Virginia Natural Resources Funding and How It Compares to Other States

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Summary

Virginia has been spending less than one percent of its general funds and all other fund sources appropriated in the state budget on natural resources, state parks and recreation since FY 2014 (see Figure 1). This comports with Census Bureau findings of Virginia annually spending an average of about 0.60-0.65% of all state funds on natural resources (see Table 9) and about 0.30 % on parks and recreation. Add the additional $75 million (0.14%) tax expenditure from the Virginia Land Preservation Tax Credit, and Virginia spends about one percent of available state revenues on natural resources. Virginia has occasionally spent more - such as 2010 and 2014 - when large bond issues have been devoted to water quality improvement initiatives.

According to the Census Bureau, Virginia ranks near the bottom when compared to other states' spending on natural resources (see Figure 2). The average state spends about double the amount as a percent of their state resources versus Virginia's spending on natural resources. When compared to our surrounding states of North Carolina, Pennsylvania, and particularly Maryland, Virginia spends considerably less on natural resources. Virginia does somewhat better – ranking 24th - when comparing spending through our Department of Environmental Quality with similar environmental regulatory agencies in other states. However, Virginia environmental agency spending is significantly less on a per capita basis when compared with our sister Chesapeake Bay states of Maryland and Pennsylvania (see Table 10).

Much of Virginia natural resource funding is spent on activities that can be related to Chesapeake Bay restoration. However, Maryland, in comparison, is much more aggressive in its spending on Chesapeake Bay improvements. Maryland typically spends $600 million per year on Chesapeake Bay restoration – more than twice what Virginia spends. Maryland has several dedicated sources of funding for natural resources, including a $5.00 per month fee on water and sewer bills, plus a share of the motor fuels and rental car taxes for water quality improvements, and a share of their real estate transfer tax for land conservation efforts.

Pennsylvania has also committed dedicated revenue sources for natural resource protection – including a share of real estate transfer and cigarette taxes, "tipping' fees from waste disposal, and an impact fee on the extraction of natural gas.

In 2010, North Carolina eliminated most dedicated sources of funding for natural resources. Since then NC has relied upon general fund appropriations, both recurring and one-time to support their three remaining conservation trust funds. In 2015, the NC General Assembly also repealed their conservation tax credit. North Carolina spending on natural resources has declined since 2010.

Many other states have dedicated sources of revenue for land conservation and natural resource protection, the most common being a dedicated share of real estate transfer taxes. Virginia does commit through its budget a $20 recordation fee, which is shared between the state general fund and the Virginia Natural Resources Commitment Fund for non-point pollution control efforts, and sets aside ten percent of any budget or revenue surplus to its Water Quality Improvement Fund. Virginia is also the national leader in using tax credits for land preservation.

Virginia*forever's* Five-Year Plan, 2015-2019 called for a total state investment of $833,785,000 to meet land conservation goals. In addition, the plan called for $805,000,000 to meet water quality improvement goals, including an additional $50 million each year beyond FY 2015 and FY 2016 investments for wastewater treatment facility upgrades for fiscal years 2017-19, $50 million each year for stormwater management, and $505 million over the five years for agriculture BMP's. [1]

[1] http://virginiaforever.org/fiveyearplan/

From fiscal years 2015 through 2019 under current policy Virginia is providing $410 million for land conservation efforts. This includes the assumption of $75 million in each fiscal year 2017-19 for the land preservation tax credit, and $6.5 million allocated to the Virginia Land Conservation Foundation and $250,000 to the Virginia Farm Preservation Fund programs in FY 2019. This would leave Virginia*forever's* Five-Year Plan for land conservation underfunded by $423 million.

From fiscal years 2015 through 2019 under current policy Virginia is providing $520 million for water quality and agriculture BMP efforts. This amount includes the assumption that the $106 million in wastewater bonds, $75 million in combined sewer overflow bonds for Richmond and Lynchburg cities, and the $35 million for the Stormwater Local Assistance Fund (SLAF) authorized in the 2014 Session are included as issued in the 2015-19 time-period. In addition, it assumes current trends in the state match for the Clean Water Revolving Fund and $10 million in recordation fees allocated for agriculture BMP's in FY 2019. Finally it includes the recently announced $22.5 million in Part A and B deposits to the Water Quality Improvement Fund (WQIF) as a result of the FY 2017 revenue and balance surplus. This would leave Virginia*forever's* Five-Year Plan for water quality underfunded by $285 million.

With the well-documented constraints on the Virginia's existing general fund and debt capacity that is virtually tapped out (summarized prior to Figure 1 on page 5), it will likely be necessary to find new dedicated revenue sources in order to meet Virginia*forever's* goals for land conservation and water quality. As outlined in the paper, many states -- including our sister Chesapeake Bay states of Maryland and Pennsylvania -- have adopted dedicated revenues to fund their natural resource protection goals.

About Fiscal Analytics, Ltd.:

Fiscal Analytics, Ltd. was co-founded in 1999 by James J. Regimbal Jr. Mr. Regimbal has 34 years of experience in state and local budget and tax policy analysis. He served for 12 years on the staff of the Virginia Senate Finance Committee from 1987-1999, where he provided the Committee with expertise in tax policy, economic and revenue forecasting and transportation and finance agency budgets. His expertise in state and local budget and tax policy issues have been provided to local governments, business groups, trade associations, and nonprofit organizations. His local government clients currently include the Virginia Association of Counties, the Virginia Municipal League, and the Virginia First Cities Coalition. Other clients have included the Virginia Association of School Superintendents, VirginiaForever, Virginia Hospital & Healthcare Association (VHHA) and the Virginia Health Care Association (VHCA). Mr. Regimbal holds a B.S. in Economics from the University of Pacific, and an MBA from Virginia Commonwealth University.

Mr. Neal Menkes also assisted in producing this study. Mr. Menkes was previously an analyst for the Department of Planning and Budget, a Deputy Secretary of Natural Resources in the Wilder Administration, and served for 14 years on the Virginia Senate Finance Committee with responsibility for Economic Development, Natural Resources, and Transportation budgets. Most recently he has served as Director of Fiscal Policy for the Virginia Municipal League.

Virginia Natural Resources Funding

The Secretary of Natural Resources is responsible for six agencies: the Department of Environmental Quality (DEQ), The Department of Conservation and Recreation (DCR), the Department of Game and Inland Fisheries, the Marine Resources Commission, the Department of Historic Resources, and the Museum of Natural History. Additional natural resource funding is contained in the Dept. of Forestry's Forest Management Program and the Dept. of Agriculture's Farmland Preservation Program. In total, the Natural Resources Secretariat funding, plus VDACS and Forestry funding comprises just 0.63 percent of state general funds and 0.78 percent of all funds in the current FY 2018 Appropriation Act. While natural resource funding scored a somewhat higher percentage of general funds in FY 2017 – 0.98 percent – due to the episodic addition of $53.5 million in Water Quality Improvement Funds (WQIF) for non-point pollution programs in DCR, funding for natural resources for other programs tracked historical trends and total funding was still less than one percent of the state's budget.

Table 1
State Natural Resource Appropriations

	FY 2018 Appropriations			
Natural Resource Agency	**General Fund**	**Special Funds**	**Federal Funds**	**Total**
Secretary of Natural Resources	$587,173	$0	$100,000	$687,173
Environmental Quality (DEQ)	$39,560,090	$86,726,841	$50,431,206	$176,718,137
Conservation and Recreation (DCR)	$49,922,661	$38,563,749	$11,728,919	$100,215,329
Game and Inland Fisheries (DGIF)	$0	$46,555,222	$16,278,143	$62,833,365
Marine Resources Commission	$12,646,957	$8,887,439	$3,430,800	$24,965,196
Historic Resources	$4,431,398	$845,994	$1,565,926	$6,843,318
Museum of Natural History	$2,660,680	$338,075	$95,000	$3,093,755
Total NR Secretariat	**$109,808,959**	**$181,917,320**	**$83,629,994**	**$375,356,273**
Dept. of Forestry Forest Mgmnt	**$18,383,948**	**$10,340,210**	**$4,790,153**	**$33,514,311**
VDACS Farmland Preservation	**$250,000**	**$0**	**$0**	**$250,000**
Total State Operating Appropriations	$20,354,616,519	$23,430,012,343	$8,150,897,481	$51,935,526,343
Total State Capital Appropriations	$0	$489,813,132	$4,763,000	$494,576,132
NR as a % of Total State	**0.63%**	**0.80%**	**1.08%**	**0.78%**

The 0.6 percent spent on "natural resources" and 0.3 percent spent on "parks and recreation" in Virginia indicated by U.S. Census Bureau 2015 Annual Survey of State Government Finances[2] generally corresponds to the amount of FY 2015 appropriations for the Natural Resource Secretariat. If the Virginia land conservation tax credit program cost of about $70 million per year is added to appropriation amounts in Table 1, an additional 0.13 percent of Virginia's revenues are devoted to natural resources.

[2] https://www.census.gov/govs/state/

Spending in the Natural Resources Secretariat (plus Dept. of Forestry Forest Management) has generally been declining over time as a percent of the state budget as seen in Figure 1, and particularly general fund NR spending as seen in Table 2. The highest spending on natural resources coincided with the state's housing boom economy of the mid-2000's. The state also adopted a significant tax increase beginning in 2005 that bolstered the general fund (sales tax rate was increased by 0.5%, plus a tobacco tax increase and income tax modifications). In fiscal years 2007 and 2008, the state made large discreet general fund deposits to the Water Quality Improvement Fund beyond the requirement to deposit ten percent of any general fund revenue or budget balance surplus. Since the great recession of 2009 the state has cut back its support for natural resources and virtually every other general fund category (except for Medicaid, debt service, and mental health) due to:

1) Slower economic growth (partly from defense spending cutbacks) resulting in reduced general fund revenues compared with historic trends;
2) Continuing high growth rates of Medicaid spending due to increased utilization and health care cost increases;
3) Increased use of debt – particularly for higher education to offset lower operational support – resulting in an increase in annual GF debt service payments growing from $243 million fifteen years ago to $764 million today.

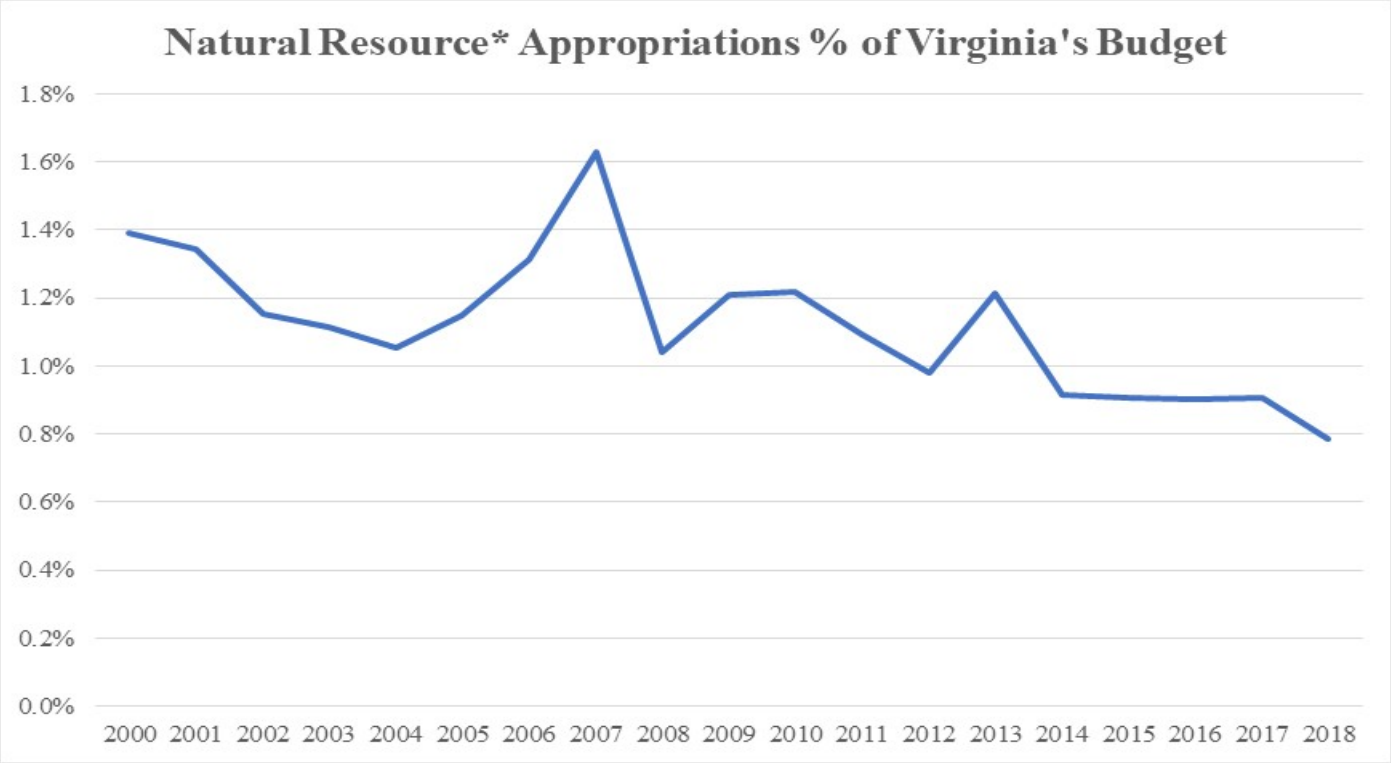
Table 2
General Fund Operating Appropriation Growth ($ Mil.)

	2001	2018	Growth	Annualized Growth
Medicaid	$1,384.2	$4,605.7	232.7%	7.3%
GF Debt Service	$243.1	$763.7	214.2%	7.0%
Behavioral Health	$430.2	$772.6	79.6%	3.5%
Other H&HS	$648.9	$1,059.0	63.2%	2.9%
K-12 Public Education	$3,942.4	$6,030.0	53.0%	2.5%
Public Safety/Comp Board	$1,949.1	$2,588.3	32.8%	1.7%
Higher Education	$1,634.2	$2,014.5	23.3%	1.2%
All Other	$1,899.4	$2,392.3	25.9%	1.4%
Natural Resources*	**$152.1**	**$128.5**	**-15.5%**	**-1.0%**
Total GF Operating	$12,283.6	$20,354.6	65.7%	3.0%

** Includes NR Secretariat, Forest Management and VDACS Farmland Preservation*

The state has provided additional support for natural resources in the form of bonds since the recession that is not contained in Figure 1. Nor does the figure include loans made from the Clean Water Revolving Loan Fund. The General Assembly authorized $250 million in 2010, $181 million in 2014, and $59 million in 2017 for wastewater treatment upgrades; $75 million for combined sewer overflow projects in the cities of Richmond and Lynchburg in 2014; and $55 million in 2014/15 and $20 million in 2016 for the Stormwater Local Assistance Fund.

Figure 1



*Includes Natural Resources Secretariat appropriations plus Dept. of Forestry Forest Mgmt.
Note: Natural resource appropriations do not include debt service payments on bonds contained within the Treasury Board budget.

Direct spending programs in Virginia since fiscal year 2000 on land conservation, wastewater and stormwater cleanup efforts, and agricultural best management practices are contained in Table 3 below. In reviewing this table, note the wide fluctuations in the amount of funding that each of these programs have received throughout the period shown. Appendix A provides the detailed sources by year for this table.

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
2000 Total	**5,750,000**	**49,542,280**	**0**	**9,831,250**	**65,123,530**
General	1,250,000	19,815,380		9,831,250	
Federal	0	29,726,900		0	

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
Special	4,500,000	0		0	
Bonds	0	0		0	
2001	**10,600,000**	**45,994,029**	**0**	**13,040,462**	**69,634,491**
General	9,600,000	15,799,005		12,040,462	
Federal	500,000	27,495,024		0	
Special	500,000	2,700,000		1,000,000	
Bonds	0	0		0	
2002	**50,000,000**	**32,797,038**	**0**	**1,040,462**	**83,837,500**
General	0	5,466,173		1,040,462	
Federal	0	27,330,865		0	
Special	0	0		0	
Bonds	50,000,000	0		0	
2003	**500,000**	**32,610,724**	**0**	**5,831,981**	**38,942,705**
General	0	5,435,121		3,652,981	
Federal	0	27,175,603		0	
Special	500,000	0		2,179,000	
Bonds	0	0		0	
2004	**1,463,275**	**32,546,804**	**0**	**2,886,110**	**36,896,189**
General	0	5,424,467		685,473	
Federal	0	27,122,337		0	
Special	1,463,275	0		2,200,637	
Bonds	0	0		0	

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
2005	**18,938,043**	**39,759,382**	**0**	**10,102,973**	**68,800,398**
General	12,500,000	17,670,314		10,102,973	
Federal	6,000,000	22,089,068		0	
Special	438,043	0		0	
Bonds	0	0		0	
2006	**3,572,523**	**105,736,342**	**0**	**70,458,873**	**179,767,738**
General	2,500,000	87,779,890		70,458,873	
Federal	0	17,956,452		0	
Special	1,072,523	0		0	
Bonds	0	0		0	
2007	**7,993,269**	**243,284,500**	**0**	**4,485,473**	**255,763,242**
General	4,600,000	217,180,750		4,485,473	
Federal	230,000	21,903,750		0	
Special	3,163,269	4,200,000		0	
Bonds	0	0		0	
2008	**3,397,880**	**36,711,477**	**0**	**1,185,473**	**41,294,830**
General	3,000,000	22,785,246		685,473	
Federal	0	13,926,231		0	
Special	397,880	0		500,000	
Bonds	0	0		0	
2009	**33,500,000**	**17,188,177**	**0**	**21,112,300**	**71,800,477**
General	2,500,000	3,261,946		1,112,300	
Federal	750,000	13,926,231		0	

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
Special	250,000	0		20,000,000	
Bonds	30,000,000	0		0	
2010	**134,083,818**	**300,037,600**	**0**	**20,000,000**	**454,121,418**
General	2,500,000	8,339,600		15,200,000	
Federal	0	41,698,000		0	
Special	4,666	0		4,800,000	
Bonds	0	250,000,000		0	
Credits	131,579,152			0	
2011	**120,926,367**	**39,908,300**	**0**	**41,898,700**	**202,733,367**
General	500,000	9,688,300		32,798,700	
Federal	0	30,220,000		0	
Special	2,000,000	0		9,100,000	
Bonds	0	0		0	
Credits	118,426,367			0	
2012	**98,600,354**	**34,708,000**	**0**	**9,100,000**	**142,408,354**
General	1,500,000	5,784,000		0	
Federal	0	28,924,000		0	
Special	2,000,000	0		9,100,000	
Bonds	0	0		0	
Credits	95,100,354	0		0	
2013	**72,991,847**	**120,356,994**	**1,000,000**	**30,079,048**	**224,427,889**
General	1,000,000	93,033,994	1,000,000	20,979,048	
Federal	0	27,323,000	0	0	

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
Special	2,000,000	0	0	9,100,000	
Bonds	0	0	0	0	
Credits	69,991,847	0	0	0	
2014	**73,796,521**	**215,432,800**	**35,000,000**	**9,100,000**	**333,329,321**
General	1,000,000	5,738,800	0	0	
Federal	0	28,694,000	0	0	
Special	2,000,000	0	0	9,100,000	
Bonds	0	181,000,000	35,000,000	0	
Credits	70,796,521	0	0	0	
2015	**73,478,333**	**41,840,100**	**23,292,479**	**33,897,500**	**172,508,412**
General	2,000,000	13,292,100	0	23,897,500	
Federal	1,107,874	28,548,000	3,292,479	0	
Special	2,472,126	0	0	10,000,000	
Bonds	0	0	20,000,000	0	
Credits	67,898,333	0	0	0	
2016	**78,543,846**	**32,812,800**	**28,292,479**	**28,881,888**	**148,531,013**
General	5,927,000	5,468,800	5,000,000	10,696,471	
Federal	110,374	27,344,000	3,292,479	0	
Special	2,139,626	0	0	18,185,417	
Bonds	0	0	20,000,000	0	
Credits	70,366,846	0	0	0	
2017	**14,526,000**	**59,000,000**	**3,292,479**	**71,708,800**	**168,527,279**
General	8,500,000	0	0	61,708,800	

Table 3

Virginia Expenditures for Land Conservation, Wastewater, Stormwater, and Non-point Source Pollution

Fiscal Year	Land Conservation	Wastewater	Stormwater	Non-Point Source	Total Authorization
Federal	2,123,000		3,292,479	0	
Special	3,903,000	0	0	10,000,000	
Bonds	0	59,000,000	0	0	
2018	**12,404,000**	**0**	**3,292,479**	**18,274,474**	**33,970,953**
General	4,750,000		0	0	
Federal	2,013,000		3,292,479	0	
Special	5,641,000		0	18,274,474	
Bonds	0		0	0	

Notes:
1) Land conservation includes operating and capital spending for VLCF, VFPF, and LPTC claims as well as forestry land acquisitions. Land conservation includes acquisitions of state park land, state forests, and state natural heritage areas as well as support for land easement purchases and management by public and non-profit entities.
2) Wastewater includes general fund for WQIF point projects, bonds & state match for Clean Water Revolving Loan Fund and federal CWRLF capitalization dollars. Grants are made to finance the costs of design and installation of nutrient removal technology at publicly owned treatment works to comply with regulatory or permit requirements. The category does not include money for CSO projects but does include interest on the WQIF.
3) Stormwater includes bond funding and general fund dollars for SLAF and money from

the Virginia Water Quality Improvement Fund. Matching grants to localities are used for new stormwater best management practices, stormwater best management retrofits, stream restorations, low impact development projects, buffer restoration, pond and wetlands restorations.

4) VPBA bonds are authorized either in the Budget Bill or in separate, standalone legislation.
5) Non-Point Source programs include general fund and NGF deposits and appropriations made to WQIF and CBLAD appropriations for local assistance programs. The category also includes specific appropriations made for the federal Conservation Enhancement Program, Ag BMPs cost-share assistance, livestock stream exclusion practices, and certain technical assistance for Soil and Water Conservation Districts.

Virginia Land Conservation

A major building block of Virginia's land conservation efforts is the Virginia Land Conservation Foundation (VLCF), which was established in 1999. The Foundation manages the Virginia Land Conservation Fund, a non-lapsing fund in the state treasury. The VLCF provides grants to state agencies including the Virginia Outdoors Foundation, and matching grants to local governments and nonprofit organizations for land acquisition and purchase of development rights to protect open spaces and parks, natural areas, historic areas, farmlands and forests. The Foundation serves as the primary catalyst to foster state-local collaboration on behalf of land conservation and is one of the key tools that Virginia utilizes to attain its land conservation targets. A coordinating multi-agency task force consisting of the Director of the Department of Conservation and Recreation (DCR), the Commissioner of Agriculture and Consumer Services, the State Forester, the Director of the Department of Historic Resources, the Director of the Department of Game and Inland Fisheries, and the Executive Director of the Virginia Outdoors Foundation, or their designees, provide the VLCF Board with assistance on such matters as grant criteria, grant priorities, and grant selection. The Virginia Department of Conservation and Recreation serves as the lead staff for the Foundation. The Virginia Department of Conservation and Recreation's Office of Land Conservation serves as a statewide central contact, repository, and clearinghouse for land conservation in Virginia. During VLCF grant rounds, this office serves as an important source of information for potential grant applicants and acts as the grant manager for projects funded.

Table 4 details the direct state land conservation program funding since FY 2000, including Virginia Land Conservation Foundation Program (VLCF) funding, direct capital appropriations, Virginia Farmland Preservation Fund (VFPF), and the Department of Historic Resources Virginia Battlefield Preservation Fund.

Table 4
Direct Land Conservation Funding

Year	VLCF-GF	VLCF-NGF Approps	VLCF-Total	Capitol Authorizations	VFPF Direct Appropriations
2000	1,250,000	500,000	1,750,000	4,500,000	
2001	9,600,000	-	9,600,000	1,000,000	
2002	-	-	-	50,000,000	
2003	-	-	-	500,000	
2004	-	1,463,275	1,463,275	-	
2005	12,500,000	438,043	12,938,043	6,000,000	
2006	2,500,000	972,523	3,472,523	100,000	
2007	3,000,000	963,269	3,963,269	4,030,000	
2008	3,000,000	397,880	3,397,880	-	
2009	2,000,000		2,000,000	31,000,000	500,000
2010	2,000,000	4,666	2,004,666	-	500,000
2011	500,000	2,000,000	2,500,000	-	
2012	1,500,000	2,000,000	3,500,000	-	
2013	1,000,000	2,000,000	3,000,000	-	
2014	1,000,000	2,000,000	3,000,000	-	
2015	1,000,000	2,000,000	3,000,000	1,580,000	1,000,000
2016	4,000,000	2,000,000	6,000,000	427,000	1,750,000
2017	8,000,000	2,000,000	10,000,000	4,026,000	500,000

2018	4,500,000	2,000,000	6,500,000	5,654,000	250,000

Virginia Battlefield Preservation Fund*

Fiscal Year	Amount
2007	$500,000
2008	$200,000
2009	$5,190,000
2010	$190,000
2011	$0
2012	$0
2013	$1,000,000
2014	$1,400,000
2015	$1,000,000
2016	$2,000,000
2017	$792,385
2018	$1,000,000

* Formerly Civil War Battlefield Preservation Fund

Virginia Land Preservation Tax Credit Program

The Virginia Land Conservation Incentives Act of 1999 significantly enhanced the tax benefits available to private landowners who donate land or conservation easements by creating the Land Preservation Tax Credit.[3] Prior to tax year 2007, a landowner could receive an income tax credit equal to 50 percent of the fair market value of the donated land or easement. The law was changed for tax year 2007 by reducing the credit from 50 percent to 40 percent. Beginning with calendar year 2015, the maximum amount of credits that may be issued in a calendar year shall not exceed $75 million. In no case shall the Tax Department issue any tax credit for a donation from any allocation or pool of tax credits attributable to a calendar year prior to the year in which the complete tax credit application for the donation was filed. The amount of the credit that may be claimed by each taxpayer, including credit claimed by applying unused credits as provided under subsection C of § 58.1-513, shall not exceed $20,000 for 2017 and 2018 taxable years as prescribed in Part 3 of §3-5.19 of Chapter 836 2017 Acts of Assembly. Finally, a taxpayer claiming a tax credit in excess of $1 million is now required to have the conservation value of the easement verified by the Director of the Virginia Department of Conservation and Recreation; the Director's verification must be based on criteria established by the Virginia Land Conservation Foundation. To receive approval, credits over this amount must meet the following criteria:

- ✓ Conservation purpose;
- ✓ Public benefit, and
- ✓ General water quality and forest management

[3] § 58.1-512, Code of Virginia

Conservation purpose can include agricultural use, forestal use, natural habitat and biological diversity, historic preservation, natural resource based outdoor recreation or education, watershed protection, preservation of scenic open space, or conservation and open space lands designated by local governments. Donated land or easements will be presumed to meet one or more of the conservation purposes if they are approved by the VOF, Department of Historic Resources, Department of Forestry, Department of Conservation and Recreation, or Department of Game and Inland Fisheries. Public benefit must include restrictions that 1) protect the land in perpetuity, 2) prohibit significant alteration of the conservation values of the property, and 3) ensure that the conservation value of the property will not be adversely affected by future subdivision or development. Finally, the conservation easement must ensure the protection of water quality and forest resources as stated in the adopted criteria.

The Virginia Land Preservation Tax Credit has proven itself an effective incentive, and even with the moderate reduction to a 40 percent credit towards taxable income, it remains a powerful tool for encouraging voluntary, private land conservation. This tax credit is especially effective because of its transferability. Any unused credits can be transferred or sold, making the incentive valuable for landowners without large incomes. Even with these changes, Virginia has one of the most generous land preservation tax incentive programs in the nation (see Table 12) for details on other state tax credit programs).

As of May 1, 2017, nearly 814,000 acres have been put under permanent conservation easement through the almost $1.6 billion Virginia Land Preservation Tax Credit Program.

Table 5
Virginia Land Preservation Tax Credit

Year	# of Credits	# of Acres	Tax Credits Allocated	Tax Credits Claimed
2000-06	1,557	295,070	$736,837,981	$426,832,755
2007-08	478	119,504	$202,287,081	$236,858,621
2009	228	63,409	$106,647,006	$85,153,370
2010	146	38,551	$106,845,000	$131,579,152
2011	367	75,025	$108,424,000	$118,426,367
2012	228	45,329	$64,090,780	$95,100,354
2013	234	64,909	$78,882,596	$69,991,847
2014	136	31,428	$55,648,387	$70,796,521
2015	182	42,362	$48,625,672	$67,898,333
2016*	163	30,983	$58,475,935	$70,366,846
2017*	31	7,216	$7,865,915	
Total	**3,750**	**813,786**	**1,574,630,353**	**$1,373,004,166**

* Partial year data. Tax credits are allocated and claimed on a calendar year basis rather than a fiscal year.
Amounts claimed from 2000-2009 do not include amended returns.
Source: Larry Durbin, Assistant Tax Commissioner, Va Dept. of Taxation, May 24, 2017

Wastewater/Stormwater Funding Programs

State wastewater upgrades have typically been funded through the Water Quality Improvement Fund, special bond authorizations, and state match funding and federal funds capitalizing the Clean Water Revolving Loan Fund. Recently stormwater projects have been funded through the State/Local Assistance Fund.

The point agency for wastewater efforts is the Department of Environmental Quality (DEQ). This agency administers state laws and regulations, including permits, to improve and protect Virginia's streams, rivers, bays, wetlands, and ground water.

DEQ manages the Clean Water Revolving Loan Fund, administering the Fund's policies on behalf of the State Water Control Board. The Virginia Resources Authority (VRA) serves as the financial manager of the Fund. Loans are made to Virginia local governments to assist with wastewater treatment plant and/or collection system improvements. Localities may apply for a loan from the VCWRLF Wastewater Loan Program for any expansion, upgrade, extension, replacement, repairs, rehabilitation, and/or additions to publicly-owned wastewater collection and treatment facilities; construction of any needed new facility or new conveyance system; and any planning and/or design costs associated with the above improvements. According to VRA's 2016 Annual Report (Table 6), from fiscal years 2007 through 2016, the Revolving Fund issued over $1.6 billion in loans for 222 projects.[4]

DEQ is also the lead agency for developing and implementing statewide stormwater management and nonpoint source pollution control programs to protect the Commonwealth's water quality and quantity. Loans are provided through the Revolving Fund to local governments for the construction of facilities or structures or implementation of best management practices that reduce or prevent pollution of state waters caused by storm water runoff from impervious surfaces. The General Assembly has also provided appropriations (and bonds) to assist localities by establishing and funding the Stormwater Local Assistance Fund. In FY17, DEQ announced grants authorized for the Stormwater Local Assistance Fund (SLAF) totaled $19,855,948 and covered 41 projects in 26 localities

The Water Quality Improvement Act directs DEQ to assist local governments and individuals in reducing point source nutrient loads to the Chesapeake Bay with technical and financial assistance made available through grants provided from the fund.

[4] http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD5372016/$file/RD537.pdf

Table 6
Virginia Wastewater/Stormwater Funding

	Wastewater			Stormwater
Year	DEQ/WQIF	Bonds	Clean Water Revolving Loan Fund -- State & Federal	SLAF
2000	13,870,000	-	35,672,280	
2001	13,000,000		32,994,029	
2002	-		32,797,038	
2003	-		32,610,724	
2004	-		32,546,804	
2005	13,252,500		26,506,882	
2006	84,188,600		21,547,742	
2007	217,000,000		26,284,500	
2008	20,000,000		16,711,477	
2009	476,000		16,711,477	
2010	-	250,000,000	50,037,600	
2011	3,644,300		36,264,000	
2012	-		34,708,000	
2013	87,569,394		32,787,600	1,000,000
2014		106,000,000	34,432,800	35,000,000
2015	7,582,500		34,257,600	23,292,479
2016	-		32,812,800	28,292,479
2017		59,000,000		3,292,470
2018				3,292,470

Non-Point Pollution Control and Agricultural BMP Tax Credit Funding

State non-point pollution control efforts take place mainly through programs administered by the Department of Conservation and Recreation (DCR).

The Water Quality Improvement Fund is the principal source of state money to implement nutrient and sediment reduction activities within the Chesapeake Bay watershed and in watersheds outside of the Chesapeake Bay.

The majority of WQIF dollars are managed by DCR for the Agricultural BMP (best management practices) cost share program. WQIF money is also used to support the state-federal Conservation Reserve Enhancement Program and strategic nonpoint source water quality initiatives within the Virginia Department of Forestry.

The importance of Agricultural BMPs cannot be overstated. Some 25.0 percent of Virginia's land area is used for some kind of agricultural activity. Many of these activities can be the source of significant amounts of nutrient (phosphorus and nitrogen), sediment, pathogen, and pesticide pollution to the Commonwealth's waters. Agriculture is one of the largest contributors of nutrient and sediment loadings to state waters.

Much of DCR's work along with the efforts of the agency's federal partners and the Soil and Water Conservation Districts is focused on installing, promoting and tracking agricultural BMPs. These practices include the control of cropland runoff, animal waste dispersal, streambank erosion, improper use of fertilizers and pesticides, and other similar actions. Money is expended on constructing control devices such as riparian buffers, diversions, grass filter strips, animal waste control facilities, animal carcass incinerators, stream exclusion fencing, and chemical and fertilizer handling facilities.

The WQIF Reserve Fund was established in 2004 by the General Assembly (2004 Special Session I, Chapter 4) "to support the Fund's purposes…when year-end general fund surpluses are unavailable…" Some 15.0 percent of any amounts appropriated to WQIF due to a general fund revenue surplus are directed to the Reserve. The money may be used when no general fund surpluses are available as directed by the General Assembly.

The 2010 Session of the General Assembly imposed a $20.00 fee on every deed for which a recordation tax is collected pursuant to state law and every certificate of satisfaction admitted when a lien is released and recorded by a clerk of any circuit court. Half of the fees are deposited to the Virginia Natural Resources Commitment Fund, which is a subfund of the WQIF. The remaining fees are credited to the state general fund.

The Virginia Natural Resources Commitment Fund is managed by the Department of Conservation and Recreation. The majority of dollars are used for the Virginia Agricultural Best Management Practices Cost-Share Program. Roughly 8.0 percent is distributed to the Soil and Water Conservation Districts to provide technical assistance regarding Agricultural BMPs.

Table 7
Virginia Non-Point Pollution Control Funding

Year	DCR/WQIF (GF)	Recordation fees & Other NGF	DCR/WQIF Reserve Fund
2000	9,831,250		
2001	12,040,462	1,000,000	
2002	1,040,462		
2003	3,652,981	2,179,000	
2004	685,473	2,200,637	
2005	9,876,357	-	226,616
2006	61,346,933	-	9,111,940
2007	4,285,868	-	199,605
2008	685,473	-	500,000
2009	1,112,300	-	20,000,000
2010	15,200,000	-	4,800,000
2011	27,878,895	9,100,000	4,919,805
2012	-	9,100,000	-
2013	19,679,048	9,100,000	1,300,000
2014		9,100,000	
2015	20,931,888	10,000,000	2,965,612
2016	10,696,471	10,000,000	8,185,417
2017	53,464,590	10,000,000	8,244,210
2018	-	10,000,000	8,274,474

The Virginia Agricultural BMP Tax Credit Program began in 1998. It supports the voluntary installation of BMPs that support Virginia's nonpoint source pollution water quality objectives. Agricultural producers with a conservation plan approved by their Soil and Water Conservation District (SWCD) may take a credit against state income tax of 25 percent of the first $70,000 spent on agricultural BMPs. The amount of the tax credit may not exceed $17,500 or the total state income tax obligation. Starting with tax year 2011, any unusable tax credit - i.e., exceeding the state tax obligation - will be refunded to the taxpayer by the Virginia Department of Taxation.

Table 8
Agriculture BMP Tax Credit

2010	$669,940
2011	$585,469
2012	$1,248,177
2013	$858,504
2014	$798,586
2015	$1,144,933
2016	$1,008,216

Source: Dept. of Taxation Annual Reports

Natural Resource Funding Comparison to Other States

One of the problems in comparing states on spending for the environment is that each state is unique, with a unique set of problems, financial resources, policy priorities, and geography. For example, Pennsylvania has a large mining and gas "fracking" industry and is spending $77 million each year in its fiscal years 2017 and 2018 budgets just on mine reclamation projects. Maryland is almost entirely in the Chesapeake Bay Watershed. In addition to comparing the size of each state's environmental problems, there are other difficulties in comparing spending. For example, spending could be compared on a percent of state revenue, per capita, or on a wealth basis, or per land area basis.

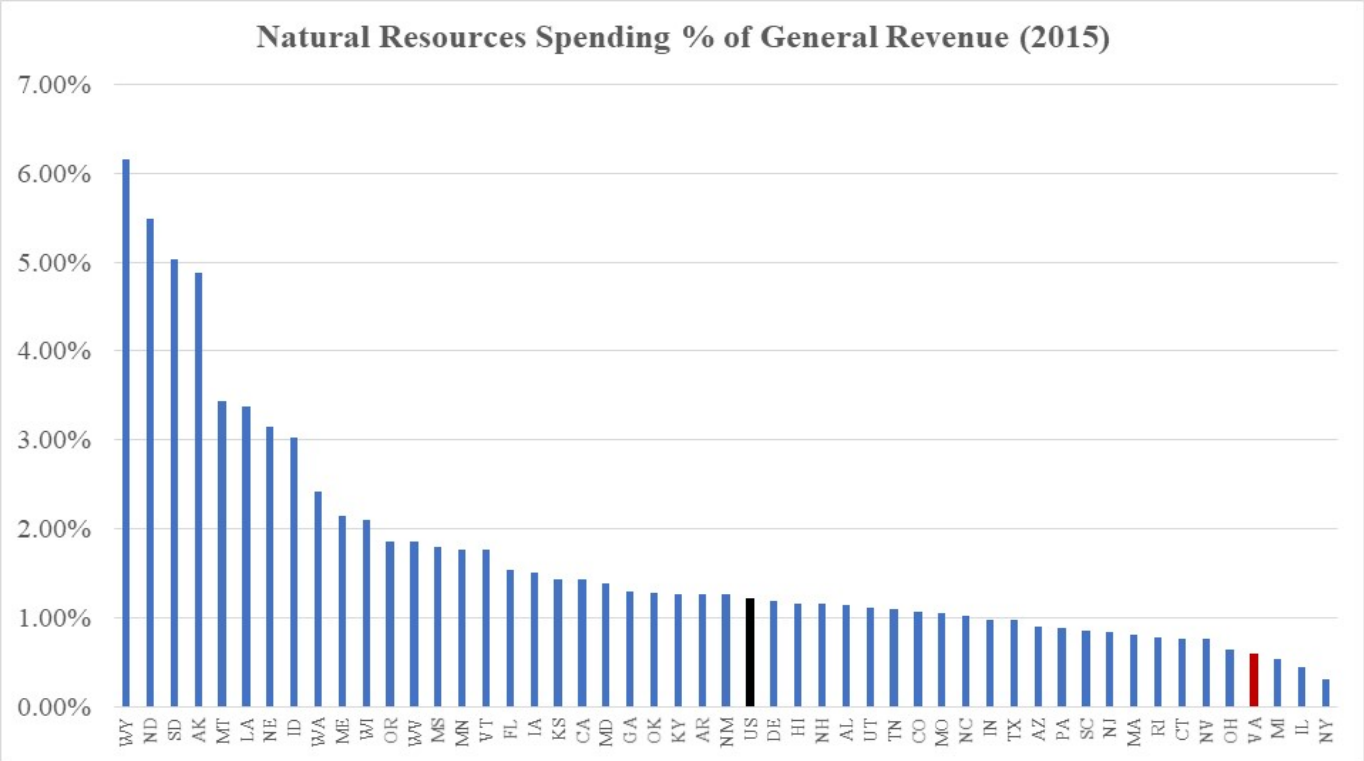
This section cites several sources that compare different aspects of state spending on natural resources. While it is very important to recognize that these sources look at different aspects of natural resources spending, general conclusions can be drawn about a state's ranking relative to other states and regions. In addition, the extent to which these sources are comparing "apples to apples" varies because states are organized in different ways and track their own natural resource spending differently. Taken together, these sources make it clear that Virginia trails other states in terms of the amount of our budget that is devoted to natural resources.

U.S. Census Bureau State Natural Resource Funding Comparison

According to the U.S. Census Bureau 2015 Annual Survey of State Government Finances, **Virginia's 0.6 percent ranks near the bottom for spending on natural resources as a percent of general revenue**. As indicated earlier, the 0.6 percent spent on "natural resources" and 0.3 percent spent on "parks and recreation" in Virginia indicated by U.S. Census Bureau 2015 Annual Survey of State Government Finances[5] generally corresponds to the amount spent in recent years and FY 2018 appropriations for the Natural Resource Secretariat seen in Table 1. Figure 2 below compares the Census data spending in our surrounding states and the national averages. According to this data, Virginia spends about half the national average on natural resources. All other Southeastern States – and all states bordering Virginia – rank above Virginia with regard to the amount of general revenue that is spent on natural resources.

[5] https://www.census.gov/govs/state/

Figure 2



Source: U.S. Census Bureau, 2015 data

When analyzing the Census Bureau data over a longer period of time, with the notable exceptions of 2011 and 2012, Virginia has consistently spent about 0.6 percent of its general revenue on natural resources. According to this Census analysis, Virginia spends about half the U.S. state average, and less than our surrounding Chesapeake Bay states. Even adding the imputed 0.14 percent additional funding calculated by adding the Virginia Land Preservation Tax Credit at $75 million per year would leave Virginia spending considerably less than our surrounding states.

Table 9

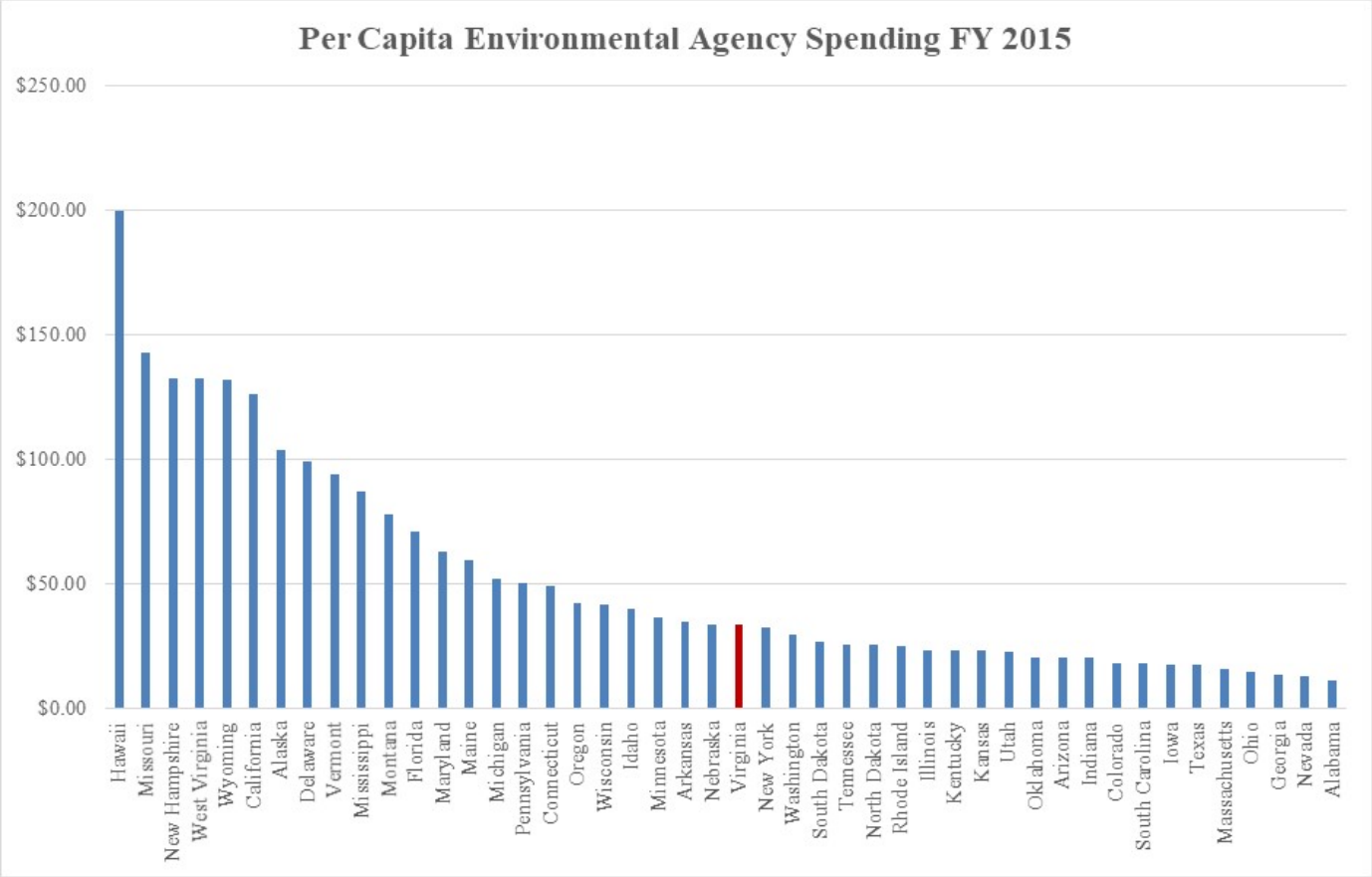
Percent of State General Revenue Spent Directly on Natural Resources					
	US Average	MD	NC	PA	VA
2015	1.21%	1.39%	1.02%	0.89%	0.60%
2014	1.80%	1.31%	1.03%	0.92%	0.61%
2013	1.26%	1.29%	1.07%	0.92%	0.61%
2012	1.35%	1.52%	1.31%	1.31%	1.74%
2011	1.33%	1.42%	1.36%	0.95%	1.75%
2010	1.37%	1.57%	1.26%	1.08%	0.64%
2009	1.51%	2.18%	1.85%	1.08%	0.65%
2008	1.49%	1.95%	1.61%	1.12%	0.59%
2007	1.52%	1.89%	1.61%	1.08%	0.60%
2006	1.44%	1.55%	1.33%	1.04%	0.64%

Source: U.S. Census Bureau

Environmental Council of the States (ECOS) Comparison

According to the Environmental Council of the States, Virginia compares more favorably in direct spending in its "Environmental Agency" (DEQ) budgets, when compared to similar agency spending in other states – ranking 24 out of the 50 states in per capita spending in FY 2015. It is important to recognize that this ranking includes federal funds, fees and other non-general funds. In fact, during FY 15, only 14% of DEQ funding consists of state general fund dollars. And as shown on the next page, Virginia spends significantly less than both Pennsylvania and Maryland.

Figure 3



While ranking in the midpoint of all states on per capita spending for environmental *agency* budgets, Virginia spends less than our adjacent Chesapeake Bay states.

Table 10

Environmental Agency Spending in Chesapeake Bay States

	Population	FY 2015 EAB Budget	Per Capita EAB Spending FY 2015	Per Capita EAB Spending FY 2014	Per Capita EAB Spending FY 2013
Virginia	8,383,993	$282,201,486	$33.66	$26.55	$28.43
Pennsylvania	12,802,503	$649,584,000	$50.74	$51.67	$46.91
Maryland	6,006,401	$379,064,123	$63.11	$62.42	$78.29

Source: Environmental Council of the States, STATUS OF STATE ENVIRONMENTAL AGENCY BUDGETS, 2013-2015, March 15, 2017

Virginia FY 2015 DEQ funding includes:
General Fund – $38,717,466. (Including $2.1 million DEQ match for the SRF)
Federal Funds – $62,492,150. (Including $34.4 million for the SRF)
Fees and All Other – $180,991,870.
(Does not include VRA SRF loans of over $100 mil. per year)

For Pennsylvania DEP budget see:
http://www.budget.pa.gov/PublicationsAndReports/CommonwealthBudget/Documents/2017-18%20Proposed%20Budget/2017-18%20Budget%20Document%20-%20Web.pdf, page E17-1

EPA Chesapeake Bay Watershed Restoration Spending Comparison

In December of 2014, the Chesapeake Bay Accountability and Recovery Act (CBARA) was signed into law. This act requires the federal Office of Management and Budget (OMB) to submit an annual report on federal and state funding toward environmental restoration in the Chesapeake Bay watershed.[6] As defined by CBARA, state restoration activities include any State programs and projects carried out under State authority that directly or indirectly protect, conserve, or restore living resources, habitat, water resources, or water quality in the Chesapeake Bay watershed. These include programs or projects that promote responsible land use, stewardship, and community engagement in the Chesapeake Bay. Categories for consideration include physical restoration, planning, feasibility studies, scientific research, monitoring, education, and infrastructure development. Not all categories are relevant to all States or activities. It is important to recognize that in complying with CBARA, states did not approach the task of submitting their spending in a uniform way. Pennsylvania had a particularly difficult time determining what to include, and as described on page 39 and shown in Table 16, has revised its submission. While it appears that Virginia is spending significantly more that Pennsylvania on Chesapeake

[6] http://chesapeakeprogress.com/funding

Bay restoration, Pennsylvania ranks above Virginia both in regard to the percentage of general revenues spent on natural resources overall, and per capita environmental agency spending.

The seven watershed state jurisdictions — Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia and West Virginia — reported investing an estimated $1.23 billion in watershed restoration through state programs in fiscal 2016. This marked a slight increase from the estimated investments of fiscal 2015, and is $252 million below the estimated fiscal 2017 budget of $1.54 billion.[7] The reported state spending confirms the high levels of natural resource funding in the state of Maryland (although somewhat reduced if public transportation and higher education research is excluded as explained later in the report.)

Additional detailed information on state funding for Chesapeake Bay restoration activities by type of program can be found in the appendices of this report and at: http://www.chesapeakebay.net/channel_files/23874/cbara_chesapeake_bay_crosscut_report_final_(12.06.16).pdf

Table 11

State Spending for Chesapeake Bay Watershed Restoration ($ Thous.)				
	FY 2014	FY 2015	FY 2016	FY 2017
Delaware	$750	$750	$750	$750
District of Columbia	$28,299	$33,110	$26,544	$52,126
Maryland	N/A	$871,424	$870,451	$1,097,742
New York	$6,490	$6,280	$6,041	$6,990
Pennsylvania	$53,899	$86,594	$40,034	$33,671
Virginia	$177,111	$241,239	$255,862	$301,940
West Virginia	$17,682	$43,884	$86,062	$44,879
TOTAL	N/A	$1,283,281	$1,285,744	$1,538,098

Source: http://chesapeakeprogress.com/funding

[7] IBID

Dedicated State Funding Sources for Land Conservation

The most common funding source for land conservation -- including, Delaware, Maryland, and Pennsylvania -- is the real estate transfer tax. North Carolina recently ended its transfer tax dedication to land conservation. These taxes are also often used to support the debt service for bonds. Other dedicated revenue sources used by states for land preservation include license plate fees in North Carolina, oil and gas impact fees and royalties, solid waste tipping fees, and cigarette taxes in Pennsylvania, and sales tax revenue in New Jersey. While Virginia has one of the most generous land conservation tax credit programs, other states use this mechanism as well.

Alabama
Funding Source: Oil and gas royalties (1992)
In 1992 and 2012, voters passed 20-year constitutional amendments funded by revenues from oil and gas operations. Revenue is capped at $15 million per year.

Arizona
Funding Sources: Lottery proceeds (1990), legislative appropriation (1998)
In 1990, voters dedicated up to $20 million annually in lottery funds for conservation. The legislature swept these funds in 2010 to balance the state budget. Also in 2010, voters successfully rejected an additional sweep of $20 million in annual appropriations for
Growing Smarter, a grants program established in 1998.

Arkansas
Funding Source: Real estate transfer tax (1987), sales tax (1996)
A constitutional amendment passed in 1996 dedicates a portion of the state sales tax for land conservation. Revenues are split between Game & Fish and State Parks departments. The tax generates a total of $40 million to $60 million annually.

California
Funding Source: Voter approved bonds (since 1960s)
California has passed over $10 billion in voter approved conservation bond funds since 1996. A vehicle registration fee for funding state parks was rejected by voters in 2010.

Colorado
Funding Source: Lottery proceeds (1992)
Voters passed a constitutional amendment in 1992 that dedicates lottery revenues to fund Great Outdoors Colorado (GOCO). A 2001 ballot measure allowed GOCO $115 million in bonding authority. GOCO lottery funding is currently approved through June 30, 2024.

Connecticut
Funding Sources: Legislative bonds (multiple), deed recording fee (2005)
Funded by a deed recording fee, the Community Investment Act provides up to $10 million annually for open space and farmland. Additional funding comes from state bonds.

Delaware
Funding Source: Real estate transfer tax (1986)

A real estate transfer tax provides $10 million in annual appropriations to the Delaware Agricultural Lands Preservation Program, plus an additional $10 million in annual appropriations to the Open Space Program.

Florida

Funding Source: Documentary stamp tax (deed recording fee) (1990)

Historically, the state issued $300 million annually in bonds, backed by the documentary stamp tax, however in recent years these funds were frequently diverted to the general fund. In 2014, an amendment to the Florida Constitution passed with 75 percent support, dedicating one-third of this funding source for 20 years, which will generate a projected $22 billion.

Hawaii

Funding Source: Conveyance tax (real estate transfer tax) (2005)

The Legacy Land Conservation Program was created in 2005 to provide a funding infusion to state's Land Conservation Fund. Ten percent of conveyance tax revenues are earmarked for the program, about $4 million annually.

Illinois

Funding Sources: Real estate transfer tax (1986), legislative bonds

Primary funding comes from a statutorily dedicated state real estate transfer tax, a fee of $1 per $1,000 paid for property sold in the state. Most of this funding is now swept to the state general fund, but at its peak, the tax generated $30 million annually.

Iowa

Funding Source: Legislative appropriations (1989)

The state legislature set conservation program funding at $10 million annually from the general fund. A trust fund was approved by voters in 2010, however a proposed sales tax to fund it is pending.

Maine

Funding Source: Voter approved bonds (1987)

Seven bonds have been approved since 1987, generating over $136 million.

Maryland

Funding Source: Real estate transfer tax (1969)

Maryland is one of the first states to fund land conservation through a dedicated real estate transfer tax and agricultural transfer tax. At full funding, the transfer tax could generate several hundred million dollars for Program Open Space, the state's primary conservation program.

Massachusetts

Funding Sources: Legislative bonds (multiple), deed recording fee (2000)

The state legislature authorizes bond expenditures for environmental programs. The most recent bond in 2014 dedicated $360 million to land conservation over four years. Additionally, revenue from a deed recording fee passed in 2000generates between $20 million to $70 million annually for the state Community Preservation Act trust fund.

Michigan

Funding Source: Royalties on sale and lease of mineral rights (1976)

Voters passed a constitutional amendment titled the Michigan Natural Resources Trust Fund Act in 1984, creating a dedicated revenue source through oil and gas leases. About $30 million is generated annually.

Minnesota

Funding Sources: Lottery (1990), sales tax (2008), legislative bonds

Minnesota voters have approved three constitutional amendments dedicating funds for conservation. Lottery proceeds were approved in 1990 and 1998, and a sales tax was approved in 2008. The sales tax is expected to generate over $5.5 billion over the next 25 years.

Missouri

Funding Source: Voter approved sales tax (1976)

Voters passed a permanent 1/8 of one-cent sales tax in 1976, which generates $90 million to $100 million a year for conservation. The state also has a constitutionally dedicated sales tax for parks, soil, and water, that is not typically used for land conservation. This tax is up for renewal on the November 2016 ballot.

Nebraska

Funding Source: Voter approved lottery funds (1992)

In 1992, voters approved a constitutional amendment to create the Nebraska Lottery. A portion of the proceeds go to the Nebraska Environmental Trust: from $15 million to $18 million annually.

New Hampshire

Funding Sources: Legislative appropriations (multiple), deed recording fee (2007)

The legislature passed a $25 deed fee on all documents recorded at the ten county deed registries in 2007. The fee was expected to generate about $6 million annually for land conservation, and sunset after 10 years. In FY12-13, nearly all LCHIP funding was diverted to the general fund. LCHIP funding was restored in FY14 through FY17 when the state allocated the entire income from the Registry Fees to LCHIP. The average amount has been $4 million annually.

New Jersey

Funding Sources: Voter approved bonds (multiple), sales tax (1998), corporate business tax (2014)

Between 1961 and 2009, voters overwhelmingly approved thirteen state bond issues for parks, open space and farmland acquisition generating over $1.6 billion. In 1998, voters approved a constitutional amendment dedicating $98 million annually for 30 years from the existing state sales tax to the new Garden State Preservation Trust. In 2014, 65 percent of voters approved a constitutional amendment permanently dedicating a portion of the corporate business tax to land conservation.

New York

Funding Sources: Real estate transfer tax (1993), voter approved bond (1996)

Land conservation funding comes primarily from a real estate transfer tax that supports the Environmental Protection Fund (EPF). EPF includes a wide range of programs including land conservation. In 2007, the New York legislature approved funding for EPF at $300 million annually, however since 2008, EPF funding levels have fluctuated widely: from $112 million in 2012, to $173 million in 2015, to $300 million in 2016. Voters passed a $1.75 billion clean air and clean water bond act in 1996, which has been expended.

North Carolina

Funding Sources: Legislative appropriations, real estate transfer tax (1987), eliminated 2010

Most conservation funding comes from state appropriations. Until 2010, funding was dedicated through a real estate transfer tax ($2 per $1,000 of the value of the property). Historically, funding was split between four conservation trust funds and has varied considerably. In 2010, the Clean Water Management Trust Fund received $100 million over two years; recent funding has been between $15-20 million per year. In 2014, the four trust funds were collapsed into three.

Ohio
Funding Source: Voter approved bonds (2000)
In 2000 and 2008, voters approved constitutional amendments that secured $800 million in bond funding for the Clean Ohio Fund.

Oregon
Funding Source: Voter approved lottery proceeds (1998)
In 1998, voters approved a fifteen-year constitutional amendment that secured a portion of lottery funding for conservation purposes. In 2010 voters reaffirmed that commitment in perpetuity. Proceeds are expected to generate $1.74 billion over the next twenty years.

Pennsylvania
Funding Sources: Real estate transfer tax (1993), cigarette tax (1988), voter approved bonds (1993, 2005), tipping fee (2002), impact fees and royalties from gas wells on state lands (2012)
http://keystonefund.org/
The Keystone and Growing Greener programs have been funded by direct appropriations from the General Fund, a portion of the real estate transfer tax, a state tipping fee, and several voter approved bonds. In 2012, the state's General Assembly passed legislation authorizing certain counties to impose an impact fee on natural gas wells. This fee generated almost $224 million in 2014.

Rhode Island
Funding Source: Voter approved bonds (1989-2012)
Since 1989, voters have passed twelve general obligation bonds to fund state land acquisition, generating over $200 million.

South Carolina
Funding Source: Real estate transfer tax (1986)
The Conservation Bank receives $9 million per year through a portion of the real estate transfer tax. An additional eight percent of transfer tax revenue goes to the Heritage Fund ($1.30 per $500 of value goes to the state, 10 cents of which is allocated to the Fund).

Tennessee
Funding Source: Real estate transfer tax (1986)
Tennessee charges a real estate transfer tax of $0.37 per $100 on the value of property, $0.29 of which goes to the state general
fund. The remaining $0.08 – about $25 million annually – is dedicated to four state conservation funds.

Texas
Funding Source: Sporting goods sales tax (1993)
Since 1993, Texas dedicates a portion of sales tax revenue collected on sporting goods sales to fund the state park system. Revenue is used primarily for park operations and repairs. Though the sporting goods sales tax brings in over $250 million annually, parks had received only about $26 million each year, due to a spending cap—the remainder was diverted to the general fund. The spending cap was removed in 2015 and 94 percent of the sporting goods sales tax is now dedicated to parks.

Vermont
Funding Source: Real estate transfer tax (1988)

Since 1988, the Vermont Housing and Conservation Board (VHCB) is funded by real estate transfer tax revenue along with bonds and general fund appropriations. The transfer tax generated about $7 million for VHCB land conservation programs in 2016.

Washington
Funding Source: Legislative bonds and appropriations (1989)
Biennial legislative approval of bonds and general appropriations provides the majority of funding for state land conservation programs. Appropriations to the Washington Wildlife and Recreation Program range from $45 million to $100 million per biennium.

West Virginia
Funding Source: Deed recording fee (2008)
The West Virginia Outdoor Heritage Conservation Fund was established in 2008. The fund receives approximately $800,000 annually from a dedicated $9 fee paid on deed recordings.

Wisconsin
Funding Source: Legislative bonds (1989)
In 2010, the state conservation program was reauthorized through 2020 with $86 million per year in general bonding authority to
support and ensure continued conservation by the Department of Natural Resources, nonprofit conservation organizations, and local
governments. This funding was reduced in 2011, and land acquisitions halted. In 2015, funding was restored to about $33 million annually.

Since the 2008 recession there have been fifteen successful statewide measures:
Nine bond measures: Rhode Island (4), Maine (2), California, New Jersey, and Ohio.
Two sales-tax measures: Minnesota and Iowa (relying on a future sales-tax increase by the legislature)
Alabama dedicated off-shore drilling revenues
Florida dedicated a documentary stamp tax (real estate transfer tax)
New Jersey dedicated a corporate business tax
Oregon dedicated lottery proceeds

Source: Andrew DuMoulin, Trust for Public Land, Last updated August 2016

State Land Preservation Tax Credit Programs

As of 2017, thirteen states offer tax credits as an incentive for easement donations (See Table 11). North Carolina ended its tax credit program in 2015. Georgia allows no new tax credits to be issued after December 31, 2016. The programs typically provide taxpayers with credits equivalent to a stated fraction of the fair market value of the easement. The number of credits is usually capped per parcel, or sometimes per donor, and there is a specified period during which credits may be carried forward to be used against future tax bills. Five states allow taxpayers to sell their credits (including Georgia), making them even more valuable to the cash-poor donors who might not be able to use the credits during that carryforward period. The usage and cost of the tax credit program is thus higher in states that allow transfer of the credit. Unused credits are or have been refundable under certain circumstances in several states.

These programs are in addition to the federal tax deduction program. Generally, a taxpayer is allowed to deduct up to the value of the donation, up to 30 percent of the taxpayer's income. The taxpayer can spread the deduction over an additional five years. These are the same parameters that apply to any deduction for a non-cash charitable donation.[8] An "enhanced easement incentive" was available to allow a deduction up to 50 percent of the taxpayer's income generally, and up to 100 percent of the taxpayer's income for qualified ranchers and farmers making a donation. The enhanced incentive also allowed the deduction to be taken over a period of 15 years. This enhanced program expired on December 31, 2013. In Virginia, a taxpayer is not required to add-back the federal amount deducted to his state adjusted gross income, and if the donation qualifies, the taxpayer may also participate in the Virginia land preservation tax credit program. The Internal Revenue Code also allows for an estate tax exclusion from federal estate taxes of up to 40 percent of the value of land under conservation easement. The exclusion is capped at $500,000. To qualify, the easement must be perpetual, and must meet defined conservation purposes. The easement may be given by a landowner who has owned his land for at least three years, by a family member, or the executor of the estate of such a landowner. The intent of this provision is to provide relief from estate taxes for farmers and ranchers passing land to their children who might otherwise be forced to sell the land to pay estate taxes.

[8] Land Preservation Tax Credit, Virginia Joint Subcommittee to Evaluate Tax Preferences, November, 2014

Table 12

State Land Preservation Tax Credit Programs					
State	**Credit**	**Max/Taxpayer (Cap)**	**Yrs Carryfwd**	**Transferable?**	**Cost/yr?**
Arkansas	50% of FMV	$5,000/year ($500,000)	9	No	
California	55% of FMV	None	8	No	Wildlife Conservation Board must approve the conservation values. Minimal
Colorado	50% of FMV	$375,000 ($22,000,000)	20	Yes	$15.2 mil. in 2011
Connecticut	50% of FMV	None	25	No	less than $1 mil. per year
Delaware	40% of FMV	$50,000 - $1,000,000	5	No	
Georgia	*25% of FMV*	*$250,000 individuals / $500,000 Corp.*	*10*	*Yes*	*Max. $30 mil. No new credits after 12/31/2016*
Iowa	50% of FMV	$100,000	20	No	
Maryland	100% of FMV	$80,000 capped $5,000/yr	15	No	less than $1 mil. per year
Massachusetts	50% of FMV	$50,000 - $2,000,000	refundable	No	
Mississippi	50% of transaction cost from easement creation	$10,000	10	No	
New Mexico	50% of FMV	$250,000	20	Yes	$8.39 mil. from 2011-2015; 64,146 acres preserved
New York	25% of property tax on property under easement	$5,000	Annual Benefit	No	
N. Carolina	*25% of FMV*	*$250,000 individuals / $500,000 Corp.*	*5*	*No*	*Repealed 2015*
S. Carolina	Max 25% of FMV or $250/acre	$52,500/yr	As Necessary	Yes	$12 mil./yr avg since 2010
Virginia	40% of FMV	$20,000/yr - $100,000,000	13	Yes	See Table 5

Sources: Land Preservation Tax Credit, Virginia Joint Subcommittee to Evaluate Tax Preferences, November, 2014.
http://dls.virginia.gov/commissions/tax/files/LandPreservationTaxCreditReport.pdf

State Income Tax Credits for Conservation Easements: Do Additional Credits Create Additional Value? Jeffrey O. Sundberg, Lincoln Institute of Land Policy, 2011

http://www.lincolninst.edu/sites/default/files/pubfiles/1961_1282_sundberg_finalwp11js1.pdf

Natural Resource Funding in Surrounding States

Maryland

Maryland has been a leader in enactment of strategies to reach its goals of cleaning up the Chesapeake Bay. Funding for Chesapeake Bay restoration has averaged $600 million per year from FY 2014 through FY 2018 (*not including Maryland higher education research and Dept. of Transportation transit and sustainable transportation alternatives funding*).[9] (Unlike Virginia, almost the entire state falls in the Chesapeake Basin.)

Table 13

Maryland Chesapeake Bay Restoration Spending ($ Mil.)

(Not Including Transportation and Higher Ed. Research)

Spending Category	2014 (a)	2015 (a)	2016 (a)	2017 (approp.)	2018 (allowance)
Land Preservation	$77.3	$54.8	$59.9	$61.1	$91.0
Septic Systems	$29.2	$21.4	$25.9	$21.1	$21.6
Wastewater Treatment	$262.5	$249.9	$512.3	$244.5	$479.2
Urban Stormwater	$81.3	$33.2	$9.6	$12.3	$12.1
Agriculture BMP's	$42.0	$46.9	$62.1	$64.8	$60.0
Oyster Restoration	$15.2	$11.9	$11.1	$8.3	$7.6
Living Resources	$43.9	$66.3	$41.3	$58.8	$57.8
Other	$11.6	$13.7	$14.0	$13.8	$15.3
Total	**$563.0**	**$498.1**	**$736.2**	**$484.7**	**$744.6**

A 2016 report to the General Assembly reported that a recent assessment by the University of Maryland Environmental Finance Center[10] found that "Our analysis indicates that the resources are in place to achieve interim and final restoration targets. In other words, no new state-based fees or taxes are required moving forward." This conclusion was based upon three important caveats. First, the State applies its expected excess WWTP allocation (i.e. urban growth capacity) to offset expected shortfalls in the stormwater and septic sectors, and then builds the capacity for growth back into the system. Second, the current level of environmental regulation will be maintained within each of the four pollution sectors and that enforcement will be consistent and effective. And third, that the current State Chesapeake Bay grant programs (primarily the BRF and Trust Fund) are fully funded through 2025 and the funds allocated in the most cost-effective manners possible.[11] The 2016 General Assembly report also found that:

[9] Chesapeake Bay Fiscal 2018 Budget Overview – Exhibit 6, Department of Legislative Services Office of Policy Analysis, Annapolis, Maryland, January 2017
[10] Maryland's Chesapeake Bay Restoration Financing Strategy Final Report, Environmental Finance Center, UMD, February 2015
[11] Historical and Projected Chesapeake Bay Restoration Spending, A Report to the Maryland General Assembly pursuant to the 2015 Joint Chairman's Report, January 26, 2016, FINAL REPORT

Agriculture makes up the largest contribution of nutrients and sediment to the Bay. It has also made steady reductions. The sector sees reduction both from management practices as well as the loss of land to development. Management practices are implemented on at least 70 percent of the sector area. Agricultural land area has decreased by seven percent. Reduction in phosphorus through Best Management Practice implementation is supplemented with lower than anticipated
poultry population estimates based on latest agricultural census data.

Urban Stormwater makes up the second largest contribution of nutrients and sediment to the Bay. Atmospheric deposition is a major nitrogen source in the urban environment and implementation of air pollution reduction strategies in the region is a key driver of nitrogen reduction. Phosphorus reductions are due in part to fertilizer management. Trends have been relatively flat because restoration practices have kept pace with the addition of new loads from new development. The development sector land area has increased by 17 percent since 2000 as a result of the conversion of forest, agricultural and open land to development. Since 2010, new
development has to meet Environmental Site Design to the Maximum Extent Practicable. Currently 33 percent of the urban area has stormwater management.

Wastewater makes up the third largest contribution of nutrients to the Bay and the smallest contribution of sediment. It has also achieved the greatest amount of reduction. Changes in the loads from wastewater treatment plants are a combination of the upgrades of municipal plants, closures of industrial facilities, growth and the impact of year-to-year rainfall variability.

Septic Systems have the least contribution of nitrogen to the Bay and contributes no phosphorus or sediment. Trends appear to be relatively flat because restoration practices have kept pace with the addition of new loads from new development.

Maryland Financing

Direct state spending in Maryland land conservation, wastewater, stormwater, and non-point pollution control is listed in Table 14. Maryland has long allowed local governments to use their Water Quality Revolving Loan Fund to access capital in lieu of issuing local debt. The Water Quality Revolving Loan Fund current loan interest rates (including fees) range from 0.95 percent/yr. fixed rate for disadvantaged communities and 1.55 percent/yr. for all others, for a term up to 30-years. This provides substantial debt service savings when compared to issuing local debt around 4 percent/yr. Local governments can also leverage their storm water fee revenue by issuing long term debt rather than undertaking only pay-as-you-go stormwater capital improvements. Maryland continues to explore and implement new financing actions to maximize the impact of Bay restoration funding.

Table 14

Land Conservation, Wastewater, Stormater, and Agricultural Best Management Spending by Maryland							
Fiscal 2014-2018							
Fiscal Year	Fund Type	Land Conservation	Wastewater		Stormwater	Agriculture BMP	Total
			WW Treatment	*Septic*			Spending
2014	General Funds	$572,027	$5,381,491	$3,731,724	$3,438,458	$10,892,016	$24,015,716
	Special Funds	39,321,628	184,313,220	24,398,389	37,682,415	26,429,991	$312,145,643
	Federal Funds	4,500,000	36,790,292	47,658	3,044,061	366,944	$44,748,955
	Reimbursable Funds	451,977	0	1,071,498	619,662	556,533	$2,699,670
	General Obligation Bonds	32,476,000	36,040,000	0	36,558,000	3,750,000	$108,824,000
	Total	**$77,321,632**	**$262,525,003**	**$29,249,269**	**$81,342,596**	**$41,995,484**	**$492,433,984**
2015	General Funds	$586,078	$5,180,913	$4,115,835	$3,692,189	$9,854,835	$23,429,850
	Special Funds	8,465,007	181,679,741	16,451,693	307,186	12,204,003	$219,107,630
	Federal Funds	2,500,000	35,396,773	88,159	3,892,639	598,230	$42,475,801
	Reimbursable Funds	237,240	0	789,358	308,331	18,037,823	$19,372,752
	General Obligation Bonds	42,991,000	27,659,000	0	25,000,000	6,190,000	$101,840,000
	Total	**$54,779,325**	**$249,916,427**	**$21,445,045**	**$33,200,345**	**$46,884,891**	**$406,226,033**
2016	General Funds	$616,393	$21,135,659	$4,435,637	$3,947,577	$10,482,010	$40,617,276
	Special Funds	6,661,348	241,792,491	20,451,169	870,637	29,776,835	$299,552,480
	Federal Funds	1,907,678	36,129,092	140,184	4,170,023	669,302	$43,016,279
	Reimbursable Funds	227,901	0	863,970	594,351	19,198,072	$20,884,294
	General Obligation Bonds	50,450,273	213,282,000	0	0	2,000,000	$265,732,273
	Total	**$59,863,593**	**$512,339,242**	**$25,890,960**	**$9,582,588**	**$62,126,219**	**$669,802,602**
2017	General Funds	$583,016	$12,061,045	$4,688,546	$4,819,502	$11,214,519	$33,366,628
	Special Funds	49,006,989	182,825,387	15,510,179	1,030,956	31,516,731	$279,890,242
	Federal Funds	5,750,000	35,568,460	50,069	4,446,679	129,858	$45,945,066
	Reimbursable Funds	784,639	0	814,267	1,969,335	21,975,953	$25,544,194
	General Obligation Bonds	5,000,000	14,000,000	0	0	0	$19,000,000
	Total	**$61,124,644**	**$244,454,892**	**$21,063,061**	**$12,266,472**	**$64,837,061**	**$403,746,130**
2018	General Funds	$604,783	$5,181,870	$4,194,680	$4,880,663	$10,733,804	$25,595,800
	Special Funds	81,387,810	166,535,946	16,500,000	1,155,517	18,883,252	$284,462,525
	Federal Funds	3,000,000	34,121,926	50,709	4,259,889	194,000	$41,626,524
	Reimbursable Funds	1,011,585	0	876,098	1,806,993	22,205,867	$25,900,543
	General Obligation Bonds	5,000,000	273,314,000	0	0	8,000,000	$286,314,000
	Total	**$91,004,178**	**$479,153,742**	**$21,621,487**	**$12,103,062**	**$60,016,923**	**$663,899,392**

Source: Andrew Gray, Policy Analyst, Department of Legislative Services

Following are a listing of significant actions taken to finance Maryland Chesapeake Bay restoration:

The Bay Restoration Fund was signed into law on May 26, 2004. [12] Residents and building owners in Maryland are subject to a set of fees that support the Fund, which was created to upgrade Maryland's wastewater treatment plants. Each residential dwelling that receives an individual sewer bill and each onsite sewage disposal system or holding tank that receives a water bill is subject to a $5.00 monthly fee. Fees from wastewater treatment plant users generate an estimated $100 million per year. The Maryland Department of the

[12] http://mde.maryland.gov/programs/water/BayRestorationFund/Pages/Index.aspx

Environment issues bonds backed in full or in part by funds generated under this program. The 67 major, publicly owned, facilities discharging to the Chesapeake Bay met the criteria specified by the Bay Restoration Fund and have the priority for funding. The Department may consider other facilities on a case-by-case basis based on the cost effectiveness of the upgrade and other factors. Since its inception in 2005 through Fiscal Year 2016, this fund has awarded $1.19 billion in grants for enhanced nutrient reduction at the 67 major wastewater treatment plants. With the major wastewater treatments plants fully funded, the fund will continue its emphasis on cost efficient nitrogen reductions to achieve Bay restoration goals.

Each user of an onsite sewage disposal system that does **not** receive a water bill and each user of sewage holding tank that does **not** receive a water bill is subject to a $60 annual fee. The total estimated program income is $27 million per year. Sixty percent of these funds are used for septic system upgrades and the remaining 40 percent are used for cover crops. There are 420,000 onsite systems in Maryland. With priority given to failing septic systems in Critical Areas, funds can be provided for upgrades of existing systems to best available technology for nitrogen removal or for the marginal cost of using best available technology instead of conventional technology.

Chesapeake and Atlantic Coastal Bays Trust Fund: The Trust Fund solicits and funds the most cost effective, efficient **non-point** source nutrient and sediment reduction projects in geographic targeted areas of the state on an annual basis. Formed by the Maryland General Assembly in 2007, the Trust Fund is capitalized with about $50 million in revenue from Maryland motor fuel and car rental taxes.[13] For the first time since its inception, the Trust Fund was fully funded in Fiscal Year 2016. Between 2009 and 2015, the fund has invested more than $250 million in efforts to improve the health of the Chesapeake Bay by advancing the implementation of local and state Watershed Implementation Plans. Its singular focus on reducing non-point sources of nutrient and sediment pollution makes it one of the only programs of its kind in the nation. In Fiscal Year 2016 the fund targeted $39.4 million and leveraged an additional $17.8 million in local and private funding to accelerate state and local efforts to improve the health of the Chesapeake Bay.

Program Open Space (POS): In 1970, the Maryland General Assembly dedicated a 0.5% real estate transfer tax to fund the POS. The transfer tax currently generates over $200 million per year. As real estate activity and home prices grew in the 1970's, the General Assembly put annual caps on the revenue available to the POS and diverted funds to the general fund. This funding mechanism was designed to directly tie development to available funding for open space and recreational facilities for the public good. The Program also administers and leverages federal funds including funds provided through the U.S. Department of the Interior's Land and Water Conservation Fund. POS has two components.

- Program Open Space Stateside preserves natural areas for public recreation and watershed and wildlife protection across Maryland through the acquisition of fee simple land and conservation easements. Fee simple purchases are managed by DNR as State Parks, Forests, and Wildlife and Fisheries Management Areas. A portion of stateside funds is also dedicated to capital improvements, critical maintenance, and operations in state parks. POS Stateside projects are driven by a Targeting System, which uses the best scientific information available to target the program's limited funds.

- Program Open Space Local provides financial and technical assistance to local subdivisions (counties and municipalities) for the planning, acquisition, and/or development of recreation land or open space areas to meet their specific local land conservation and recreation goals consistent with their local Land Preservation, Parks and Recreation Plans. To date over 5,800 projects have been funded through POS Local.

[13] http://dnr.maryland.gov/ccs/Publication/TrustFund_Annual_Report_2017.pdf

The Maryland General Assembly has also permitted several other uses for the POS fund over the years, including Dept. of Natural Resources administrative expenses and State Park operating expenses. There are also several programs besides the POS programs used for land conservation that receive real estate transfer tax revenue.

The Rural Legacy program was established in 1997 to protect areas of large, continuous blocks of land of rural landscapes, including agricultural, natural, cultural, and forestry resources. The Program protects natural, cultural, agricultural, and forest land statewide by granting funds to local governments and land trusts, to conserve land through easement and fee purchases within designated rural legacy areas. Currently there are 31 Rural Legacy Areas throughout the state. The RLP uses an objective scoring approach to review and allocate its limited grant funds. Land conservation investments are targeted to protect the most ecologically valuable properties that most directly impact Chesapeake Bay and local waterway health. This year's allocations include $17,663,385 in FY17 funds. There is at least one Rural Legacy Area in every county of the state and the total acreage designated in all Rural Legacy Areas is 920,694 acres. Enacted by the General Assembly in 1997, Maryland's Rural Legacy Program has dedicated over $305.6 million to preserve 86,103 acres of valuable farmland, forests, and natural areas.

The Maryland Agricultural Land Preservation Foundation was created in 1977 to preserve productive agricultural and forest land. The Maryland Environmental Trust (MET) was formed in 1967 to conserve, improve, stimulate, and perpetuate the aesthetic, natural, scenic and cultural aspects of Maryland's environment. The Trust also promotes conservation of open space and appreciation of the environment and its care. MET programs now include Land Conservation, Monitoring and Stewardship, Local Land Trust Assistance, and the Keep Maryland Beautiful Grants Program.

According to a December 2015 report to the Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee, over 862,000 acres have been preserved by easement, and another 726,000 acres have been protected through public ownership. These 1.6 million acres provide valuable "ecological services": protecting the water supply, cleaning the air and filtering stormwater runoff, and providing habitat for wildlife in addition to having a significant economic impact for both the State and local jurisdictions.[14]

Transfer Tax Formula

The funding for each program supported by the property transfer tax is outlined in §13-209 of the Tax-Property Article and §5-903 of the Natural Resources Article of the Annotated Code of Maryland. During the creation of the Governor's budget allowance, a revenue estimate is decided by the Board of Revenue Estimates and forms the basis of the transfer tax allocation. This estimate is also combined with the over-attainment or under-attainment of actual revenues from two fiscal years prior. The funds are then allocated to programs in four steps:

1) Up to 3% is allocated to the Department of Natural Resources for administrative expenses.
2) Of the remaining funds, 75.15% is allocated to Program Open Space (POS), 17.05% is allocated to the Maryland Agricultural Land Preservation Fund (MALPF), 5% is allocated to Rural Legacy, 1.8% is allocated to the Heritage Conservation Fund, and 1% is allocated for POS – State.

[14] Maryland Land Preservation Programs, "Report to the Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee", Departments of Budget and Management, Natural Resources, Agriculture, and Planning, December 1, 2015.

3) Of the 75.15% allocated to POS, up to $3 million can be allocated to the Heritage Areas Authority. The remainder after the Heritage Areas Authority allocation is split 50% to POS – Local and 50% to POS – State. 4) Of the 50% that goes to POS – Local, the greater of $21 million or 20% of total POS is allocated for Maryland Park Service operational expenses. The remaining funds are allocated to the counties and Baltimore City by another allocation formula specifically for POS – Local.

Of the 50% that goes to POS – State, the funds are distributed as follows: a. Rural Legacy – up to $8 million b. Debt Service on 2009 POS Bonds – approximately $6 million a year until 2026 6 c. Capital Development – at least 1/8 of the total POS, Rural Legacy and Additional State Land Acquisition allocation less the funding for the Heritage Areas Authority. The Capital Development piece funds DNR's Critical Maintenance Program, the Natural Resources Development Fund, and the Ocean City Beach Replenishment Program. d. Park Service – Receives an additional $1.2 million from the Capital Development allocation e. Baltimore City Direct Grant – at least $1.5 million f. POS State Allocation – remaining funds after above allocations (a) through (e).

Table 15 – Maryland Transfer Tax Funding Allocations

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Transfer Tax Transferred to General Fund	89.197	144.187	115.366	62.771	46.028
DNR Administrative Expenses	4.920	5.804	5.236	5.549	6.444
Debt Service	6.109	6.207	6.422	6.575	6.735
Heritage Areas Authority	3.000	3.000	3.000	3.000	3.000
POS Local	11.863			21.690	37.213
Rural Legacy	5.364	0.803	0.711	12.663	18.913
POS Capital Development	0.153	9.623	5.197	9.562	18.797
State Park Operating Expenses	24.927	30.176	24.090	27.567	34.506
Agricultural Land Preservation	9.053			16.227	28.923
State Land Acquisition	12.189	1.500	1.500	19.368	31.476
Total Transfer Tax Allocated in State Budget	**77.578**	**57.113**	**46.156**	**122.201**	**186.007**
GO Bonds in State Budget to Replace Transfer Tax**	59.351	72.462	87.275		
Total Funding in State Budget					
**in millions*					
****Additional General Funds are planned in the out-years to replace transfer tax transferred to the General Fund.**					
Source: Department of Budget and Management					

Pennsylvania

Pennsylvania has a number of designated funds and funding sources for natural resources. The Keystone Recreation, Park and Conservation Fund Act was signed into law in July 1993. The Act directed 15% of the state's one percent Real Estate Transfer Tax to the Keystone Fund, establishing a dedicated and permanent funding source for recreation, parks, conservation, and other programming. The grants require a minimum 50% match from the recipient municipality or nonprofit organization.

Another source of conservation funding in Pennsylvania is 2/31 of the state cigarette tax of $2.60 per pack of 20 cigarettes, or about $20.5 million per year, is used provided to the Agricultural Conservation Easement Fund to help preserve Pennsylvania farmland.

In 1989, the Act 101 Recycling Fee established a $2.00 per ton fee to benefit the Recycling Fund. The fee applies to waste disposed of at Pennsylvania municipal waste landfills. Revenue is used to fund grants to municipalities for recycling programs, waste facility studies, and state programs concerning litter control, recycling and waste reduction. In 1999, Act 68 established a $0.25 per ton fee to benefit the Environmental Stewardship Fund. The fee applies to waste disposed of at Pennsylvania municipal waste landfills.

"Growing Greener" was initiated in 1999 and committed $650 million over five years for investments in farmland preservation, conservation of open space, restoring and protecting Pennsylvania's streams and rivers, improving and expanding state and local parks, and developing new trails and greenways. In 2002, the General Assembly created a dedicated source of funding for Growing Greener by increasing the tipping fee - a charge for dumping trash in landfills. The revenue generated by the increase was placed into the Environmental Stewardship Fund (ESF) for Growing Greener. Act 90 of 2002 created a permanent $4.00 per ton fee, known as the disposal fee, which applies to waste managed at Pennsylvania municipal waste landfills. The total taxpayer cost, as fees paid by landfill operators are often passed onto waste collectors and haulers, and then to their customers, was estimated at $56 million per year. Pennsylvania has a tipping fee of $7.25 per ton and is the only state to use its state-imposed tipping fees to finance land conservation and other environmental programs. The state uses revenue to fund Growing Greener projects, debt service on Growing Greener II general obligation bonds, and for recycling programs.

In 2005 a $625 million bond measure "Growing Greener II" was passed "for the maintenance and protection of the environment, open space and farmland preservation, watershed protection, abandoned mine reclamation, acid mine drainage remediation and other environmental initiatives." This now depleted funding was spread across agencies and funded key environmental projects over the course of six years as indicated below.

$230 million for the Dept. of Environmental Protection
Acid mine removal, flood protection, watershed protection, etc.

$217.5 million for the Dept. of Conservation and Natural Resources
Capital improvements for state parks and forests and open space acquisitions

$80 million for the Dept. of Agriculture
Farmland preservation

$50 million for the Dept. of Community and Economic Development
Targeted community redevelopment projects aimed at reducing sprawl

$27.5 million for the Fish and Boat Commission

Dam and fish hatchery improvements

$20 million Pennsylvania Game Commission Capital improvements related to hunting

Following the voters' approval of the Growing Greener II bonds in 2005, the General Assembly and Governor enacted legislation that contained a provision providing an option for Growing Greener II debt service to be paid out of the Environmental Stewardship Fund, contrary to the normal practice of paying debt service out of general funds. Ensuing budgets tapped the Environmental Stewardship Fund to pay off the debt service on the Growing Greener II bonds approved by voters in 2005. This redirection of revenues continues to the present day. In January 2015, the Growing Greener Coalition stated that the tipping fee generates about $60 million for the ESF fund, but due to legislation passed with the Growing Greener II program in 2005, about $40 million of that revenue is used to pay the yearly Growing Greener II bond debt service.[15] This remaining revenue is allocated to four state agencies for environmental restoration, land conservation and community recreation and revitalization projects. Per legislation passed in 2002, funds from the Environmental Steward Fund are distributed as follows:

- 43.7% goes to the Department of Environmental Protection to clean up acid mine drainage and support watershed based conservation efforts
- 28.5% goes to the Department of Conservation and Natural Resources for rehabilitation of state parks and forests and grants to local governments and nonprofits for open space protection and recreation projects, and
- 27.9% goes to Pennsylvania Infrastructure Investment Authority for water and wastewater treatment facilities.

In 2012, Act 13 allowed for 10% of the funds generated through the Marcellus Shale Legacy Fund (statewide distribution of impact fee revenue) to be earmarked for the Environmental Stewardship Fund. Act 13 also allowed, beginning in the 2012-2013 budget, for $20 million from the state Oil & Gas Lease Fund to be deposited into the ESF. Transfers from the Oil & Gas Lease Fund increased to $35 million annually beginning with the 2013-2014 budget. The impact fee revenues for ESF are distributed to four state agencies:

- Department of Conservation and Natural Resources (24.1%);
- Department of Environmental Protection (37.4%);
- Department of Agriculture (14.8%)
- Pennsylvania Infrastructure Investment Authority (23.7%)

The following Table 16 is Pennsylvania's revised submission to the Environmental Protection Agency for the Chesapeake Bay Accountability and Recovery Act (CBARA) State Budget Reporting. It details spending by funding type for Pennsylvania's Chesapeake Bay cleanup activities.

[15] Justin Balik, Trust for Public Land, Memorandum to Interested Parties, January 14, 2016.

Table 16

Pennsylvania Spending on Chesapeake Bay Cleanup

	(Federal Fiscal Years)			
				Estimated
	FY 2015	**FY 2016**	**FY2017**	**FY2018**
Department of Environmental Protection				
Growing Greener (See Note 4)	$8,219,554	$9,372,736	$ 13,635,709	
Water Pollution Control (See Note 1)	$3,772,908	$4,449,934	$ 3,635,338	$4,000,000
Conservation Plan Reimbursement Program				$1,500,000
Chesapeake Bay Implementation				
Program Management and Administration	$1,271,341	$1,039,447	$ 956,145	See note 5
Chesapeake Bay Regulatory and Accountability				
Program Management and Administration	$1,519,162	$1,439,523	$ 918,466	$2,535,000
Non-Tidal Monitoring Network	$22,082	$3,950		
Flood Protection Program	$138,562	$13,569		
Chesapeake Bay Commission	$227,000	$227,000	$275,000	$275,000
Subtotal	$15,170,609	$16,546,159	$19,420,658	$8,310,000
State Conservation Commission (See Note 1)				
Conservation District Fund Allocation Program	$3,491,000	$3,502,000	$3,525,000	$3,540,000
Dirt, Gravel and Low Volume Road Program	$13,720,000	$13,720,000	$13,720,000	$13,720,000
Nutrient Management Program	$1,530,000	$1,530,000	$1,539,000	$1,545,000
Resource Enhancement and Protection Program	$4,900,000	$4,900,000	$4,900,000	$4,900,000
Subtotal	$23,641,000	$23,652,000	$23,684,000	$23,705,000
Pennsylvania Infrastructure Investment Authority				
Project Construction & Implementation (See Note 3)	$12,272,342	$7,026,241	$43,393,256	
Subtotal	$12,272,342	$7,026,241	$43,393,256	$0
Department of Natural Resources				
Land Conservation	$34,700,447	$3,061,907	$ 734,730	$4,000,000
Rivers Conservation	$701,560	$200,000		
Riparian Buffers (PennVest Funding)			$ 1,000,000	$1,000,000
Riparian Buffers (DCNR)		$550,000	$ 325,000	
Tree Canopy (TreeVitalize Program)	$43,431	$43,431	$ 61,931	
Subtotal	$35,445,438	$3,855,338	$2,121,661	$5,000,000
Total, State of Pennsylvania	**$86,529,389**	**$51,079,738**	**$88,619,575**	**$37,015,000**

Note 1 -- Costs calculated as 49% of statewide costs, since approximately 49% of the state is in the Chesapeake Bay Watershed.

Note 2 -- Costs figured on federal fiscal year, FY16 costs are from October 1, 2016 through June 30, 2017.

Note 3 -- Amounts are based on projects approved, not funds spent.

Projections can not be made since we can't determine type, number of projects or amounts we will receive.

Note 4 -- Actual projections can not be made since amounts are based on projects approved.

However, a minimum amount is budgeted as match to the EPA CBIG grant.

Note 5 -- Transferred to CBRAP as match.

Source: Sean Gimble, Executive Assistant, Office of Water Resources Planning, Department of Environmental Protection. Derived from an update to the Dec. 2016 CBARA Chesapeake Bay Report to the Environmental Protection Agency.

According to Pennsylvania's Nonpoint Source Funding Program annual reports, about $140 million of federal and state funding is currently spent on nonpoint source pollution activities in Pennsylvania each year, and PA DEP asserts that the majority of this funding is devoted to BMP deployment (87% in 2014), with the remainder funding personnel and operations. This includes expenditures from 11 state and 18 federal nonpoint source pollution programs (see Table 17).

Table 17

State and Federal Nonpoint Source Funding in Pennsylvania ($Mil.)

State sources	FY 2013	FY 2014
Department of Environmental Protection (DEP)		
Conservation District watershed specialists	2.079	2.136
Environment Stewardship and Watershed Protection (Growing Greener)	18.008	17.393
Chesapeake Bay Implementation Grant	3.787	3.591
Conservation District Fund Allocation Program (line item plus UGWF monies)	2.506	4.381
Dirt and Gravel Roads Pollution Prevention Program	3.528	20.854
PA Infrastructure and Investment Authority (PENNVEST)		
Grants for nonpoint source projects	3.712	6.523
Pennsylvania Department of Agriculture (PDA)		
Nutrient Management Fund (transfer)	2.714	2.714
Conservation District Fund Allocation Program (line item plus UCGW monies)	0.869	2.744
Resource Enhancement and Protection Tax Credits Available	10.000	10.000
Public Utilities Commission (PUC)		
Conservation District Funding from UGWF	0.0	3.750
Commonwealth Financing Authority		
Act 13 NPS Funding	10.959	3.147
State Funding Subtotal	**58.162**	**77.233**

Federal Sources	FY 2013	FY 2014
US Environmental Protection Agency (EPA)		
Section 319 Nonpoint Source Management Program	4.379	4.672
National Fish and Wildlife Foundation – Chesapeake Bay Small Watershed Grant (annual funding, PAIspecific grants)	0.487	0.553
National Fish and Wildlife Foundation – Chesapeake Bay Innovative Nutrient and Sediment Reduction Grant (PAIspecific grants)	1.207	1.916
USDA Natural Resources Conservation Service		
Agricultural Management Assistance	0.280	1.080
Chesapeake Bay Watershed Initiative	9.100	0.0
Environmental Quality Incentive Program	21.100	21.790
Farm and Ranchland Protection Program	3.000	0.0
Agric Cons Easement Program (ag land easements)	0.0	4.620
Conservation Stewardship Program (new contracts)	0.700	0.350
Conservation Stewardship Program (funds obligated to pay on prior year contracts)	6.200	6.180
Grasslands Reserve Program	0.0	0.310
Healthy Forests Reserve Program	0.0	0.660
Wetlands Reserve Program	4.750	0.0
Agric Cons Easement Program (wetland reserve easements)	0.0	3.860
Wildlife Habitat Incentive Program	2.280	0.0
USDA Farm Service Agency		
Conservation Reserve Enhancement Program (includes financial incentives, cost share, and rental payments)	23.753	21.885
Biomass Crop Assistance Program	0.152	0.013
Grassland Reserve Program	0.618	0.150
Federal Funding Subtotal	**78.006**	**68.039**
TOTAL	**136.168**	**145.272**

Source: Options for Financing Chesapeake Bay Restoration in Pennsylvania, Environmental Finance Center, University of Maryland November 2016

The PENNVEST Clean Water State Revolving Fund (CWSRF) program provides funding to projects throughout Pennsylvania for the construction and maintenance of wastewater treatment facilities, storm water management projects, nonpoint source pollution controls, and watershed and estuary management. This program offers low interest loans with flexible terms to assist a variety of borrowers that include local governments, municipalities, and privately owned entities and to establish partnerships to leverage other funding sources. The CWSRF program is managed under the Pennsylvania State Regulations for PENNVEST funding wastewater projects. In partnership with the Pennsylvania Department of Environmental

Protection, management occurs during project planning, application submission, contracting and financing, and site inspection and reporting.

Table 18

Land Conservation and PennVEST Funding			
	Loan $	**Grant $**	**Total $**
		2013-2014	
Land Conservation	$0	$18,244,934	$18,244,934
NonPoint Source	$2,880,000	$1,216,543	$4,096,543
Wastewater	$163,282,342	$27,967,316	$191,249,658
Grand Total	**$166,162,342**	**$29,183,859**	**$195,346,201**
		2014-2015	
Land Conservation	$0	$9,555,451	$9,555,451
NonPoint Source	$8,752,737	$2,156,877	$10,909,614
Wastewater	$198,363,650	$40,121,980	$238,485,630
Grand Total	**$207,116,387**	**$42,278,857**	**$249,395,244**
		2015-2016	
Land Conservation	$0	$8,842,000	$8,842,000
NonPoint Source	$12,500,837	$6,698,890	$19,199,727
Wastewater	$150,779,611	$29,336,851	$180,116,462
Grand Total	**$163,280,448**	**$36,035,741**	**$199,316,189**
		2016-2017	
Land Conservation	$0	$11,158,200	$11,158,200
NonPoint Source	$910,438	$5,932,480	$6,842,918
Wastewater	$144,488,289	$52,685,725	$197,174,014
Grand Total	**$145,398,727**	**$58,618,205**	**$204,016,932**

Sources: Kristel Sheesley, Environmental Finance Center, University of Maryland
Paul Marchetti, PennVest
Lauren S. Imgrund, Deputy Secretary, Conservation & Technical Services, PA Department of Conservation & Natural Resources

A current proposal by the Pennsylvania nonprofit Growing Greener Coalition calls for increasing the Growing Greener Environmental Stewardship Fund.[16] As mentioned earlier, this Fund supports environmental projects such as greenway development, habitat conservation, open space preservation, and water quality restoration with state bonds (including the $625 million bond in 2005), landfill tipping fees, and contributions from the Marcellus Legacy Fund and the Oil and Gas Lease Fund. This Fund has been one of

[16] https://pagrowinggreener.org/gg3/

the most important sources of revenue for statewide environmental restoration efforts, funding hallmark state programs such as the Resource Enhancement Agricultural Program and DEP's MS4 implementation program. However, funding for the program has decreased from an estimated average of $200 million per year in the mid-2000s to $57 million in 2016, with all bond funding currently depleted.

The Growing Greener Coalition is calling for the program's revenue to be increased to approximately $315 million, with more than half dedicated to water quality restoration. While the blueprint does not specify revenue sources, it could be funded at least in part through a new state bond. Further, the Coalition asserts that the program leverages private, local, and federal matching dollars at a ratio of 1:2. Growing Greener III presents an opportunity for the Commonwealth to more aggressively pursue nutrient and sediment TMDL targets in the agriculture and urban runoff sectors, if funds were to be dedicated to those needs.

Another alternative is to impose a tax on nutrient and sediment emissions from all sources. Such pollution taxes have the benefit of directly disincentivizing the undesired activity (in this case, nutrient and sediment pollution), and when set at the appropriate rate, they can achieve reductions in the most economically efficient way and also catalyze the development of innovative pollution reduction technologies. They are also more easily administered than many regulatory programs, and they provide a flexible revenue stream because the rate can be adjusted over time as needed.

Given the current widespread aversion to general tax increases, *fees* are a potentially more palatable option. The Pennsylvania Legislature is currently considering a new fee that would raise funds for water restoration. The "water resource usage fee" would be assessed on large withdrawals of water – greater than 10,000 gallons per day – by consumers such as utilities, golf courses, and nuclear power plants. The proposed rate is 1 penny per 100 gallons if the water is eventually returned to its source, and 1 penny per 10 gallons if it is not returned to its source. Municipal water plants and agricultural users would be exempt. Based on current usage rates, the fee has the potential to generate $245 million annually.

Sources:

http://growinggreener.info/
http://growinggreener.info/how-growing-greener-works/revenue-source/

Pennsylvania Chesapeake Watershed Implementation Plan, Phase 2
Prepared by the Pennsylvania Department of Environmental Protection
March 30, 2012

Options for Financing Chesapeake Bay Restoration in Pennsylvania
Environmental Finance Center, University of Maryland, November 2016

North Carolina

Most land conservation and water quality funding in North Carolina now comes through state appropriations. North Carolina used to have a dedicated funding source for land conservation through a real estate transfer tax ($2 per $1,000 of the value of the property). Of every two dollars generated from the real estate transfer tax, one-dollar went to conservation, the other to local governments. The dollar for conservation was split between the Parks and Recreation Trust Fund and the Natural Heritage Trust Fund. Seventy-five cents went to the Parks and Recreation Trust Fund for land acquisition and capital improvements (65 percent), local park projects (30 percent), and public beach access (5 percent); the remaining 25 cents went to the Natural Heritage Trust Fund, primarily used for land acquisition. In addition, the sale of personalized license plates was another dedicated source of revenue for the Natural Heritage Trust Fund and the Park and Recreation Trust Fund.

After the major political change in the legislature in the 2010 elections, the General Assembly eliminated most dedicated sources of funding (except the Highway Fund and the sale of personalized license plates). The legislature also combined the Natural Heritage Trust Fund with the Clean Water Management Trust Fund. Since then NC has relied upon General Fund appropriations, both recurring and one-time or non-recurring to support the three remaining conservation trust funds.

In 2015, the NC General Assembly also repealed their conservation tax credit. North Carolina employed a conservation tax credit in the amount of 25 percent of the fair market value of property donated to the state or local government, or a non-profit entity organized to receive and administer lands for conservation purposes. The credit could not exceed $500K for corporations and $250k for individuals, with a five-year carryforward provision. Unlike Virginia, the credits could not be sold. Since the repeal of its dedicated funding sources and tax credits, NC has relied upon General Fund appropriations, both recurring and one-time or non-recurring to support the three remaining conservation trust funds. 1) the Parks and Recreation Trust Fund, 2) the Clean Water Management Trust Fund, and 3) the Agriculture Development and Farmland Preservation Trust Fund.

Table 19

North Carolina State General Funds, Except Where Noted

	Land Conservation					Water Infrastructure Authority Funds		
Fiscal Year	**ADFPTF**	**PARTF - net approp.**	**PARTF -license plate revenue**	**CWMTF**	**CWMTF - license plate revenue**	**State Wastewater Reserve Program (Loans/Grants)**	**CWSRF State Match**	**Connect NC Bonds**
2014	1,617,401	11,000,000	1,429,367	7,076,976	4,324,165	3,500,000	4,925,000	
2015	2,608,376	13,075,000	1,436,095	11,357,530	4,489,636	6,000,000	5,000,000	
2016	2,610,253	13,190,924	1,441,614	16,657,530	4,522,564	12,400,000	5,000,000	
2017	3,610,258	23,947,931	1,425,149	21,257,530	4,450,000	33,798,981	5,100,000	309,500,000
2018	3,610,988	20,914,852	1,425,149	22,400,000	4,450,000	10,345,000	5,100,000	
	Ag. Development and Farmland Preservation Fund; primarily conservation	Parks & Recreation Trust Fund: 65% state parks (capital, land purchase, etc), 30% local parks, 5%	Budget in red/actuals not yet collected	Clean Water Management Trust Fund: primarily land acquisition, some stormwater	Budget in red/actuals not yet collected		Clean Water State Revolving Fund: federal/state loans to local wastewater capital facilities	$100 mil. in grants/$209.5 mil. in loans for drinking water/wastewater divided equally

Source: Lanier McRee, *Principal Fiscal Analyst,* Agriculture, Natural, & Economic Resources Team, Fiscal Research Division, North Carolina General Assembly

The Parks and Recreation Trust Fund

The Parks and Recreation Trust Fund (PRTF) was initiated in 1994 to provide for the acquisition of state park lands and related capital facility improvement projects, to provide funds for local government parks and recreation land acquisition, and to provide coastal and estuarine beach access. Similar to the NHTF, funding was derived from the 7.5 cents/$100 of the state tax on real estate conveyances, and $5 from the additional fee on personalized license plates. The amount transferred to the PRTF varied from $27.5 million in FY 2002 to $58.1 million in FY 2006. Since 1997, the NHTF spent over $194 million for State park land acquisition and capital improvements. In addition, the PRTF has awarded over $92 million for local government parks, leveraging an additional $270 million in local matching funds.

In FY 2015, the PARTF received an appropriation of $12.4 million. In FY 2016, the appropriation was increased to $28.2 million, of which $16.4 million was intended as recurring and $10.4 million was a one-time appropriation and the remaining $1.4 million was from license plate revenues. Governor Cooper's budget included a $1.8 million recurring increase for FY 2018, plus an additional $5 million nonrecurring appropriation for a total of $24.2 million. The Governor's budget also included an additional $3.6 million increase for FY 2019.

Clean Water Management Trust Fund

The 1996 General Assembly created the Clean Water Management Trust Fund [Chapter 113A Article 18 (GS 113A-251 et seq.)), "to clean up pollution in the State's surface waters and to protect, preserve and conserve those waters that are not yet polluted." As originally created, the CWMTF was to "use innovative and non-regulatory approaches to help finance projects that specifically address water pollution problems and focus on upgrading surface waters, eliminating pollution, and protecting, preserving and conserving unpolluted surface waters, including enhancement or development of drinking water supplies" and "to build a network of riparian buffers and greenways for environmental, educational, and recreational benefit."

Until July 2013, the CWMTF was an independent, non-regulatory agency housed for administrative-only purposes in the Department of Environment and Natural Resources (DENR, now DEQ). Previously, a 21-member board of trustees established criteria, allocated funds, reviewed applications, and approved grants through three principal committees: infrastructure wastewater, restoration/storm water/greenways and land/conservation easement acquisition. Local governments, state agencies, and nonprofit conservation organizations, such as land trusts, were eligible applicants. As a grant making agency, funds were allocated to address and correct pollution problems and to protect unpolluted waters that are identified by eligible grant applicants.

With the passage of the 2013-2014 budget and per Session Law 2013-360, section 14.3, the General Assembly and Governor made substantial changes to the Clean Water Management Trust Fund, including moving the agency fully into the Department of Environment and Natural Resources, and reducing the size of the board from 21 to 9 members.

In 2015, Governor Pat McCrory signed the 2015-2016 state budget into law which moved the state's natural resources attractions (the three coastal aquariums, state parks, Museum of Natural Sciences and N.C. Zoo) as well as the Division of Land and Water Stewardship's Clean Water Management Trust Fund and Natural Heritage Program into what is now the Department of Natural and Cultural Resources (DNCR, formerly DCR).

From its inception through 2015, the CWMTF – via appropriations and receipts – has partnered with local communities and organizations to contribute nearly $1,000,000,000 to the protection and restoration of the state's natural and cultural resources. Further, the fund has leveraged approximately one and a half times that amount (and additional $1,500,000,000) to support those same efforts to protect and restore our state's resources.

The Agriculture Development and Farmland Preservation Trust Fund

The Agriculture Development and Farmland Preservation Trust Fund (ADFPTF) purpose is to support the purchase of agricultural easements, promote sustainable farms, and fund farmland conservation agreements. The ADFPTF is primarily funded with state general fund appropriations. Since 1998, the ADFPTF has allocated $2.65 million to leverage $26 million worth of federal, private, and local funds.

IN 2015, the ADFPTF received $2.6 million in recurring appropriations, which was increased by a $1 million non-recurring appropriation in FY 2016. For FY 2018, Governor Cooper's budget included a $400,000 recurring budget increase, plus a $1.35 non-recurring appropriation for a total of $4.35 million.

Over the next few years, it is anticipated that the ADFPTF will need $19 million in non-recurring funds to help match federal grants from the U.S. Department of Agriculture to protect family farms in western North Carolina, and a U.S. Defense Department Sentinel Landscapes program grant to protect land near the state's military installations.

Table 20
ADFP Trust Fund Fiscal History (State Appropriations)

Fiscal Year	Appropriated State Budget	Budget Reductions (Reversions)	Available State Approps
2005-06	$50,000	$0	$50,000
2006-07	$0	$0	$-
2007-08	$8,000,000	$0	$8,000,000
2008-09	$4,000,000	$0	$4,000,000
2009-10	$2,000,000	$0	$2,000,000
2010-11	$1,926,011	$2,200,492	$(274,481)
2011-12	$1,700,000	$0	$1,700,000
2012-13	$1,666,930	$0	$1,666,930
2013-14	$3,017,401	$0	$3,017,401
2014-15	$3,608,376	$0	$3,608,376
2015-16	$2,610,253	$0	$2,610,253
2016-17	$3,612,387		$3,612,387
Total	$32,191,358	$2,200,492	$29,990,866

In March 2016, NC voters approved a $2,000,000,000 Connect NC Bond package. Included in the bond package is $309.5 million divided equally between clean water drinking and wastewater projects. $100 million is dedicated for direct grants and $209.5 million for loans. In addition, the bond package includes $78,000,000 for state & local parks, including $14,000,000 for state park land acquisition.

North Carolina also has several other entities pursuing related purposes. The Wildlife Resources Commission (WRC) is responsible for managing and protecting the State's wildlife resources. Revenues are primarily from

hunting, fishing and related licenses. The WRC also works closely with the Ecosystem Enhancement Program (EEP). The goal of this program is wetlands protection and restoration. A large part of the EEP funding comes from the Department of Transportation. North Carolina also provides significant funding to historic sites and the State Historic Preservation Office.

Land for Tomorrow Coalition Budget Priorities

North Carolina land conservation advocates -- including the Land for Tomorrow coalition and The Nature Conservancy -- would like to restore dedicated funding from the deed stamp tax for conservation as well as the conservation income tax credit, but have been unsuccessful so far. Land for Tomorrow is a coalition of conservation organizations, local park and recreation agencies, and wildlife groups in North Carolina that advocate for increased conservation funding and policies to incentivize land conservation. In a 2017 letter to Governor Cooper, Land for Tomorrow's budget priorities for the 2017-19 biennium include:

- **$28 million per year recurring for the Clean Water Management Trust Fund (CWMTF).** Currently funded at approximately $22.4 million/year, the CWMTF received more than $82 million in grant requests for 2016. This demand is projected to significantly increase with major landscape scale projects along the Yadkin and Dan Rivers and the Headwaters State Forest project in the mountains. In 2013, the NC General Assembly merged the Natural Heritage Trust Fund (NHTF) with the CWMTF, but did not provide additional resources for the protection of cultural and historical sites typically funded through the NHTF, resulting in a lack of resources to protect these irreplaceable sites.

- **$28 million per year recurring for the Park and Recreation Trust Fund (PARTF)**. Currently funded at $22.7 million/year, the PARTF continues to have strong demand for local park projects and additional state park capital projects not supported by the recent Connect NC Bond. Of this amount, 65 percent funds state park capital projects, 30 percent funds local government matching grants, and five percent funds coastal access projects. In 2016, PARTF received more than $18 million in local government grant requests with $8.4 million of projects funded.

- **$7.5 million per year recurring for the Agricultural Development and Farmland Preservation Trust Fund.** The ADFPTF is currently funded at $3.6 million/year, $2 million of which is restricted to military projects. While the rate of farmland and farm loss has slowed somewhat since the 2008 recession, from an average of 100,000 acres per year to 70,000 acres per year, the state has lost more than one million acres of farmland and nearly 9,000 farms during the past 20 years. This trend must be reversed to ensure our state's long term food security.

- **$30 million in supplemental funding for fire and flood mitigation.** Increase funding for the CWMTF to protect and restore wetlands, acquire stream buffers and floodplains, and to assist communities in converting properties bought out by FEMA into parks, greenways and green infrastructure. Increased funding for the ADFPTF and PARTF to acquire private in-holdings and properties adjacent to state parks and forests to improve fire safety and management.

- In addition to these budget priorities, Land for Tomorrow wants to explore options for reestablishing the state tax credit (or other tax incentives) for donations of land or conservation easements, and dedicated revenue sources for conservation funding.

Interview Sources

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Appendix A

Sources for Virginia Spending on Natural Resources				
Fiscal Year	**Land Conservation**	**Wastewater**	**Stormwater**	**Non-Point**
2000	2000 Session; Chpt 1072; Items C-107.70 and C-108.1; and Item 434A	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2000 Session; Chpt 1072; Item 427D		2000 Session; Chpt 1072; Item 436C
2001	2000 Session; Chpt 2073; Item C-150 and Item 410J	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2002 Session; Chpt 814; Item 415B		2002 Session; Chpt 814; Items 406 and 409C
2002	2002 Session; Chpt 887 and Chpt 854	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes		2002 Session; Chpt 814; Item 406
2003	2002 Session; Chpt 899; Item C-112	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes		2003 Session; Chpt 1042; Items 377 and 380D&E
2004	2004 Session; Chpt 943; Item 381K and DCR Spreadsheet "VLCF Appropriations FY00-FY18"	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes		2004 Session; Chpt 943 Item 380D&L

Sources for Virginia Spending on Natural Resources				
Fiscal Year	**Land Conservation**	**Wastewater**	**Stormwater**	**Non-Point**
2005	2004 Special Session; Chpt 4; Item C-6; DCR Spreadsheet "VLCF Appropriations FY00-FY18"; and 2005 Session; Chpt 951; Item 383H	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2006 Special Session; Chpt 2; Item 388D		2005 Session; Chpt 951; Item 382C&D
2006	2005 Session; Chpt 951; Item C-6.30; Item 383H&J; and DCR Spreadsheet "VLCF Appropriations FY00-FY18"	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2006 Special Session; Chpt 2; Item 388D		2006 Special Session; Chpt 2; Item 382C&D
2007	2007 Session; Chpt 847; Items C-14, C-16.10, C-259, 359E&F; DCR Spreadsheet "VLCF Appropriations FY00-FY18"	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2008 Session; Chpt 847; Item 364B&C		2008 Session; Chpt 847; Item 358B&K
2008	2008 Session; Chpt 847; Item 359E&F	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes 2008 Session; Chpt 847; Item 364B		2008 Session; Chpt 847; Item 358B&N
2009	2009 Session; Chpt 781; Items C-110; C-112; 2010 Session; Chpt 872; Item 362D&E; Summary of Budget Amendments to the 2008-10 Budget (SFC and HAC Final Budget Document)	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2010 Session; Chpt 872; Item 368D		2009 Session; Chpt 872; Item 361G&I

Sources for Virginia Spending on Natural Resources				
Fiscal Year	**Land Conservation**	**Wastewater**	**Stormwater**	**Non-Point**
2010	Virginia TAX Annual Reports; Summary of Budget Amendments to the 2008-10 Budget (SFC and HAC Final Budget Document); 2010 Session; Chpt 872; Item 362D&E; DCR Spreadsheet "VLCF Appropriations FY00-FY18)	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2010 Session; Chpt 872; Item 368E		2010 Session; Chpt 872; Item 361G
2011	Virginia TAX Annual Reports; 2012 Special Session; Chpt 2; Item 352D	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2012 Special Session; Chpt 2; Item 351D		2012 Special Session; Chpt 2; Item 351H&L
2012	Virginia TAX Annual Reports; 2012 Special Session; Chpt 2; Item 352D	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes		2012 Special Session; Chpt 2; Item 351H
2013	Virginia TAX Annual Reports; 2014 Special Session; Chpt 1; Item 361D	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2014 Special Session; Chpt 1; Item 366C&D	2014 Special Session; Chpt 1; Item 360M	2013 Session; Chpt 806; Item 360H,K&M
2014	Virginia TAX Annual Reports; 2014 Special Session; Chpt 1; Item 361D	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2014 Special Session; Chpt 1; Item 366F	2014 Special Session; Chpt 1; Item C-39.40 D	2014 Special Session; Chpt 1; Item 360H

Sources for Virginia Spending on Natural Resources				
Fiscal Year	**Land Conservation**	**Wastewater**	**Stormwater**	**Non-Point**
2015	Virginia TAX Annual Reports; 2016 Session; Chpt 732; Items 88G, 358D, & C-23	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes; 2015 Session; Chpt 665; Item 363F	2014 Special Session; Chpt 2; Items 363G and C-43C	2015 Session; Chpt 665; Item 357B&D
2016	Virginia TAX Annual Reports; 2016 Session; Chpt 732; Items 88G, 358D, C-23, & C-25.40	June 27, 2017 E-mail from Walter Gills, Pgm Mgr, Clean Water Financing & Assistance Pgm, DEQ to Neal Menkes	2016 Session; Chpt 759; Enactment Clause 7; 2016 Session; Chpt 732; Item 363C&G	2016 Session; Chpt 732; Item 357B&D
2017	2017 Session; Chpt 836; Items 91G, 365D, C-25, C-26, & C-29	2016 Session; Chpt 769; Enactment Clause 6	2017 Session; Chpt 836; Item 370H	2017 Session; Chpt 836, Item 364B&D
2018	2017 Session; Chpt 836; Items 91G, 365D, C-25, C-26, & C-29		2017 Session; Chpt 836; Item 370H	2017 Session, Chpt 836; Item 364B&D

APPENDIX B
Detailed Chesapeake Bay Restoration Activities Funded in the State Budgets

Table 13—Maryland Chesapeake Bay Restoration Activities Funded in the Budget

(Budget authority in thousands)	FY 2015 Actual	FY 2016 Appropriation	FY 2017 Allowance
Total Funds			
Department of Natural Resources	110,596	87,839	97,821
Program Open Space	15,072	24,603	19,618
Rural Legacy	16,034	10,082	17,663
Department of Planning	5,410	5,543	5,623
Department of Agriculture	46,885	50,453	52,757
Maryland Agricultural Land Preservation Foundation	22,850	31,294	22,968
Maryland Department of the Environment	281,255	287,399	285,529
Maryland State Dept. of Education	417	417	417
Maryland Higher Education	35,136	35,358	31,428
Maryland Department of Transportation	337,769	337,464	563,916
Total, Maryland Funds by Department	**871,424**	**870,451**	**1,097,742**
Funds by Fund Type			
General Fund	32,803	34,383	38,412
Special Fund	276,779	286,259	329,608

Federal Fund	54,270	52,751	56,204
Reimbursable Funds	25,227	33,336	32,083
Current Unrestricted	23,734	25,700	27,502
Current Restricted	11,402	9,658	3,927
GO Bonds	109,440	90,900	46,092
MDOT	337,769	337,464	563,916
Total, Maryland Funds by Fund Type	**871,424**	**870,451**	**1,097,742**

Funds by Spending Category			
Land Preservation	54,779	67,317	61,623
Septic Systems	21,445	21,043	21,123
Wastewater Treatment	249,916	256,315	254,685
Urban Stormwater	33,200	9,386	10,755
Agricultural BMPs	46,885	50,273	52,611
Oyster Restoration	11,889	13,085	8,281
Transit & Sustainable Transportation Alternatives	337,769	337,464	563,916
Living Resources	66,251	66,619	79,600
Education and Research	35,553	35,775	31,845
Other	13,736	13,174	13,304
Total, Maryland Funds by Spending Category	**871,424**	**870,451**	**1,097,742**

Notes on Table 13:
This data only includes state agency programs that have more than 50% of their activities directly related to Chesapeake Bay Restoration. Funding related to salaries and fringes does not reflect health insurance or increment adjustments.

This table assumes enhanced funding of $4.0 million for Program Open Space Streetside, $4.9 million for Rural Legacy and $3.5 million for the Maryland Agricultural Land Preservation Foundation is passed by the General Assembly as proposed in the Governor's Budget.

Table 16--Pennsylvania, State Programs[1,2]

(Budget authority in thousands)	FY 2014	FY 2015	FY 2016	FY 2017
Department of Environmental Protection				
Growing Greener	7,165	8,220	9,373	2,645[3]
Water Pollution Control	803	3,773	1,978	2,724
Chesapeake Bay Implementation- Program Management and Administration	1,076	1,402	513	1,061
Chesapeake Bay Implementation- Project Construction and Implementation	1,397			
Chesapeake Bay Regulatory And Accountability- Program Management and Administration		1,519	631	1,635

Flood Protection Program	245	139	14	
Chesapeake Bay Commission	227	227	227	227
State Conservation Commission				
Conservation District Fund Allocation Program	3,491	3,491	3,502	3,502
Dirt, Gravel, and Low Volume Road Program	13,720	13,720	13,720	13,720
Nutrient Management Program	1,449	1,530	1,530	1,530
Resource Enhancement and Protection Program	4,900	4,900	4,900	4,900
Pennsylvania Infrastructure Investment Authority				
Project Construction and Implementation	10,222	12,272	385	n/a[4]
Department of Natural Resources				
Land Conservation	9,078	34,700	3,062	726
Rivers Conservation	125	702	200	
Riparian Buffers (Reboot Strategy)				1,000[5]
Total, Pennsylvania, State Programs	**53,899**	**86,594**	**40,034**	**33,671**

[1] Costs figured on federal fiscal year, FY16 costs are from October 1, 2015 through March 31, 2016.
[2] Costs of some projects calculated as 49% of statewide costs, since approximately 49% of the state is in the Chesapeake Bay Watershed.
[3] Actual projections cannot be made since amounts are based on projects approved. However, a minimum amount is budgeted as match to the EPA CBIG grant.
[4] Amounts are based on projects approved, not funds spent. Projections cannot be made since we can't determine type, number of projects or amounts we will receive.
[5] Includes $500,000 in in-kind services

Table 17--Pennsylvania, Federal Funds Received[1],[2]

(Budget authority in thousands)	Federal Agency	Federal Program	FY 2014	FY 2015	FY 2016
Department of Environmental Protection					
Nonpoint Source Program- Program Management & Administrative Oversight	EPA	CWA 319 Nonpoint Source Program	741	616	743
Nonpoint Source Program- Project Construction & Implementation	EPA	CWA 319 Nonpoint Source Program	1,689	2,444	2,085
Water Pollution Control	EPA	CWA 106 Grant	3,195	2,730	1,765
Water Pollution Control Supplemental Monitoring	EPA	CWA 106 Supplemental Grant	87	69	67
Monitoring, Assessment and Planning	EPA	CWA 604(b)	292	143	104
Chesapeake Bay Implementation- Program Management & Administrative Oversight	EPA	Chesapeake Bay Implementation Grant	909	471	67
Chesapeake Bay Implementation- Project Construction & Implementation	EPA	Chesapeake Bay Implementation Grant	2,740	590	553
Chesapeake Bay Regulatory and Accountability	EPA	Ches. Bay Regulatory and Accountability Grant	1,309	3,718	2,116
SWAT Program	USDA, NRCS		421	295	129
Department of Natural Resources					
Land Conservation	USDA, FS	Forest Legacy Program		1,500	
Pennsylvania Infrastructure Investment Authority					
Program Management & Administrative Oversight	EPA	SRF	1,434	1,500	892
Project Construction & Implementation	EPA	SRF	40,500	2,621	315
Total, Pennsylvania, Federal Funds Received			**53,317**	**16,697**	**8,835**

[1] Costs for some projects calculated as 49% of statewide costs, since approximately 49% of the state is in the Chesapeake Bay Watershed.
[2] Costs figured on federal fiscal year, FY16 costs are from October 1, 2015 through March 31, 2016.

Table 18--Virginia, State Programs

(Budget authority in thousands)	FY 2014	FY 2015	FY 2016	FY 2017
Department of Conservation and Recreation				
Soil and Water Conservation[1]	1,641	1,756	2,203	1,867
Financial Assistance to Soil and Water Conservation Districts	3,798	4,127	4,272	4,314
Technical Assistance to Soil and Water Conservation Districts	1,544	1,710	1,708	4,767
Agricultural Best Management Practices Cost Share Assistance	13,448	14,878	14,502	33,217
Dam Inventory, Evaluation and Classification and Flood Plain Management[2]	1,729	1,829	1,466	1,675
Natural Heritage Preservation and Management[3]	1,924	1,964	2,416	2,101
Preservation of Open Space Lands[4]	3,174	2,770	3,424	3,123
Design and Construction of Outdoor Recreational Facilities	440	442	360	414
State Park Management and Operations	21,726	22,962	24,769	23,152
Natural Outdoor Recreational and Open Space Resource Research, Planning, and Technical Assistance[5]	576	521	667	588
General Administration Management for Chesapeake bay Program activities	3,950	5,336	5,055	4,780
Department of Environmental Quality[6]				
Water Quality Improvement Fund point source grants	27,840	69,129	60,234	75,316
Water Quality Improvement Fund non-point source grants	425	306	1,540	3,000
Clean Water SRF	30,054	34,972	45,734	45,000
Stormwater Local Assistance grants[7]	0	2,715	2,975	15,000
Stormwater Management[8]	2,197	8,660	3,157	3,218
Water Quality Management	14,026	14,335	14,374	15,284
Air Quality[9]	8,293	8,594	8,584	8,766
Land Management [10]	4,100	4,937	4,491	5,292
Superfund	1,193	1,656	1,657	1,702
Petroleum Remediation	21,807	22,325	23,794	23,035

Litter Control and Recycling	1,409	1,389	1,421	1,467
Lynchburg and City of Richmond Combined Sewer Overflow grants	827	3,585	7,980	12,000
Department of Game and Inland Fisheries				
Fisheries and Aquatic Habitat	2,669	2,392	1,303	890
Species of Conservation Need and Habitat	723	514	215	611
Wildlife and Terrestrial Habitat	4,749	4,190	3,465	2,461
Land Acquisition	0	826	11,648	4,400
Department of Transportation[11]				
MS4/Chesapeake Bay TMDL Special Condition	849	419	448	2,500
Marine Resources Commission				
Oyster Restoration	2,000	2,000	2,000	2,000
Total, Virginia, State Programs	**177,111**	**241,239**	**255,862**	**301,940**

[1] Includes Water Quality practices, Nutrient Mgt to prevent run off, Agricultural incentives, Resource Mgt planning, Engineering Services, Shoreline Erosion Advisory (SEAS), Adopt a Stream, Watershed and Stream Exclusion Practices, Chesapeake Bay Restoration Fund, Plant more Plants, Conservation Reserve Enhancement Program (CREP), Virginia Agricultural Best Mgt Practices

[2] Public Safety, Erosion Control, Climate resiliency, Water Quality

[3] Natural Area Preserves. Conservation of Virginia's biodiversity and ecosystems of lands with native plant and animal life. Protection and outdoor recreational opportunities. Clean water through Caves and Karst.

[4] Land protection grants and advisory, Virginia Outdoors Fund, Virginia Land Conservation Foundation, Clean Water Revolving Loan, Land Conservation, Virginia Recreational Trails Fund, Tax Incentive Administration

[5] Virginia Outdoors Plan, Land Water Conservation Fund, Recreational Trails Program, Virginia Land and Water Conservation Fund, Greenways and Trails, Blueways and Water Trails, Public Access, Virginia Scenic Resources (Rivers and Byways), Master Planning of Parks, Green Infrastructure-interconnected network of waterways wetlands, wildlife habitats, parks, and other open spaces that support native species.

[6] All costs are based on June 30, state fiscal year

[7] Total program costs allocated based on statewide bay land area 60%

[8] Total program costs allocated based on statewide bay land area 60%

[9] Total program costs allocated based on statewide bay land area 60% except for non-attainment emissions inspection expenditures at 100%

[10] Total program costs allocated based on statewide bay land area 60%

[11] Based on state fiscal year.

Table 19--Virginia, Federal Funds Received

(Budget authority in thousands)	Federal Agency	Federal Program	FY 2014	FY 2015	FY 2016
Department of Conservation and Recreation					
Soil and Water Conservation[1]	EPA	CWA 319, CBIG, CBRAP	1,847	3,044	3,346
Dam Inventory, Evaluation, and Classification and Flood Plain Mgmt[2]	FEMA	CTP, CAP-SSE, Dam Safety	467	634	333
Natural Outdoor Recreational and Open Space Resource Research, Planning, and Technical Assistance[3]	NPS and USFWS	Land Conservation, East Coast Greenway	4,391	1,712	1,870
Department of Environmental Quality					
Virginia Revolving Loan Program	EPA	SRF	28,694	28,548	18,126
Non-point Source program	EPA	CWA 319	1,123	1,929	1,880
Chesapeake Bay Monitoring	EPA	CWA 117 d & e	1,286	1,360	1,360
Chesapeake Bay Regulatory and Accountability[4]	EPA	CBRAP	3,037	2,438	8,726
Chesapeake Bay Implementation	EPA	CBIG	0	10,716	0
Leaking Underground Storage Tank	EPA	LUST	883	868	883
Leaking Underground Storage Tank Prevention	EPA	LUST Prevention	512	512	513
PPG 106 Water[5]	EPA	CWA 106	2,073	2,125	2,073
PPG 105 Air[6]	EPA	CAA 105	1,786	1,760	1,764
PPG RCRA[7]	EPA	RCRA	1,194	1,205	1,200
Water Quality	EPA	604B	103	103	103
Coastal Zone Management	NOAA	CZM	1,050	1,001	1,249
Department of Game and Inland Fisheries					
Fisheries and Aquatic Habitat	USFWS	Sportfish Restoration	2,001	1,794	977
Species of Conservation Need and Habitat	USFWS	State Wildlife Grants	723	514	215
Wildlife and Terrestrial Habitat	USFWS	Wildlife Restoration	3,562	3,143	2,599
Land Acquisition	USFWS	Wildlife Restoration	0	826	11,648

Department of Health				
Onsite Septic Program	CBSF	26	235	131
Marine Resource Commission				
Oyster Restoration	Hurricane Sandy Disaster	0	0	439
Total, Virginia, Federal Funds Received		**54,758**	**64,467**	**59,435**

[1] Includes Water Quality practices, Nutrient Mgt to prevent run off, Agricultural incentives, Resource Mgt planning, Engineering Services, Shoreline Erosion Advisory (SEAS), Adopt a Stream, Watershed and Stream Exclusion Practices, Chesapeake Bay Restoration Fund, Plant more Plants, Conservation Reserve Enhancement Program (CREP), Virginia Agricultural Best Mgt Practices

[2] Public Safety, Erosion Control, Climate resiliency, Water Quality

[3] Virginia Outdoors Plan, Land Water Conservation Fund, Recreational Trails Program, Virginia Land and Water Conservation Fund, Greenways and Trails, Blueways and Water Trails, Public Access, Virginia Scenic Resources (Rivers and Byways), Master Planning of Parks, Green Infrastructure-interconnected network of waterways wetlands, wildlife habitats, parks, and other open spaces that support native species.

[4] Pending application of $8.7 million; original app. submitted in May 2016

[5] Total program costs allocated based on statewide bay land area 60%

[6] Total program costs allocated based on statewide bay land area 60%

[7] Total program costs allocated based on statewide bay land area 60%

http://www.chesapeakebay.net/channel_files/23874/cbara_chesapeake_bay_crosscut_report_final_(12.06.16).pdf