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Only the Market Can Clean up the Chesapeake Bay

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Abstract

The quality of the Chesapeake Bay and its tributaries is best described by the ability of private interests using those waters. The most efficient and efficacious means to remediate the water quality of the Bay and its tributaries requires private interests to seek protection of their interests at law and expansion of the existing carbon markets to include trading of nutrient reduction amongst the polluters. Absent this approach, the incentives of the command and control regulations and the cap and trade system will fail to generate an efficient or sufficient allocation of pollution control activities and the water quality of the Bay will do no more than remain the same as it is

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WHO CONTROLS CHESAPEAKE BAY QUALITY?

Despite a fog of misrepresentation by environmental activists, when one gets down to the facts of the matter, restoration of the Chesapeake Bay rests in private hands. The twenty-plus year history of governmental action on the Bay has failed to improve water quality because the federal government never had the authority to force the actions needed and the states refused to use their authority and never will.

Because so many cite to the Chesapeake Bay Accord and related legislation and ordinances as the mandate requiring localities to restrict private interests, this section first dispenses with that misrepresenation.

Restoration of the Chesapeake Bay rests on nothing more than a voluntary commitment amongst the states whose rivers discharge into the Bay.[1] In particular, Virginia, which was at the center of legal action that resulted in EPA establishing a Chesapeake Bay Program, suffers no legal consequences if it does not perform under that agreement. Indeed, none of the signatories (Pennsylvania, Maryland, West Virginia, New York, Delaware) to the agreement met their initial promises and have repeatedly chosen to extend deadlines and amend the agreement, rather than fund restoration from state revenues.

Under the Clean Water Act ("CWA" or "the Act"), states share responsibilities with the federal government, and in particular, the Environmental Protection Agency (Regions II & III).[2] Under the Act, Virginia municipalities must apply "best practicable control technology" ("BPT") to remove "conventional" pollutants, which included nutrients.[3] This is the "secondary treatment" requirement that most municipalities and all Virginia municipalities have now met. The Act does not require municipalities to go beyond secondary treatment. In fact, EPA refused to redefine BPT to require greater nutrient removal, in part as the Act does not authorize such an extension.[4] The Act also requires states to assess the quality of their waters, establish water quality goals, and if not met, to establish total maximum daily loads from point source and non-point source polluters. If a state refused to undertake such planning, the Act mandates that EPA conduct this planning. If a state did not do this work, the only risk it would face is loss of the state grant that pays for a small part of state costs of implementing the Act.

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[1] A full discussion of the voluntary agreements is presented in: U.S. EPA, Decision On Petition For Rulemaking To Address Nutrient Pollution From Significant Point Sources In The Chesapeake Bay Watershed, (June 13, 2005) *See*: http://www.epa.gov/water/cbfpetition/petition.pdf (page 6, et seq.)

[2] Congressional Research Service, "Clean Water Act: A Summary of the Law" (Jan 24, 2002), *See*: http://usinfo.state.gov/usa/infousa/laws/majorlaw/cwa.pdf.

[3] *Id*, at page CRS-4.

[4] U.S. EPA, Decision On Petition For Rulemaking To Address Nutrient Pollution From Significant Point Sources In The Chesapeake Bay Watershed, (June 13, 2005), *see* http://www.epa.gov/water/cbfpetition/petition.pdf .

The commonly referenced "court order" that Virginia and its localities usually refer to when arguing they have a legal mandate to take specific steps to clean up the Bay also requires water quality assessment and the subsequent required actions – in essence, a court ordered implementation of the Act. The court order, however, is an order against EPA. EPA and Virginia made an agreement for Virginia to carry out the planning effort by 2010, in an attempt by EPA to avoid a court order. The court did not buy the approach, required more than the original agreement, and made the requirements of the order enforceable against EPA alone. As Virginia was not a party to the suit, the court could not and did not make the state responsible for carrying out the planning activities. This, however, is moot as the Commonwealth has fully performed under these agreements. If Virginia does not complete its planning by 2010, then EPA must do so by 2011, or be in contempt of court. The agreement, incorporated into the court order, has several intermediate deadlines – all enforceable against EPA, but not Virginia. Nothing in the order or the Act requires a municipality or non-point source to turn over a single spade-full of dirt. The entire gravity of the action is to ensure Virginia has water quality standards, even if unenforceable.

The only forcing requirement under the water quality planning authorities of the Act is one that requires point sources to meet discharge limitations that a state concludes are necessary to achieve the water quality goals. Taking the BPT and water quality planning sections of the Act together, however, a permit requiring more than secondary treatment for nutrient removal is not federally enforceable under the authorities of the Act.[5]

On the other hand, states have the authority to require more than secondary treatment, and Virginia, for example, is in the process of doing so at this time. Like all other states, Virginia's authority rises from state law, not federal law.[6] Under these proposed regulations, the Virginia Department of Environmental Quality will impose nutrient restrictions that will force municipalities to go beyond best practicable control technology (secondary treatment) and apply tertiary nutrient removal. Notably, it remains unclear whether EPA could bring an enforcement case against a Virginia municipality under Virginia laws and regulations. In general, the EPA has defined state laws as federally enforceable, and might take an action exclusively under the state authorities, but this would be an extremely rare event. The Department of Justice, which files such cases, would generally not accept a case exclusively under state law, especially if the State has initiated administrative or civil actions of their own.

So, who controls the water quality in the Bay? Clearly not the federal government, and up to now, none of the States have significantly implemented point-source controls. As the next section demonstrates, even if they had, the Bay would not be "clean," because the pollution that degrades the Bay comes from sources beyond the legal and political reach of regulation.

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[5] This has never been tested at law, but is the common interpretation by EPA's Office of General Counsel and Water Enforcement Division attorneys. Personal communications to the author. The Agency has chosen not to address this matter in writing, choosing instead to resolve matters through voluntary agreements under the Chesapeake Bay Agreement, and similar agreements in other major watershed.

[6] 9VAC25-31-50. *See*: http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC25-31-50 .

WHAT ARE THE SOURCES OF POLLUTION INTO THE BAY?

The Bay suffers from two kinds of discharge -- sediments and nutrients. The sediments bury the life on the bottoms of rivers, deltas, and shorelines. These include the extremely important breeding grounds for mollusks and fish. As the name implies, nutrients -- specifically nitrogen and phosphorus -- provide essential support to algae and other small life forms that constitute the bottom of the food chain in the Bay. Too many nutrients, however, and the algae can consume large amounts of oxygen thus forcing the top of the food chain (the fish) to other waters, and causing mollusks and fish hatchlings to fail to thrive and eventually die.

The Chesapeake Bay Accords established reduction targets for the nutrients. Table I shows the size of mandatory reductions and the breakdown in contributions from each of seven sources.

Table I

Source	% of Acres	% of Nitrogen	% of Phosphorus	Sediment
Agriculture	22.7	41.0	47.3	62.8
Atmospheric Deposition	1.0	1.3	0.8	0.0
Forest	57.1	14.8	2.1	19.8
Mixed Open	9.9	6.5	11.3	7.7
Point Source	0.0	21.0	22.1	0.0
Urban	9.3	15.4	16.3	9.7
Stream Bed	Unaccounted for in the analysis, erosion of streams resulting from the vast increases in runoff due to urban/suburban impervious surfaces appears to account for the majority of the sediment contributions below urban centers.			
Reduction Targets		34.6	60.0	na
Source: EPA Chesapeake Bay Program				

Note, the regulated community (the point sources) alone do not contribute enough to meet the reduction the states seek under the accord, even if one could remove all the nutrients from that source. Indeed, the only apparent way to meet the targets is to address both point sources and non-point sources, specifically, agriculture and stream bed erosion.

As Table I shows, agriculture demands address, agricultural non-point sources deserve further attention. Table II breaks down the nitrogen sources for Virginia, an exemplar for the whole Bay watershed. As the table shows, crops are the big problem and one of the two biggest unaddressed solutions for non-point sources.

Table II

Source	% of VA Total N Contribution to Bay	% of Ag Contribution	Subject to Regulation
Manure (not applied to fields)	1 %	3%	Yes
Crops (subject to tillage) (includes applied manure)	**16%**	**55%**	**No**
Hay (includes applied manure)	4%	14%	No
Pasture (includes applied manure)	8%	28%	No
Ag as Total VA Contribution	29%	100%	
Source: EPA Chesapeake Bay Program			

The same agriculture pattern arises in each state and, as Table III shows, this really means Maryland, Pennsylvania and Virginia must step up, while the other jurisdictions are unimportant overall.

Table III

State	Percent of Acres Draining into the Bay	Percent of Nitrogen Loading	Percent of Phosphorus Loading	Percent of Sediment Loading
NY	9.7	6.6	5.2	2.9
DE	1.1	1.8	2.1	1.1
MD	14.4	20.4	20.4	20.0
DC	0.1	1.3	0.6	0.1
PA	35.2	39.3	18.4	22.0
VA	33.9	28.0	50.5	47.1
WV	5.6	2.6	2.9	6.8

Source: EPA Chesapeake Bay Program

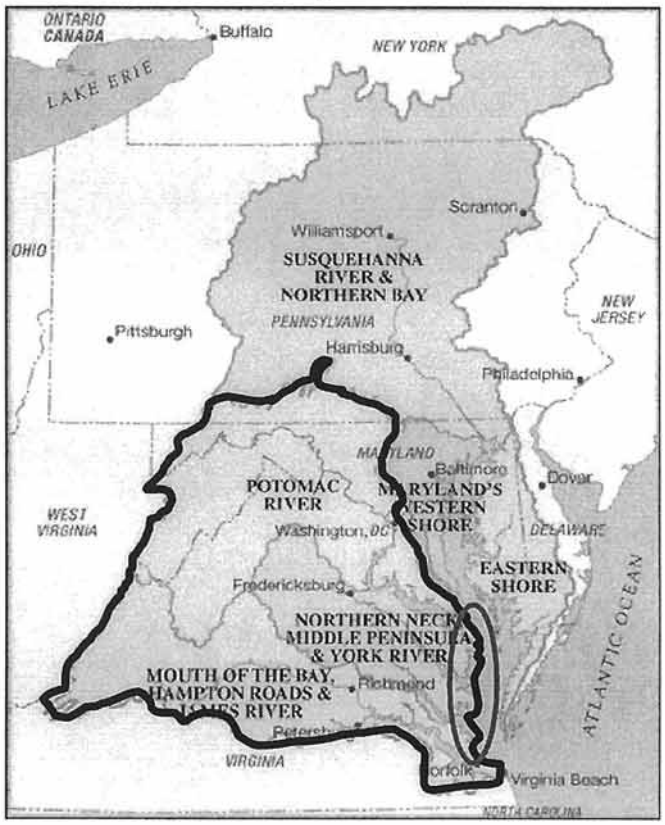
In some cases, however, agricultural discharges have been nearly eradicated. In the Colonial Soil and Water District, south and east of Richmond Virginia, nearly all of the crop land now uses "never-till" agronomy that reduces nutrient and sediment discharges by over 90 percent.[7] Based on this control mechanism, one would expect the nutrients and sediment-related water quality in the Middle and Lower James River to be improving and of relatively high

[7] *See*: http://colonialswcd.vaswcd.org/Trib%20Strat%20TMDLs%20and%20WQ%20Trading.htm.

quality. Indeed, the nutrients are not a problem, nor are sediments from farms a problem.[8] Nevertheless, sediments are a problem in the middle and lower James River[9], and the only meaningful uncontrolled source of these sediments left is stream bed erosion. This erosion arises when the amount of water in the stream bed is greater than the stream bed can handle, causing the water to erode the sides of the bank and depositing increased particulate matter into the river and eventually into the Bay. The source of the increased stream flow is the increased amount of impervious surface in cities and towns (in this case Richmond and its suburbs) that disallows the water to percolate into the soil and ground water, rather than rush into the river. Unfortunately, the Virginia tributary strategies and Bay models do not account for this impervious surface in their remediation plans or in their explanation of sources.

This problem exists around all developed areas within the Bay's watershed. As Figure 1 shows, the agricultural sources lie within the entire watershed, although predominantly within Pennsylvania, Maryland and Virginia.

Figure 1



[8] Crop-related sediments cannot be a problem because the nutrients are carried into the water on the particulate matter and the lack of nutrients means, perforce, a lack of crop-related sediments. Indeed, studies show never-till practices keeps the soil in place and reduces sediments by over 95 percent. *See*: http://www.charlescity.org/2rivers.php.

[9] Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy for the James River, Lynnhaven and Poquoson Coastal Basins, March 2005, pp. 22-23. http://www.naturalresources.virginia.gov/Initiatives/WaterQuality/FinalizedTribStrats/james.pdf .

Figure 1 allows a second point, beyond the relative contributions of the big three states. Virginia and less than one-third of Maryland discharge only into the lower half of the Bay. (See the oval.) Thus, Pennsylvania and the eastern and western shores of Maryland must take the vast majority of responsibility for water quality in the top half of the Bay and most of the pollution throughout the Bay. Notably, only the top of the Bay has a nutrients problem, as shown in Figures 2 and 3.[10]

Figure 2

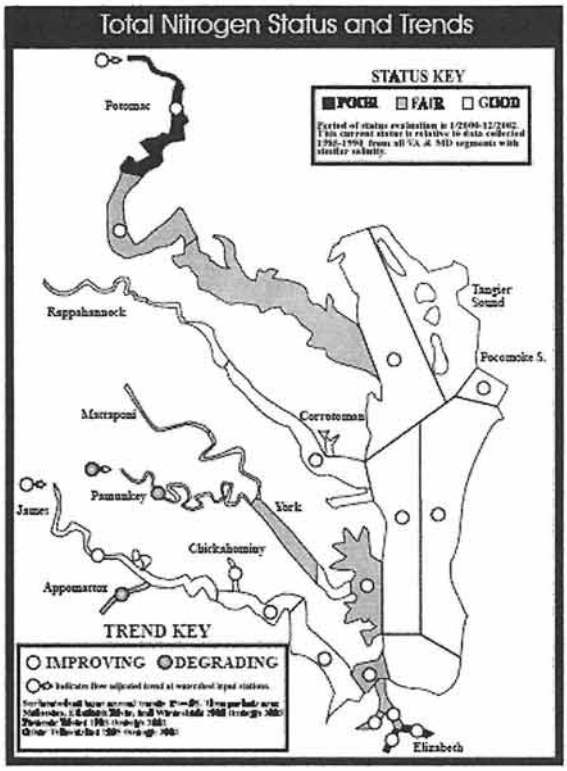
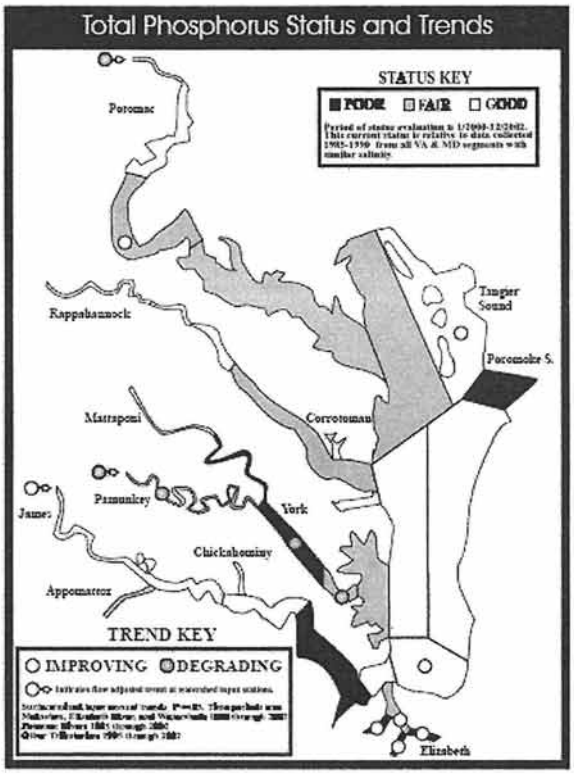


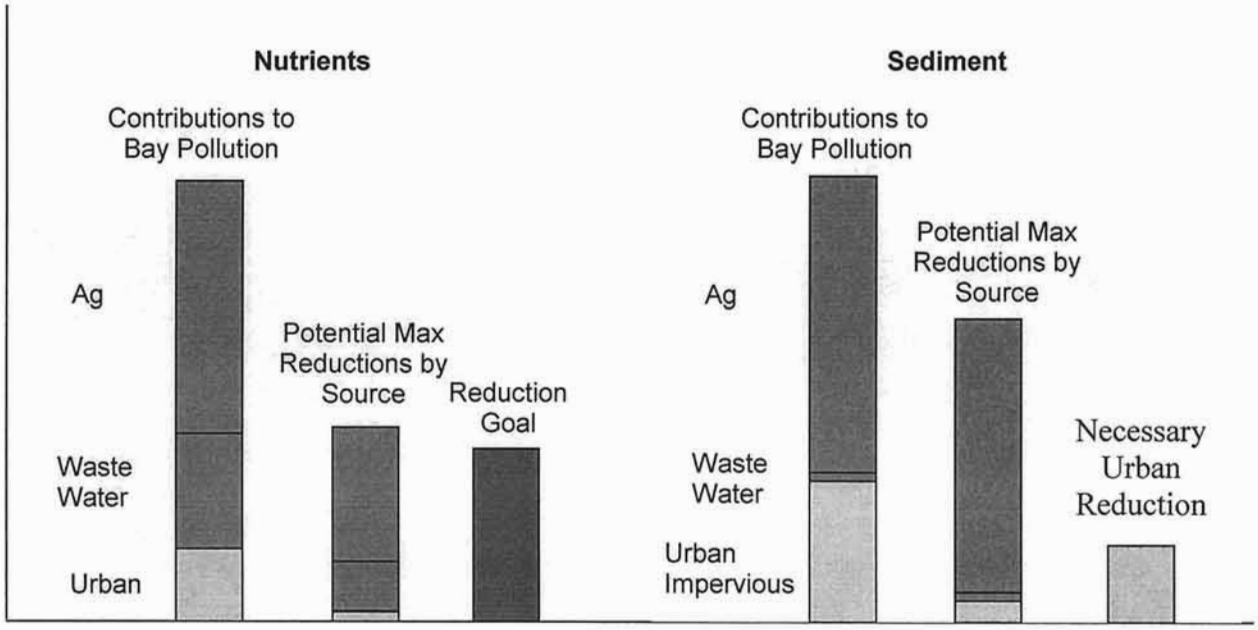
Figure 3



[10] Source: Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy for the James River, Lynnhaven and Poquoson Coastal Basins, March 2005, pp. 22-23.
http://www.naturalresources.virginia.gov/Initiatives/WaterQuality/FinalizedTribStrats/james.pdf

To reiterate, here are the significant sources of the problem and here is what we have to work with.

Figure 4



HOW DOES ONE "CLEAN UP" THE BAY?

Presumably we can "clean up" the Bay. Figure 4 suggests it's all about agriculture. To understand how to form a market to help renew the Bay, it will pay to understand what is and isn't worth buying.

The primary target of most advocates for Bay restoration has been the nutrients from point sources, the municipal waste water treatment plants. These advocates target these sources because they can be made subject to command and control regulatory programs. At present, nearly all, if not all, such plants have "secondary" treatment controls. These reduce some nutrients and nearly all sediment in the incoming sewage. The advocates want requirements for "tertiary" treatment. That treatment is identical to the technology used to turn raw river water into safe drinking water. The best known tertiary plant in the United States is the Upper Occoquan Sewage Authority. UOSA is a model for water reuse proposals from Singapore to Washington, D.C.[11] This technology, however, only reduces nutrients by about 35 percent. As the nutrient reduction goal would require a 35 percent reduction in all sources, it is not sufficient to target these point sources, alone. As a brief aside, to be taken up again, perhaps the goal is wrong.

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[11] *See*, Drinking Water Supply In The Washington, D.C. Metropolitan Area: Prospects And Options For The 21 St Century. http://www.dcwatch.com/lwvdc/lwv9903b.htm .

Reduction of nutrients from agricultural sources takes several forms, but "never-till" crop management seems the most promising. By leaving all but the harvestable grain in the field, by not tilling the field and by planting cover crops to hold nutrients and soil in place over the winter, this cropping technique has reduced nutrient and sediment runoff from those croplands by over 95 percent.[12]

Returning to the "Goal" of 35 % reduction of nutrients from all sources to the Bay, surely this goal is wrong. As Figures 2 and 3 show, there is no nitrogen problem in the Bay and phosphorous is a problem only in the northeast section of the Bay. Figures 5 & 6, from the same report, shows there is an algae problem on the west side of the Bay below the Rappahannock

Figure 5

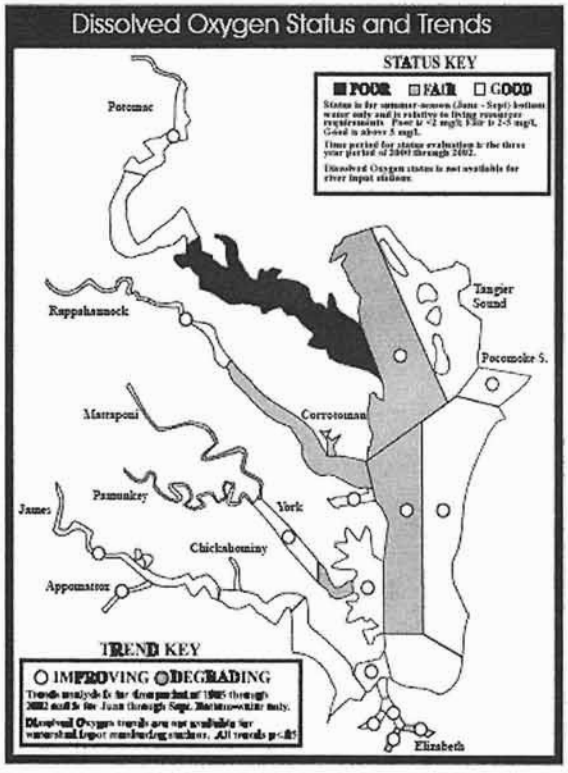
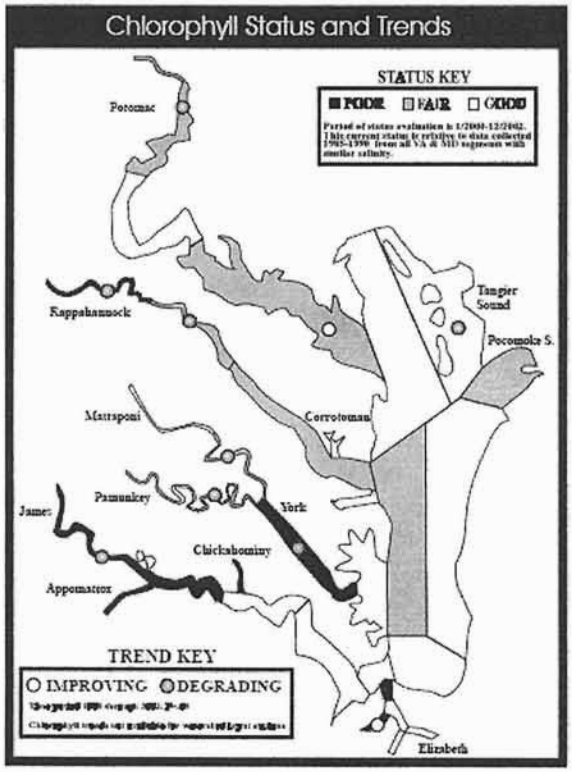


Figure 6



River and a dissolved oxygen ("DO") problem in these same two of six sections of the Bay. By applying never-till cropping to all grain crops in the top half of Virginia and on the western Maryland portion of the Bay's watershed, and tertiary control of point sources on the Potomac and Rappahannock Rivers it would be possible to meet all the goals of nutrient clean-up on the Bay, to include the algae and DO problem these nutrients cause. This suggests the current goal is without much merit. This leads to the question of cost.

Table IV provides the relative cost of nutrient reduction through point and non-point controls, using nitrogen as a surrogate.

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[12] *See*: http://www.charlescity.org/2rivers.php . There is a wealth of technical science on no-till and never-till cropping, as a browse through an internet search will access.

Table IV

Pollution Control	Total Capital Cost $ Millions (2003 – 2010)	Cost ($) per pound	Maximum Achievable Reduction (% of Goal)
Tertiary Waste Water Treatment	$ 1,200	$ 8.40	34.5 %
Waste Water Land Application	145	$ 4.20	5.0 %
Never-Till Cropping	55	$ 0.32	60.0 %
Urban Storm Water	2,000	$ 19,000.00	.01 %

Source: Policy Alternatives For Clean Up Of Virginia Waters, *see*, http://www.thomasjeffersoninst.org/pdf/articles/VA_Waters.pdf .

The Chesapeake Bay state consortium has estimated that it will cost over a billion dollars to add tertiary treatment to all the municipal waste water treatment facilities on the Bay's watershed, but as we've discussed, this is not actually necessary. Rather, only those on the Potomac and Rappahannock Rivers and the upper western portion of the Bay are a cause of the problems in the Bay. They remain expensive, however, with a cost per pound of nutrient over 26 times more than never-till cropping. It remains to be seen, but taking the large amount of crop land in the northern half of Virginia and the western third of Maryland into account, it may be that never-till cropping, alone, would be sufficient to "clean up" the Bay, if not meet the "Goals".

Of exceptional note is the cost per pound of nitrogen removal in urban settings. This is so expensive, one would think it not within reach, but in fact, Fairfax County staff planned to purchase nitrogen removal units for their storm water ponds until the Chairman of that county's Board of Supervisors was provided the table above by the Jefferson Institute and instructed county staff that he would purchase nitrogen reduction from farmers if the county needed to do any "urban" nitrogen reduction at all.[13] This saved many millions of dollars. Another alternative of some significance is land application of primary treated wastes onto agricultural lands cropped by never-till. This is half as expensive as tertiary and treatment, produces more than three times the nutrient reduction per gallon of waste than tertiary treatment (all the nutrients in the waste water and a reduction in the nutrients coming off tilled lands). Its use today, however, is limited to smaller communities located next to crop lands.

The distinction between the "Goal" and what is actually needed to clean up the Bay is significant. If it is necessary to meet the "Goal," then all farmers and all point sources have to do everything they can, regardless of cost. But if the purpose is to restore the Bay to acceptable water quality, then meeting the "Goal" is not necessary, and it may well be that only a few point sources need do anything, while the crop farmers would need to do a great deal. Considering cost, this is a good division of labor. Considering markets, it may be a much better division.[14]

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[13] I presented the data to the Chairman and he made these comments at our meeting to the head of the facilities management unit responsible for such projects, also in attendance.

[14] This paper discusses the Bay proper. The more appropriate view should be as to the quality of the various states' rivers and streams. Under those conditions, the cost differential may also be important and the potential for a crop-based approach may be sufficient in places like the upper James River, where most of the problem comes from the farms and little from point sources. In other cases, for example where the pollution is due to impervious runoff, the cropping, regardless of how well controlled, would have no effect whatever, as the water quality problems rise from the volume of water coming out of suburbs and cities and eroding the stream bed.

Finally, if the purpose is to remediate the Bay and the rivers, localized markets have even more potential.

THE NEED AND VALUE OF A MARKET MECHANISM

Until this point, this paper has not discussed the value of cleaning up the Bay, nor to whom that benefit accrues. In the context of private rights and market function, this becomes paramount. Once the largest commercial fishing waters in the U.S., if restored, the Bay could produce $3 billion in commercial fishery revenues per year. It now produces less than $100 million. Overall, some suggest the fishing and recreational value of the Bay at full ecological competence (assuming the ecology of the past) at more than a trillion dollars.[15]

These extremely large numbers usually involve adding up the value of land adjacent to the Bay and its major tributaries. If, however, the focus remains on the Bay only, and the old fish and mollusk ecologies that produced large commercial fishing revenues, then we find a common environment "owned" mostly by Maryland, with some owned by Virginia. The courts of each routinely accept nuisance cases regarding their own "waters" and each recognizes nuisance suits for water pollution over and above pollution controlled by state and federal regulations.[16] Virginia also recognizes that its rivers serve the purpose of waste disposal sinks that can carry away reasonable wastes from urban settings. Thus, a downstream discharger has a reasonable expectation that he can dump some waste into the river, and should expect that his opportunity should not be circumscribed by an upstream pollution source, just as a downstream waterman has a reasonable expectation that his oyster beds (often on private property abutting a river) should not be harmed by sediments from upstream. Recreational users, and those businesses that support them, also have a reasonable expectation of water quality sufficient to maintain their water uses.

Notably, none of the Bay advocacy groups seem willing to pursue their members' property rights at law. The Chesapeake Bay Foundation Board has specifically refused to litigate against anyone other than the federal government. Watermen seem to have been cowed by the Foundation and are unwilling to serve as defendants in any case against cities or farmers. This failure to protect property rights through legal channels has significance to a market. Without the threat of liability for discharges into the streams, the polluters have no incentive to shift their behavior other than economic self interest. Thus, if market reliance is exclusively founded on regulatory liability, the market shrinks dramatically. To the degree these downstream water quality property rights are enforced at law, the upstream polluter suffers a significant liability when harming the downstream property rights. The question then becomes, what is the most efficient means for the polluter to reduce its liability? Therein lies the genesis of the market.

ALTERNATIVE MARKET APPROACHES

A market to "clean up the Bay" must first be defined by the liabilities and private interests of market participants. If the sole purpose is to remediate the water quality in the

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[15] *See, e.g.* http://www.bayjournal.com/article.cfm?article=2395 .

[16] As I am in the process of developing legal briefs on this subject, I will not advance those legal arguments in the paper for strategic legal reasons and to maintain a "work product" privilege associated with that potential litigationl.

western quadrant of the Bay (see Figures 5 & 6), without change to the regulatory structure and limited liability now in place, then the market consists primarily of point sources buying nutrient reduction from farmers, since the point sources are regulated and the farmers are not. If, however, liability expands beyond regulatory programs, then remediation of the affected portions of the Bay becomes a robust market driven by cost-efficient pollution control. Traditional farmers will purchase nutrient reduction from never-till farmers, as will point sources and other nutrient sources (*e.g.*, private forest land, sod farms, developers, etc.). If remediation of rivers and streams is added to the "Goal", then the market expands through sub-markets identifiable by those rivers' watersheds. (See Figure 1.)

Finally, if the exclusive purpose is to meet the "35 % reduction" goal, the markets collapse, as everyone has to do everything, and there is nothing left to sell. The fortunate element of this environmental problem is that the 35% reduction is imaginary without legal enforceability. It is not anyone's property right and is not mandated in any law.

Imaginary goals, however, can and have created political mandates and both openings and barriers to market development. One might think, for example, of global warming in this context, especially with regard to the carbon market, where it is fully open and where it is not, and the political and scientific chimera of its utility in preventing predicted warming. Thus, the 35 % reduction image has influenced development of nutrient markets.

Virginia has established a watershed-based nutrient trading system in the Bay region that will allow dischargers to buy and sell credits from each other to meet their 2010 nutrient reduction goals.[17] This system relies on a cap and trade approach. Each municipal waste water treatment facility has been allocated a nutrient loading. They must either reduce their loadings to that level, or purchase loading reductions from some other facility within their watershed. They may only purchase nutrient reductions from farmers to offset growth in their system. Obviously, this market will not likely have any lasting or robust activity since every facility must eventually apply tertiary treatment, and thus reduce their loadings to their allocation limits. Further, there is little confidence that the allocation system will last long. The Virginia legislature will find it difficult to withstand the political heat of growth controls through a cap and trade allocation system. The political content of that problem is far greater than the strength of the allocation system, one already receiving the ire of small municipalities which had little or no influence in setting the initial allocations. Finally, this system cannot help meet the 35% goal since the only means to involve agriculture is to account for growth, and thus does nothing to address the majority of the existing source of nutrients – the agricultural sector. At best, it addresses one-third of the goal.

A second market also already exists – the carbon market, and specifically the Chicago Climate Exchange.[18] The farming community has already recognized the potential to reap carbon sequestration dollars through never-till farming[19] and Iowa's Farm Bureau is currently providing services to allow farmers to participate.[20] Notably, for every ten pounds of carbon

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[17] *See*, http://www.bayjournal.com/article.cfm?article=2522.
[18] *See*, http://www.chicagoclimateexchange.com/ .
[19] *See*, http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=116&subsecID=900039&contentID=252026 .
[20] *See*, http://www.iowafarmbureau.com/special/carbon/default.aspx .

sequestered through never-till practices, a pound of nitrogen (and an equivalent weight of phosphorus) is also sequestered in the soil.[21] Because this market already provides the oversight on use of never-till, at a very modest cost, it could open additional products trading nutrient reductions. Although these nutrient reductions may be of no value within the regulatory schema, they would fully satisfy the plaintiff seeking nutrient reduction from a defendant. Because the plaintiff would seek reductions necessary to remediate his interests in the rivers and the Bay, this market, in conjunction with legal protection of property rights, would most efficiently return the Bay and the rivers to a quality sufficient to rebuild the fishing, shell fish and mollusk industries (to the degree they are compromised by water quality).[22]

In conclusion, the quality of the Chesapeake Bay and its tributaries is best described by the ability of private interests using those waters. The most efficient and efficacious means to remediate the water quality of the Bay and its tributaries requires private interests to seek protection of their interests at law and expansion of the existing carbon markets to include trading of nutrient reduction amongst the polluters. Absent this approach, the incentives of the command and control regulations and the cap and trade system will fail to generate an efficient or sufficient allocation of pollution control activities and the water quality of the Bay will do no more than remain the same as it is.

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[21] Soil Organic Carbon Sequestration Rates by Tillage and Crop Rotation: A Global Data Analysis, *see*, http://cdiac.ornl.gov/programs/CSEQ/terrestrial/westpost2002/westpost2002.pdf .

[22] Note, the oyster harvest is low mainly due to diseases. The solution there is introduction of disease resistant oysters, something the environmental community will not allow, as those oysters will inhabit and replace the native oysters, which, of course, are already dead.

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James W. Dyke, Jr: Partner, McGuireWoods and former Sec. of Education, McLean, VA.

Eva S. Hardy: Senior Vice President for External Affairs and Corporate Communications, Dominion Resources Services, Inc., Richmond, VA.

Robert L. Hartwell: President, Hartwell Capitol Consulting, Sr Consultant to American Systems, International, Occoquan, VA.

Alan I. Kirshner: Chairman and CEO of Markel Corporation, Glen Allen, VA.

Jay Poole: Former V. P. for Agriculture Policy and Programs, Altria, Glen Allen, VA.

Joseph Ragan: Founder and President of Joe Ragan's Coffee, Springfield, VA.

John Rust: Partner, Rust and Rust law firm & former State Delegate, Fairfax, VA.

John Ryan: Sr Counsel and Dir. of Gov't. Affairs for Bristol Myers Squibb, Washington DC.

Robert W. Shinn: President of Public Affairs, Capital Results, Richmond, VA.

Todd A. Stottlemyer: President, National Federation of Independent Business, Washington DC.

Dr. Robert F. Turner: Law professor at the University of Virginia, Charlottesville, VA.

Robert W. Woltz, Jr: President and CEO of Verizon-Virginia, Richmond, VA.

"...a wise and frugal government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned. This is the sum of good government, and this is necessary to close the circle of our felicities."

—Thomas Jefferson, 1801

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