction sites, the developer requested a contested case hearing before the Office of Administrative Hearings. The case was settled prior to that hearing, and the developer paid a \$50,000 penalty.

Dennis Point Marina and Campground. After a participant at the town hall meeting complained about potential sewage disposal violations at the Dennis Point Marina and Campground, the OAG referred the matter to MDE. MDE conducted a search of the records concerning the facility, which was sold in 2006 and renamed the St. Mary's Yachting Center.¹⁷⁷ MDE determined that over the years the primary responsibility for permitting and inspection of campgrounds has shifted back and forth between the state health department and the local health department, which had primacy for at least the past one to two years. The St. Mary's County Health Department ("SMCHD") has no records of the onsite sewage disposal systems serving

¹⁷⁵ As is evident, several issues that emerged during the 2009 audits were not limited to a particular watershed but had more general application. Those issues are discussed *infra* in Section V, entitled "Miscellaneous."

¹⁷⁶ <http://www.smcm.edu/facilities/capitalprojects/waterfrontmitigationplanning.html>.

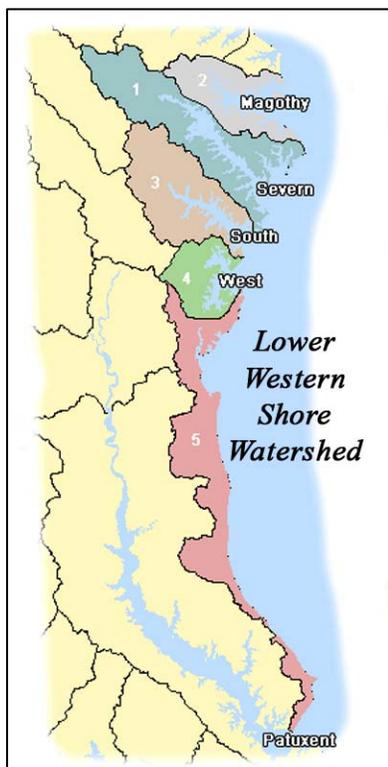
¹⁷⁷ See <http://www.stmyc.com/>.

this site, which indicates that no permits have been issued for at least the past 25 years. SMCHD performed site and soils evaluations on this property in 2006, apparently for possible expansion of the campground. Nothing further was ever submitted by the applicant.

The MDE inspector went to the site to investigate and to ensure there were no water pollution problems from sewage generated at the campground. There were approximately 86 numbered campsites in a mostly forested area, each with water, sewer and electric hookups; in a separate field area, there were approximately 20 campsites with only water and electric hookups. Sewage disposal appeared to be either through the campground collection system to one or more subsurface on-site disposal systems, or perhaps at the marina building.

The inspector saw no signs of sewage coming to the ground surface and learned from an employee that the campground is served by three or four onsite sewage disposal systems located throughout the campground area. The only campsites occupied on a somewhat permanent basis were those used by employees of the facility. The employee confirmed the campground is permitted for a total of 105 sites. The inspector did not identify any compliance issues.

II. West and Rhode Rivers



No-Discharge Zones for Maryland Waters.

During his environmental audit of the West and Rhode Rivers, the Attorney General heard concerns about pollution in the Chesapeake Bay caused by sewage discharge from boats. As mentioned above in Chapter 2, the creation of a No-Discharge Zone (“NDZ”) in the West and Rhode Rivers was suggested as a means of reducing this type of pollution.¹⁷⁸ Given the fragile health of the Bay as a whole, and the Attorney General’s longstanding commitment to reducing pollution in the Bay, the Attorney General followed up on this suggestion by seeking to establish an NDZ for all Maryland waters.

The Attorney General and his environmental team drafted legislation that would enable Maryland to prohibit the discharge of all boat sewage into Maryland waters, in part through obtaining an NDZ designation from the Environmental Protection Agency. He then worked with members of the Maryland House and Senate to introduce this legislation during the 2010 legislative session, and he and members of his staff met with as many affected groups as possible from within the boating community and affected state agencies to learn how to implement this legislation in a way that would best enable boaters to comply.¹⁷⁹ The Attorney General also testified in support of this legislation.¹⁸⁰

¹⁷⁸ See nn. 76-79, *supra*.

¹⁷⁹ See <http://mlis.state.md.us/2010rs/billfile/hb1257.htm> (House version of this legislation).

¹⁸⁰ During each session of the Maryland General Assembly, the Attorney General and his staff support many pieces of legislation dealing with a wide-ranging number of significant issues. This support includes providing assistance

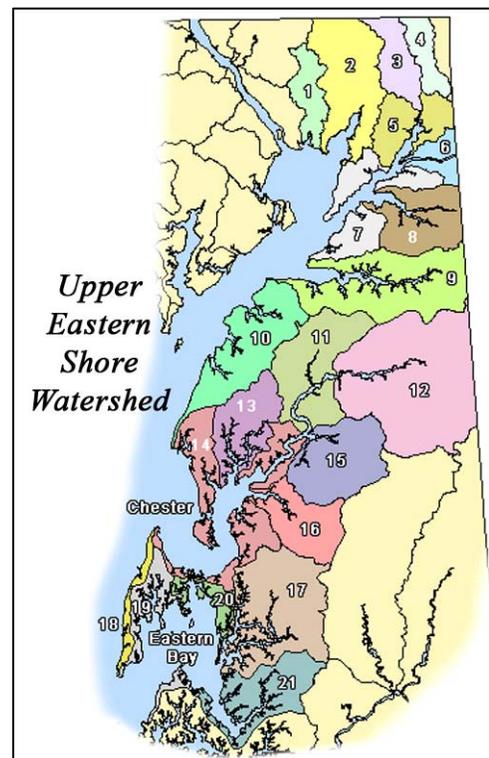
Based on the concerns that were raised in meetings with affected groups and during the legislative hearings, the Attorney General and sponsoring legislators amended the bill to be a study bill, requiring the Department of Natural Resources to provide reports to the Governor and the General Assembly on the establishment of an NDZ in all waters of the State, with a final report due on or before December 1, 2011 that would address the environmental impact of pollution from marine sanitation devices, adequacy of pump-out facilities, enforcement recommendations, costs, and a review of federal law related to establishing a no-discharge zone.¹⁸¹ Although this amended bill was received favorably and passed by the Senate, it was ultimately not passed by the House. The Attorney General plans to work with the environmental community in the coming year to determine how best to reduce sewage discharge prior to the implementation of an NDZ.

Aquaculture Enterprise Zones. After holding a public hearing in June 2009 to propose and consider creating aquaculture enterprise zones (“AEZs”) in the West/Rhode and Patuxent watersheds, DNR decided to establish two AEZs in the Patuxent River near Broomes Island – one in Jack’s Bay and one in Island Creek. Regulations to establish these areas became effective in October 2009,¹⁸² and the AEZs should be available for leasing sometime in 2010. As of April 2010, DNR is not considering an AEZ in the West/Rhode watershed.

III. Miles River

Miles Point. The two lawsuits challenging this development are currently pending in the Maryland Court of Special Appeals. The appellants, concerned residents who live near the proposed project, have sought to consolidate the cases, one that challenges the Town’s approval of the growth allocation and one that challenges the CAC’s approval of the growth allocation as a refinement to the Town’s Critical Area Law. The OAG, representing the CAC, has opposed. Oral arguments are scheduled to be heard in the Court of Special Appeals in December 2010.

Chesapeake Reach. No appeals have been filed to challenge the Critical Area Commission’s approval of the requested growth allocation for this development. The project has not yet received final permits from the Town of St. Michaels, but it will likely proceed once the permits have been obtained.



in bill drafting, working with legislative sponsors, providing oral and written testimony and letters of support, and meeting and speaking with legislators and stakeholders.

¹⁸¹ See <http://mlis.state.md.us/2010rs/billfile/sb0513.htm> (legislation as amended in the Senate).

¹⁸² See COMAR 08.02.23.05 (2010) (<http://www.dsd.state.md.us/comar/getfile.aspx?file=08.02.23.05.htm>).

Primitive Wood Design, LLC. After the spilled hazardous substances were discovered in December 2008, MDE filed an administrative complaint against the developer seeking injunctive relief and a monetary penalty. At the same time, the Attorney General's Environmental Crimes Unit, together with MDE's Hazardous Waste Division and the Maryland State Police, initiated a criminal investigation. On December 2, 2009, Primitive Wood Design, LLC, and Martin L. Bueneman, the company's owner, each pleaded guilty in Talbot County Circuit Court to one felony count of illegal hazardous substance storage and disposal.¹⁸³ Judge Broughton Earnest ordered each defendant to pay a \$10,000 fine to the Maryland Hazardous Waste Fund. Bueneman was also sentenced to 30 days incarceration, which was suspended, and placed on probation for one year.¹⁸⁴

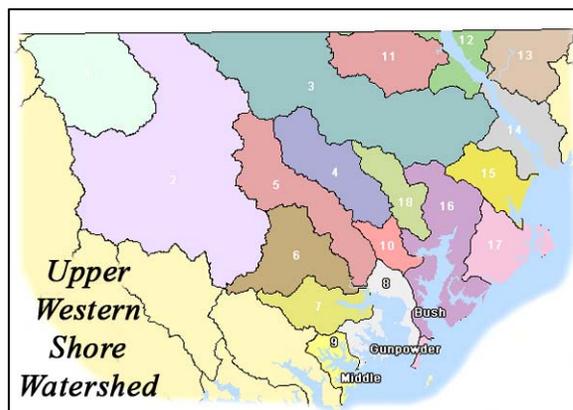
Settlement of the administrative complaint resulted in payment of an additional \$20,000 penalty, without release of claim,¹⁸⁵ and the defendants' agreement to undertake corrective action and continuous sampling and monitoring of contaminated leachate. The defendants have removed all hazardous materials associated with paint thinners and paint removal process to MDE's satisfaction. All solid waste (wood waste) is to be removed within two years. The Talbot County Health Department was also notified in an effort to ensure that local well water was not affected.

Allen Family Foods. Allen holds a permit under the National Pollution Discharge Elimination System ("NPDES")¹⁸⁶ that permits spray irrigation of industrial wastewater. The permit conditions require monitoring of groundwater and compliance with groundwater quality standards. Quarterly groundwater monitoring reports in 2007, 2008 and 2009 document yearly average nitrate concentrations in the groundwater that exceed the standard. MDE is preparing a referral of an enforcement action to the OAG for injunctive relief and penalties.¹⁸⁷

IV. Lower Susquehanna River

City of Havre de Grace Dump.

After MDE filed a notice of violation in August 2009, the City reported that it had hired a consultant to establish a corrective action plan. MDE is reviewing the submitted corrective action plan and will soon make a determination about whether to file an administrative action or a civil action.



¹⁸³ Under Maryland law, a business handling small amounts of controlled hazardous substances must not allow them to accumulate in excess of 90 days without a permit or without meeting the requirements of a generator, which this facility was not. See COMAR 26.13.03.05E(1) (2010).

¹⁸⁴ See <http://www.oag.state.md.us/Press/2009/120209.htm>.

¹⁸⁵ The OAG retained the right to refile the lawsuit at any time should the defendants fail to abide by the terms of their agreement.

¹⁸⁶ See n. 122, *supra*.

¹⁸⁷ Recently, the OAG settled another enforcement action against Allen Family Foods for violations of its pretreatment discharge permit at its poultry processing facility in Hurlock in Dorchester County for a \$100,000 penalty.

Monmouth Meadows. An additional inspection in January 2010 revealed continued deficiencies. MDE is preparing an enforcement action for civil penalties and injunctive relief that will be referred to the Office of the Attorney General.

David Lawrence Farm. On January 25, 2010, MDE referred an enforcement action to the OAG seeking civil penalties and injunctive relief, as well as penalties for violating the consent order. The case has been assigned to an assistant attorney general for formal enforcement.

McHale v. Rollins. In December 2009, while the CAC's appeal from the decision of the Cecil County Board of Zoning Appeals ("BZA") to approve a variance for a pool in the buffer was pending, members of the Commission visited the site in December 2009. Thereafter, the CAC advised the defendant that a better course of action was to seek a buffer exempt status and told him to file a map change request with the county. In January 2010, the parties appeared before the Circuit Court for Cecil County and entered into an agreement that Mr. Rollins would request the BZA to revoke the variance after which the CAC would dismiss its appeal. On February 23, 2010, the BZA revoked the variance, and on March 9, 2010, the CAC dismissed the appeal.

V. Miscellaneous

Coal-Combustion Related Pollution. The Attorney General continues to be actively involved in seeking measures to reduce pollution associated with the combustion of coal to produce energy.

- **Mirant Mid-Atlantic, LLC and Mirant Maryland Ash Management, LLC.** On April 2, 2010, the Office of the Attorney General, representing MDE, sued Mirant Mid-Atlantic, LLC and Mirant Maryland Ash Management, LLC for water pollution violations at Mirant's Brandywine site related to the disposal of coal combustion products, including fly ash. The complaint alleges that Mirant has discharged and continues to discharge pollutants from leachate into Mataponi Creek and the groundwater without a permit.¹⁸⁸ The OAG and MDE elected to file a citizen suit in federal district court under the Clean Water Act because of the lack of progress in resolving environmental violations at the Brandywine site and similar violations at Mirant's Faulkner fly ash site, which is the subject of a pending action in State court.
- **Citizen Participation in Permits for Coal-Combustion By-Products Disposal.** In the 2010 legislative session, the Attorney General's Office testified in support of legislation to require MDE to hold an informational meeting with respect to an application for a permit to dispose of coal combustion by-products (CCBs or fly ash). The bill would also have required MDE to hold a public hearing before issuing a permit to install, materially

¹⁸⁸ The complaint can be viewed at http://www.mde.state.md.us/assets/document/Mirant_Complaint.pdf.

alter, or materially extend a landfill that accepts CCBs. This legislation, which would have allowed citizen participation in the permitting process, did not pass.¹⁸⁹

Arsenic in Chicken Feed. As Co-Chair of the Environment and Energy Committee of the National Association of Attorneys General (“NAAG”), the Attorney General has worked with attorneys general from other states to urge the Federal Drug Administration (“FDA”) to ban arsenic in chicken feed. The poultry industry has been using arsenic in chicken feed since 1944, when the FDA approved the use of arsenic-containing feed additive roxarsone.¹⁹⁰ This additive promotes the growth of blood vessels in chicken, making the meat appear more attractive. However, it also poses serious health risks to consumers; accordingly the European Union banned its use in chicken feed in 1999.¹⁹¹

In the 2010 legislative session, the Attorney General actively supported legislation that would prohibit a person from using, selling, or distributing commercial feed intended for use as poultry feed that contains roxarsone or any other additive that contains arsenic.¹⁹² He met with several legislators to discuss the need to create this prohibition, and offered testimony in support of the legislation. Although the bill did not pass this session, the Attorney General plans to continue to work with the poultry farming community to reduce and eventually eliminate the use of roxarsone in chicken feed.

Lawn Fertilizer. Throughout his 2009 audits, the Attorney General heard a number of concerns about the use of lawn fertilizers and the potential for runoff, particularly in the Critical Area. During the 2009 legislative session, in response to similar concerns raised during the 2008 audits, the Attorney General successfully supported the Chesapeake Bay Phosphorus Reduction Act of 2009.¹⁹³ The legislation significantly lowers the permissible phosphorus level in fertilizer distributed and sold for use on established lawns and grass as of April 1, 2011, and adds appropriate labeling requirements for lawn fertilizer.

This year, during the 2010 legislative session, the Attorney General supported legislation to further reduce permissible phosphorus levels – from 5% to 0.5% – in fertilizer for use on established lawns and grass. Unfortunately, this legislation did not pass.¹⁹⁴

The Attorney General also supported a related measure that would have required the Maryland Department of Agriculture to adopt regulations to report the release of pesticides and fertilizer, including agricultural release, lawn care and landscaping services, maintenance of golf

¹⁸⁹ See SB 364 (<http://mlis.state.md.us/2010rs/bills/sb/sb0364f.pdf>) and HB 614 (<http://mlis.state.md.us/2010rs/bills/hb/hb0614f.pdf>).

¹⁹⁰ See Don Hopey, *Chicken Feed May Present Arsenic Danger*, PITTSBURGH POST-GAZETTE, Mar. 8, 2007, available at <http://www.post-gazette.com/pg/07067/767756-34.stm>.

¹⁹¹ Jay P. Graham *et al.*, *Growth Promoting Antibiotics in Food Animal Production: An Economic Analysis*, 122 PUB. HEALTH REP. 79, 80 (2007).

¹⁹² See SB 859 (<http://mlis.state.md.us/2010rs/bills/sb/sb0859f.pdf>) and HB 953 (<http://mlis.state.md.us/2010rs/bills/hb/hb0953f.pdf>).

¹⁹³ See SB 553 (<http://mlis.state.md.us/2009rs/bills/sb/sb0553t.pdf>) and HB 609 (<http://mlis.state.md.us/2009rs/billfile/hb0609.htm>).

¹⁹⁴ See HB 50 (<http://mlis.state.md.us/2010rs/bills/hb/hb0050t.pdf>).

courses, cemeteries and highways and roads, and pest and mosquito control. Regrettably, this legislation failed to pass as well.¹⁹⁵

Natural Resources Violations. The Attorney General's Office was instrumental in the planning and implementation of a pilot enforcement program for natural resource violations. Historically, fishing, hunting and forestry criminal violation cases were not always prosecuted aggressively in Maryland Courts. To address this problem, the Attorney General's Office worked closely with the Department of Natural Resources and the Maryland District Court to establish a special natural resources docket in the Anne Arundel County District Court. As of January 2010, all natural resources cases in Anne Arundel County will be heard on the third Friday of the month in the Anne Arundel County District Court on a special docket. The natural resources docket will allow prosecutors and judges to focus on natural resources law, become acquainted with repeat offenders, and better assess the gravity of natural resources violations. The pilot program is scheduled to be expanded to additional county District courts next year.¹⁹⁶

The Attorney General's Office also worked closely with the Department of Natural Resources and its citizen advisory groups to develop a new penalty system for commercial fishing violations. Under the new system, commercial fishermen can have their licenses suspended for a single egregious commercial fishing violation or by accumulating points on their licenses for multiple violations. The new system will deter future commercial fishing violations, conserve Maryland's fisheries, and get poachers off the water.¹⁹⁷ The Attorney General's Office will be primarily responsible for enforcing the new penalty system.

Finally, in the 2010 legislative session, the Attorney General's Office testified in support of the Conservation Law Enforcement Act of 2010. The legislation gives the Department of Natural Resources Police Force ("NRP") the responsibility to enforce conservation law and establishes a commemorative lifetime hunting license, with the proceeds from the purchases of such licenses to be used to help fund NRP enforcement programs. The measure will increase the presence of the NRP on state waterways and thereby enhance law enforcement.¹⁹⁸

MDE Enforcement. Since beginning his environmental audits in 2008, the Attorney General has repeatedly heard complaints about lack of effective enforcement and inadequate penalties sought by MDE. Recently, working with MDE, the OAG has developed internal penalty guidance for use by the water compliance program to assist the program in assessing the penalty value of cases it refers to the OAG. The guidance provides a systematic process for evaluating and weighing statutory and other factors that are part of the calculation to determine the penalty amount to be sought in each case. These factors include the willfulness of the violation, the degree of harm to the environment posed by the particular pollutant, the economic

¹⁹⁵ See SB 859 (<http://mlis.state.md.us/2010rs/bills/sb/sb0859f.pdf>) and HB 930 (<http://mlis.state.md.us/2010rs/bills/hb/hb0930f.pdf>).

¹⁹⁶ See <http://dnr.maryland.gov/dnrnews/pressrelease2010/011410a.asp>.

¹⁹⁷ See <http://dnr.maryland.gov/fisheries/regulations/proposedregulations.asp?year=2009>. The regulations took effect February 22, 2010. See COMAR 08.02.13.02 (<http://www.dsd.state.md.us/comar/getfile.aspx?file=08.02.13.02.htm>).

¹⁹⁸ See SB 987 (<http://mlis.state.md.us/2010rs/bills/sb/sb0987t.pdf>).

reasonableness of avoiding the violation, whether the violation is part of a recurrent pattern, and the circumstances of the violator. With this guidance, penalty amounts sought in water enforcement cases referred by MDE have markedly increased.

Bay Restoration Funds to Contractors. During one of the 2009 audits, the Attorney General heard that contractors performing septic upgrades were not receiving payment. A state senator asked whether MDE could bypass the homeowner and pay the contractor directly. After the audit, the senator wrote to the Attorney General and the question was referred to MDE for review. Thereafter, with the assistance of the OAG, MDE revised its procedures to address this situation. MDE now notifies applicants at the time of the award of Bay Restoration Funds that the applicant will have to authorize payment directly to the vendor. Once a system installation is completed and the homeowner signs a certification confirming completion, payment is released directly to the vendor.¹⁹⁹

Horse Farms. During his visits to the St. Mary's and West/Rhode watersheds, the Attorney General learned that many small horse farms and farmettes face manure management problems. The Maryland Department of Agriculture has a number of programs in place to assist the equine industry. Since 1998, the Horse Outreach Workgroup ("HOW") has provided information to horse owners on pasture and manure management issues.²⁰⁰ In addition, MDA received a \$700,000 grant from the EPA and the National Fish and Wildlife Foundation that will provide for equine outreach specialists, funds for on-farm best management practice cost share, workshops, pasture walks and other education and technical assistance. Examples of best management practices include watering troughs, manure storage structures, sacrifice lots and stream fencing.²⁰¹ MDA also received a grant in excess of \$600,000 from the U.S. Department of Agriculture to owners and operators of small-sized equine operations in the seven Patuxent River watershed counties with pasture and manure management.²⁰²

Out-of-State Pollution. As has been described, the Attorney General heard concerns about pollution originating from outside Maryland that ultimately reaches the Chesapeake Bay and its watershed. The Office of the Attorney General is involved in significant litigation and other measures related to this issue.

- **PPG Industries, Inc.** PPG Industries Inc. operates a chlorine manufacturing facility that sits on the Ohio River in Natrium, West Virginia, approximately 72 miles west of the West Virginia/Maryland border. A portion of the facility, which was built in 1957, uses an out-dated, mercury-based production process that remains in use at only four of the 119 chlorine plants in the United States. The mercury-based process is being eliminated

¹⁹⁹ Two bills introduced in 2010 to address this issue were withdrawn after MDE revised its procedures. See SB 8 (<http://mlis.state.md.us/2010rs/bills/sb/sb0008f.pdf>); HB 36 (<http://mlis.state.md.us/2010rs/bills/hb/hb0036f.pdf>).

²⁰⁰ The workgroup consists of representatives from the Maryland Department of Agriculture, local soil conservation districts, Natural Resource Conservation Service, Cooperative Extension, University of Maryland, the Equiery, and the Maryland Horse Council. MDA's Office of Resource Conservation provides coordination for the workgroup. <http://www.horseboard.org/HOW>.

²⁰¹ See <http://www.mda.state.md.us/article.php?i=6016>.

²⁰² See <http://www.mda.state.md.us/article.php?i=6457>.

in many countries, and the EPA has banned construction of new plants that use the process.

For decades, mercury released by the plant has polluted Maryland's air and water.²⁰³ In addition to discharging into the Ohio River, the Natrium facility emits airborne mercury that is carried by prevailing winds into Maryland and deposited onto the land and into the waters of Maryland, particularly in Western Maryland, where it accumulates in lakes and waterways.

On August 11, 2009, the Attorney General's Office entered into a settlement agreement with PPG. The agreement requires the company to reduce mercury emissions to no more than 150 pounds per year by 2011 and no more than 145 pounds by 2013 – an 87.5 percent reduction from 2004 emission levels. If PPG exceeds the emissions limits set forth in the agreement, the company will face penalties of up to \$240,000 per year.²⁰⁴

- **Greenhouse Gas Emissions.** On January 22, 2010, the Attorney General's Office, together with 15 states and New York City, filed a motion to intervene in a lawsuit brought by industry groups to challenge the EPA's "Endangerment Finding." The Endangerment Finding is the EPA's formal determination that greenhouse gases cause climate change and as a result may reasonably be anticipated to endanger public health and welfare. The motion was filed in the federal appeals court in Washington, D.C.

Last December, the EPA published the Endangerment Finding in response to the Supreme Court's landmark decision in *Massachusetts v. EPA*.²⁰⁵ The finding is the first step towards regulating greenhouse gas emissions under the Clean Air Act. By filing the motion to intervene, Maryland and the other states join the EPA in defending the EPA's determination.

- **Federal Climate and Energy Legislation.** On April 5, 2010, the Attorney General, together with the Attorneys General from California, Delaware, Maine, Massachusetts, Rhode Island and Vermont, wrote to Senators Kerry, Graham and Leiberman urging them to craft a Senate climate and energy bill that capitalizes on the significant progress that has been achieved through numerous state efforts to address global warming pollution. The letter describes measures the states have taken during a time when federal leadership was lacking. For example, states have adopted emission targets and caps, automobile emission standards, low carbon and renewable fuel standards, renewable electricity portfolio standards, electricity generation emission performance standards, climate action plans, land use measures, reporting requirements, building and appliance efficiency

²⁰³ Mercury is a hazardous neurotoxin that accumulates in the environment and particularly aquatic wildlife. According to the EPA, mercury exposure has substantial adverse impacts on public health and the environment. See, e.g., <http://www.epa.gov/mercury/reportover.htm>.

²⁰⁴ See <http://www.oag.state.md.us/Press/2009/081109.htm>.

²⁰⁵ 549 U.S. 497 (2007). The Supreme Court ruled the Clean Air Act gives the EPA authority to regulate carbon dioxide and other greenhouse gases finding that the Act's definition of air pollutant was written with "sweeping," "capacious" language so that it would not become obsolete. Maryland was one of six states (the others being Arizona, Delaware, Iowa, Minnesota, and Wisconsin) that filed as *amici* for the petitioners in that case.

standards, and labeling mandates. These programs foster innovation, save energy, create jobs, improve local air quality, generate revenue and produce consumer benefits, in addition to reducing global warming pollution.

The letter specifically urges the Senators to consider the benefits of the Regional Greenhouse Gas Initiative (“RGGI”)²⁰⁶ and asks them not to terminate such positive impacts and abandon RGGI and other similar initiatives, at least until a national system is established and achieving equivalent or better results.

- **Agricultural Nutrient Pollution.** In response to repeated anecdotal reports, the Office of the Attorney General has begun to investigate sources of agricultural nutrient pollution in Pennsylvania that contribute to the degradation of the Lower Susquehanna River and the Chesapeake Bay. Both small and large agricultural operations that allow nutrients from manure generated by their cattle and hog farms to enter streams and rivers that flow to the Bay may be in violation of federal, state, and common law. The Office is currently exploring enforcement strategies to reduce the effect of out-of-state nutrient pollution on Bay health.

Prescription Drug Disposal. As Co-Chair of the Environment and Energy Committee of the NAAG, the Attorney General has identified *Prescription Drugs – Safe Disposal and Take Back Programs* as a priority issue. Unused prescription drugs present potential for abuse in the wrong hands and the improper disposal of unused prescription drugs causes environmental problems in both surface waters and drinking water supplies. In March 2010, at the NAAG spring conference in Washington, D.C., the Attorney General and the Committee presented an hour-long discussion panel to educate state Attorneys General about the problem and inform them of initiatives they can pursue individually in their own states while a federal approach is being developed.

In addition, during the 2010 legislative session, the Attorney General’s Office testified in support of several bills related to this issue, including the Drug Stewardship Program (requiring a drug manufacturer to operate a drug stewardship program for the collection, transporting, managing, and disposal of unwanted drugs),²⁰⁷ the Pharmaceutical Disposal Act (prohibiting a health care facility from discharging, disposing of, flushing, pouring, or emptying an unused medication into a wastewater system);²⁰⁸ and Disposal of Unused Prescription Drugs (“Operation Take-back”) (requiring prescription drug containers to be labeled with appropriate disposal information, requiring pharmacists to include an information sheet with prescription drugs, and requiring pharmacies to develop and implement a program for the disposal of unused prescription drugs).²⁰⁹ Unfortunately, none of these measures passed.

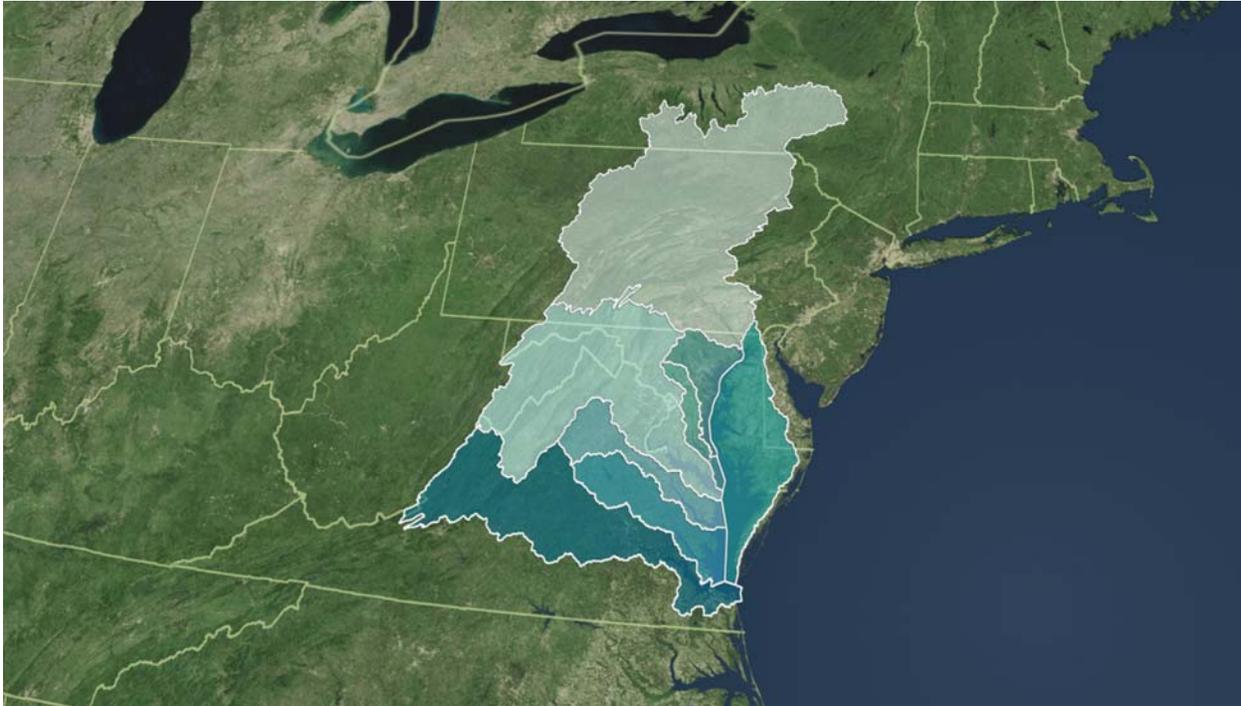
²⁰⁶ RGGI is the first mandatory, market-based carbon dioxide emissions reduction program in the United States. RGGI is a cooperative effort to limit greenhouse gas emissions by ten northeast and Mid-Atlantic States (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont) that have each capped carbon dioxide emissions from the power sector and require a ten percent reduction in these emissions by 2018.

²⁰⁷ See <http://mlis.state.md.us/2010rs/bills/hb/hb0648f.pdf>.

²⁰⁸ See <http://mlis.state.md.us/2010rs/bills/hb/hb0649f.pdf>.

²⁰⁹ See <http://mlis.state.md.us/2010rs/bills/hb/hb1387f.pdf>.

Licensing of Marine Contractors. During the 2010 legislative session, the Office of the Attorney General worked on successful legislation providing for the licensing and regulation of marine contractors. The bill establishes a Marine Contractors Licensing Board within MDE and sets out requirements for licensure and license renewal. It also requires property owners to hire a licensed marine contractor to perform marine contractor services and establishes criminal and civil penalties for violations. This measure will help ensure that tidal wetlands and other sensitive areas do not suffer environmental harm caused by unlicensed contractors who may not comply with legal requirements designed to protect such areas.²¹⁰



NASA Space Shuttle flyover of Chesapeake Bay and watershed region

²¹⁰ See SB 382 (<http://mlis.state.md.us/2010rs/bills/sb/sb0382e.pdf>) and HB 987 (<http://mlis.state.md.us/2010rs/bills/hb/hb0987t.pdf>).

CONCLUSION

During the 2009 environmental audits, the Attorney General met with elected officials, environmental leaders and community members from the St. Mary's River, West and Rhode Rivers, Miles River, and Lower Susquehanna River watersheds. At each watershed audit, the Attorney General learned about environmental matters specific to that location, ranging from oyster harvesting and Critical Area Act violations to stalled enforcement actions. More often, however, the audits revealed recurring concerns common among the watersheds. Chief among these was a concern with pollution related to agriculture and residential growth, primarily from animal waste, fertilizer, stormwater, erosion, sediment and wastewater treatment. Other common concerns included insufficiency of agency resources to investigate and prosecute polluters and inadequacy of existing financial incentives to deter pollution and promote environmental improvements.

As this information was gathered from each watershed, the Attorney General referred a number of matters to appropriate regulatory agencies; initiated and concluded enforcement actions and lawsuits; and supported significant legislation that ultimately will benefit the Chesapeake Bay, including a bill that enhances the ability of the Natural Resources Police to enforce conservation laws and a bill that provides for the licensure and regulation of marine contractors in the State. The Attorney General also supported a variety of other bills concerning issues raised during his audits, including bills to prohibit arsenic in chicken feed and boat sewage discharge in the Bay.

Much remains to be done to save the Chesapeake Bay, as the Attorney General is acutely aware. The actions he and his office are able to take as a result of these environmental audits, however, help improve the Bay's health in important ways. For instance, information provided by the watershed communities he visits allows the Office of the Attorney General to identify and target individuals and corporations that pollute, as well as to determine where carefully tailored legislation can make a difference. Through the audits, the Attorney General has also established relationships with those citizens in the Bay's watersheds who provide eyes and ears to help identify polluters and other environmental threats. Communication continues long after the day spent at each river, as new issues and problems arise with regularity, and what has been learned will inform future audits and enhance their effectiveness.



St. Mary's River, April 29, 2009



West and Rhode Rivers, July 7, 2009



Miles River, September 23, 2009



Susquehanna River, December 9, 2009



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