

P. O. Box 539
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November 25, 2005

Dear Sen. Chichester and Hawkins, and Del. Callahan, Cox, Lingamfelter and Parrish

Your charge to identify funding to improve water quality in Chesapeake Bay is critical as 2010 rapidly approaches. The size of the “Dead Zone” in the open Bay and in small waterways like the one on which I live, and the small area occupied by Submerged Aquatic Vegetation (SAV) both measure the health of the Bay, and neither measure of the Bay’s health shows any improvement. This is a fact, despite the words or the “model results” touted by various agencies, including EPA. The reason the Bay has not improved is that people will not voluntarily spend the necessary money and politicians are unwilling to mandate that they do so. It is absolutely certain that the costs involved in improving water quality in Chesapeake Bay must be borne by the citizens and you cannot escape this fact.

You must recognize that there are only two important issues. Agricultural practices have been known for over three decades to be the largest source of pollution, and wastewater treatment plants are next in importance. Other sources of “actionable” pollution such as storm water management and septic tanks are not significant compared to agriculture and wastewater treatment. You must not follow the kinds of recommendations made as part of the “Tributary Strategies.” Urban and “Mixed Open” sources of pollution were proposed to receive 44% of available funds despite the fact that these sources caused only 11% of the pollution. Agriculture, the largest source of pollution by far, was proposed to receive only 18% of available funds. Spending large sums of money on storm-water control may be visible to the urban public, making them believe that the State is actually doing something, but the positive effects on Chesapeake Bay will be minimal unless agricultural and wastewater treatment practices are addressed first. Never lose sight of the fact that the size of the “Dead Zone” and the area occupied by SAV will judge your progress every year.

The best thing you can do regarding septic systems is to mandate enforcement of existing inspection and pump-out ordinances and existing RPA ordinances. Neither Lancaster nor Northumberland Counties enforce the Bay Act pump-out ordinance, in part because local sewage treatment facilities were not designed to accept truck loads pumped from septic tanks. Providing funds and a mandate to upgrade these small facilities using additional local tax revenue to not only accept pumper loads, but to provide for better wastewater treatment, would be a step in the right direction.

All existing sewage treatment facilities must be upgraded immediately so as to reduce point-source pollution by both nitrate and phosphate. It has been known for decades that this is the easiest way to reduce pollution, but until now no one has been willing to bear the cost. Most of the funding for the upgrades should come from the same source that funded the facilities in the first place. You must recognize that “the polluter pays” is a reasonable position and that small increases in wastewater bills and taxes to

pay off debt are not onerous and are one way to distribute the financial burden. If everyone must either pay more for wastewater treatment, or have their septic system inspected and the tank pumped if necessary, then no one can complain about being singled out unfairly. Polls indicate that people are willing to pay for Bay clean-up and it is your task to mandate the clean-up and ensure that the costs are borne equitably. We cannot expect the Federal Government to do any more for the Chesapeake Bay watershed than it does for, say, San Francisco Bay or Lake Erie. Trading schemes are cumbersome and slow and require a bureaucracy open to manipulation and procrastination. The best solution is to mandate the required changes and pay for them equitably.

Most of all you must find a way to change agricultural practices. If agricultural practices do not change significantly, there can be no significant improvement in water quality in Chesapeake Bay, and you must not delude yourselves into believing otherwise. The most egregious agricultural practice is the widespread land application of animal waste (poultry litter, municipal sewage sludge and cattle and swine manure). Here is an excerpt from my public comments regarding DCR's "Nutrient Management Training and Certification Regulations, 4 VAC 5-15" which is available at www.napsva.org.

It is instructive to ask how much nitrogen (N) is land-applied in animal waste annually in Virginia, but not used by crops. The tons land-applied in 2003 were supplied to me by State agencies, and the fraction N in the animal waste and the fraction of the N not used by crops (pollution) are from DCR's 2005 Nutrient Management Standards and Criteria ("Standards"):

	<u>Pounds applied</u>	<u>*</u>	<u>fraction N</u>	<u>*</u>	<u>fraction N not used</u>	<u>=</u>	<u>pounds N pollution</u>
Sewage sludge	494,648,000	*	0.02	*	0.48	=	4,749,000
Poultry litter	1,115,268,000	*	0.03	*	0.40	=	13,383,000
Cattle, swine	468,509,000	*	0.03	*	0.60	=	<u>8,433,000</u>
							26,565,000

27 million pounds of N were land-applied in 2003 in Virginia but not used by crops. To put this large number in perspective, the Virginia Tributary Strategies claim that Virginia rivers supply 78 million pounds of N to Chesapeake Bay annually. The 2010 Cap Load Allocation for N is 51 million pounds. The goal of reducing 78 million pounds of N discharge to 51 million pounds annually by 2010 could be achieved (78 - 51 = 27) by simply eliminating the land-application of animal waste.

Massive phosphorus pollution is also caused by the land application practice. A recent land application of sewage sludge to 72.4 acres in Northumberland County applied 10,912 pounds of phosphorus. According to soil analyses, Virginia Statute (12VAC5-585-550.A "The applied nitrogen and phosphorous content of biosolids shall be limited to amounts established to support crop growth.") and "Standards" only 1151 pounds of phosphorus should have been applied to 26.5 acres. Nearly 5 tons of phosphorus were thus disposed in the guise of "free fertilizer" and in violation of a Virginia Statute but in accord with current VDH policy. At the same time, 24,770 pounds of nitrogen were disposed when the crop required only 7432 pounds of commercial nitrogen fertilizer. Animal waste is a highly inefficient form of fertilizer and causes massive and unavoidable pollution by both nitrate and phosphate. In the case of municipal sewage sludge, toxins and pharmaceuticals are also added to the soil with unknown long-term consequences, in addition to causing well-documented health problems for some people. Other states are only too glad to rid themselves of sewage sludge because gullible Virginians continue to believe land application is a wise practice. The fertilizer may be

“free” to a few farmers and generate profits for a few special interests, but society pays for it in the form of degraded water quality in our rivers, lakes and Chesapeake Bay. It is relevant that of the roughly 4.3 million acres of farmland in Virginia, less than 10% of the acreage receives animal waste according to nutrient management plans. Most Virginia farmland is obviously farmed profitably without the use of such highly polluting forms of fertilizer.

Other agricultural Best Management Practices that reduce pollution from erosion and fertilization must be mandated. The only equitable way to fund these practices so that farmers, especially the few small farmers that remain, do not shoulder the entire burden, is through taxes. An easily understood “Land-Application of Animal Waste” tax could be calculated based on the commercial value of the nitrogen and phosphorous applied to the land but not utilized by the crop. If a tax such as this were paid to local Soil and Water Conservation Districts, half by the generator and half by the user, the money could be used to fund Best Management Practices within the District. No revenue would ever be collected by the tax as it is defined above because the tax on phosphorus would far exceed the cost of more efficient chemical phosphorus fertilizer, and the tax on nitrogen would be roughly similar to the cost of more efficient chemical nitrogen fertilizer.

The bottom line is that citizens must pay for less polluting agricultural practices and better wastewater treatment in order to improve water quality in Chesapeake Bay. If you fail to mandate immediate and significant changes in agricultural practices and upgrading wastewater treatment facilities, and ensure that the cost is spread equitably, you will have failed. You will also fail if you concentrate on sources of pollution other than agriculture or wastewater treatment facilities, pass the buck to the Federal Government, or advocate slow, complicated and loophole-ridden trading schemes rather than taking immediate action. Voters will watch the results of your efforts closely, as well as the annual size of the “Dead Zone” and the area occupied by SAV.

Yours sincerely,

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Cc: Gov. Warner, Lt. Gov. Kaine, Sen. Bolling, Sec. Tayloe Murphy, Del.-elect Wittman,
Sen. John Warner