



MEMORANDUM

DATE: May 4, 2015

SUBJECT: Bion Responds to Media Attacks from the Chesapeake Bay Foundation and the Pennsylvania Environmental Digest

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The Chesapeake Bay Foundation (CBF) and/or its closely aligned, long-term ally, the Pennsylvania Environmental Digest (PED), have recently issued (or re-circulated) a number of statements intended to derail Pennsylvania Senate Bill 724 - the Watershed Improvement Act. For purposes of this response, Bion will, at times, treat CBF and PED (together with their closely aligned publicist/lobbyists) as if a single entity (while acknowledging their corporate separateness) as PED routinely publishes CBF's statements on matters in a positive, affirming manner and CBF (and its personnel and publicist/lobbyists) regularly reference/tweet/re-communicate items published in PED to their followers/backers and others. This response will use the abbreviations CBF, PED and/or CBF/PED without lengthening this (already long) response by enumerating the specific roles each may have taken with regard to each portion of the items discussed herein.

Several of these CBF/PED statements were directed at Bion Environmental Technologies, Inc. (Bion), thereby prompting this response to clarify the issues for our shareholders and other interested persons and entities. Some of the statements and accusations in these pieces were disingenuous and/or misleading, and many just outright wrong. Rather than respond to every single accusation, Bion will respond in detail to a few of the more significant misstatements.

Bion's response relates to PED's statements regarding 1) Bion's loan with the Pennsylvania Infrastructure Investment Authority (PennVEST), 2) the comparative cost effectiveness of manure waste treatment technologies versus CBF/PED-supported solutions, and 3) an assortment of other topics.

**Bion Response #1**

In statements issued on April [21](#) and [23](#), the PED issued a series of statements/articles related to a \$7.8 million loan from PennVEST to Bion PA1, LLC (PA1), a wholly-owned subsidiary of Bion, for construction of a manure treatment facility for a 2,000 cow dairy in Manheim, PA. These

articles were clearly worded to imply that PED had uncovered information concerning Bion and the PennVEST loan that was material and NOT previously disclosed by Bion. All of the information communicated by CBF/PED in these releases has long (and repeatedly) been publicly disclosed by Bion.

The PennVEST loan to PA1 was the result of initiatives by the PA Department of Environmental Protection (DEP) to demonstrate that manure management technologies could provide large scale nutrient reductions in support of the Commonwealth's Watershed Improvement Plan. PennVEST subsequently financed other manure technology projects which have experienced the same issues of repayment due to the failure of a viable market for long term verified nutrient reduction credits to develop.

Each of these projects funded by PennVEST loans relied to varying degrees on future nutrient credit sales for financial viability. The economics of the PA1 project utilizing Bion's technology was based upon a market for long term verified nitrogen credits in the \$8 to \$10 per pound/year range (as a minimum). All entities involved in this transaction were aware that absent such a market, the project would NOT be economically viable and there would be no revenue stream to repay the PennVEST loan. Bion, PennVEST and the DEP all understood that the risk of the future development of a viable nutrient credit market was "the elephant in the room", and that risk needed to be assumed by either Bion or PennVEST to enable manure technology project to be developed.

PennVEST knowingly assumed the risk related to development of a sufficient verified nutrient credit market and agreed to finance the project. Bion assumed the 'technology risk' and provided a technology guarantee. The project was constructed on time and on budget, placed in service, and the results demonstrated that the technology provided nitrogen reductions sufficient to meet the technology guarantee.

Bion Environmental Technologies, Inc., having met the technology guarantee, has no further legal responsibility for repayment of the PennVEST loan. These are previously publicly disclosed facts. PA1, the borrower, was and is a 'single purpose entity' which was created for the sole purpose of borrowing from PennVEST to construct and operate the project, a common business practice.

In the private sector, corporations routinely negotiate limited guarantees with their lenders to fund and construct projects in subsidiaries, formed specifically for that purpose, referred to as Single Purpose Entities (SPE). These guarantees revolve around the issues of risk assessment and assumption. SPE's are utilized to enable lenders to have clear access to their collateral and to separate financing liability from the parent entity. When a project in an SPE is unable to repay its lender and the lender declares the SPE to be in default, lenders often seek to pressure

parent companies to assume responsibility for SPE loans even though the parent has no legal liability.

PennVEST has declared PA1 to be in default and to date has refused to enter into a loan modification agreement for (as it has done with other manure technology projects) PA1, unless Bion assumes responsibility for the loan or provides disclosures related to Bion's technology in excess of the terms of the loan agreement. These terms are unacceptable to Bion and this was communicated to PennVEST. PennVEST has not responded to PA1's most recent proposals (made during November 2014) for loan modifications. PennVEST recently notified Bion that it was considering placing Bion on the debarred list.

The narrative above summarizes (in a simplified manner) the history and the current state of negotiations between PennVEST, PA1 and Bion.

If and when a sufficient market for long-term nutrient reduction credits or other markets for nutrient reductions develop that will result in economic viability for PA1's project, it will be in the interest of Bion, PA1 and PennVEST to take advantage of that opportunity to resolve these issues. However, no such market exists at this date.

It is important to understand that CBF/PED-sponsored/supported projects, utilizing modeled Best Management Practices (BMPs) to reduce nutrient pollution, have for a decade or longer, been largely financed with grants of up to 100% of project cost – essentially 'free' money from the government and taxpayers without providing any verifiable nutrient reduction performance guarantees. The contrast in real transparency and accountability is stark between the terms of PA1's PennVEST loan and the funding of CBF/PED sponsored/supported projects.

In another release, PED stated **"...there is nothing in Senate Bill 724 that would prohibit Bion from paying back its 2010 \$7.7 million PennVEST loan with new money it received for winning an RFP under the bill administered by PennVEST. So Bion could be in the position of paying PennVEST back with PennVEST's own money."**

This comment is intended to make the reader believe that somehow this would be a bad and/or somehow unfair result. However, this demonstrates either a complete lack of understanding of SB 724, or a total disregard for truthful commentary by CBF/PED. CBF/PED fully understand that in no way will SB 724's competitive bidding awards be funded with PennVEST funds (though PennVEST may be one of the administrators of the program). Any competitive bidding awards to PA1 and others will be the result of a winning bid that offered the lowest cost, verified nutrient reduction solution, benefiting both taxpayers and the Chesapeake Bay watershed ecosystems. Further, SB 724 funds would only be dispersed AFTER reductions are verified by PA DEP. CBF/PED apparently want legislators (and other readers) to believe it would be unethical

to win a public, competitive bid process and then use the proceeds to repay a debt. Would CBF/PED prefer that the repayment of debt to PennVEST be prohibited in such a situation?

Once again it appears that CBF/PED make irrelevant and/or misleading comments that are meant to inflame, confuse and distract, rather than inform.

## **Bion Response #2**

Claims regarding the cost effectiveness of existing and proven BMP solutions promoted by CBF/PED are seriously flawed. Recently EPA Region III issued a [Technical Assessment](#) which determined that modeled BMP were at least 50% less effective than the models claimed. The EPA report recommended that at least a 2 to 1 “uncertainty factor” be applied to these BMP models for the purposes of nutrient credit calculation, to properly reflect their actual effectiveness. The EPA Technical Assessment was followed by a study from the Chesapeake Bay Commission’s [Economics of Trading Advisory Council](#) which supported the EPA’s findings on BMP effectiveness. PA DEP is now requiring a [3 to 1](#) “uncertainty factor” to modeled BMP’s for the purpose of calculating credits.

CBF/PED continues to claim that its “proven” BMP solutions are significantly less expensive than the Pennsylvania Legislative Budget and Finance Committee (LBFC) [report](#) projection of \$8 to \$10 per pound of nitrogen for verified credits from manure technology. CBF/PED proclaim that in the latest PA nutrient credit trading auction, credits were offered at less than \$2.50 per lb of nitrogen. **The comparison is disingenuous at best.** The manure technology credits are verified and the pricing includes no taxpayer subsidy. The CBF/PED credits are modeled and the BMPs are heavily subsidized with grant funding that does not require repayment. A proper comparison would need to take into account the following:

- Grant dollars provided to the BMP. The BMP cost would need to be increased to the extent of the debt service required to replace these public grant dollars with a loan requiring repayment.
- The credits are modeled, so they would need to be reduced by two thirds under the present DEP trading guidelines recently adopted. The volume and pricing of the credits would need to be adjusted to properly reflect the “uncertainty factor”.

Clearly, \$2.50 would quickly increase to \$10 or greater if subject to such scrutiny.

Additional major factors are ignored in the CBF/PED pronouncements regarding cost effectiveness. Manure technology projects, such as Bion has/will develop, are deployed by large scale livestock producers and generate long term verified nutrient reductions in large amounts. These projects will also produce a number of ‘uncompensated benefits’ to the local freshwater resources of significant positive environmental and economic value that are essentially ‘free’.

For example, Bion's Kreider Farms projects, including Phase 2 which has not yet been developed, will capture approximately one million pounds of phosphorous. Less than 10% of that total would have made it to the Chesapeake Bay, and therefore be eligible for verified nutrient credits. The capture of the remaining 900,000 (or more) pounds of phosphorus will have significant beneficial impacts on nearby Chiques Creek, which has been on the phosphorus-impaired list since 1996. Nitrogen reductions and capture from the same project will be approximately seven million pounds, of which it is estimated that a maximum of 25% will result in Chesapeake Bay verified nutrient credits. As with phosphorus, the 'additional' nitrogen reductions will significantly reduce the environmental impact to local surface and groundwater resources. These nutrient reductions to local fresh water resources, which could be provided 'free' from projects selected under a SB 724 competitive bidding program, will provide incidental environmental benefits that may be as large (or larger) than the benefits to the Chesapeake Bay.

In summary, these large scale manure technology projects will provide low cost verified reductions in quantities that the Commonwealth requires in order to meet its Chesapeake Bay compliance mandates, as well as add potentially greater local environmental benefits.

Bion has and continues to advocate that these ancillary local fresh water benefits be valued in any competitive bidding program, to properly reflect their overall economic value to the taxpayers of the Commonwealth. These benefits include avoidance of future costs from reduced nitrates in drinking water, reduced pathogens and public health improvements, as well as increases in local real estate values and water-related recreational activities, such as fishing. These 'upstream' benefits are not achieved when downstream municipal wastewater treatment plants are upgraded to further reduce nutrient discharges. BMP's provide similar local freshwater benefits and also would be positively impacted by valuing local fresh water benefits in the bid process.

The issue of cost effectiveness is a red herring raised by CBF/PED. SB 724 advocates a competitive bidding program limited to verified reductions. The most cost effective solutions will be selected using a transparent and consistent evaluation methodology. If manure technologies are not cost effective, they will not be selected.

### **Bion Response #3**

CBF/PED's disingenuous strategy is underscored by PED's [latest re-circulated communication](#) (from PA Environmental Council), dated May 1, 2015, that concludes, "Senate Bill 724 would promote unproductive practices at significant potential cost..." Under SB 724, the 'significant potential cost' of such practices, as well as the associated risks, will be borne by the developer of the practices. **The cost to the public will be that which has been determined by a**

**competitive bidding program to be the lowest available. Further, since all reductions will have to be verified, the public will no longer have to pay for ‘unproductive practices’.** This item echoes the repeated inaccurate characterization of this central issue by CBF/PED over the last weeks and represents either a complete lack of understanding of the bill and its potential benefits for PA’s taxpayers, or a disregard for the facts regarding SB 724.

On April 20, CBF/PED released a [statement](#) through the PA Environmental Digest with a summary at the end of the release. Bion responds to those summary statements below.

### “Let’s Summarize

Senate Bill 724 would--

- 1. Squeeze Out Small Farmers With Much Cheaper Solutions:** Designs an RFP process favoring capital-intensive, high-cost technology to deliver pollution reductions, while squeezing out small farmers who want to install conservation practices. Would thousands of individual farmers, with much less expensive options, put in a bid in response to this RFP?

***Bion Response:** SB 724 does not ‘favor’ any particular solution, nor does it ‘squeeze out’ the small farmer. In fact, the bill would create the opportunity for anyone to produce reductions, by recognizing and funding those solutions that are cost-effective. The better question is why wouldn’t “thousands of individual farmers, with much less expensive options, put in a bid in response to this RFP?”*

*Bion, recognizing that to meet PA’s targets, agricultural reductions will have to come from ALL sources, has advocated a carve-out for small farmers to participate in winning bids. Also, by significantly reducing the cost of compliance with EPA mandates, more tax dollars will be available to support the small farmers in their efforts to first and foremost achieve baseline compliance, with nutrient credit reductions to follow. BMP’s must remain a part of an overall strategy.*

*CBF/PED does not mention that continued failure from the agricultural sector will result in very expensive stormwater mandates from EPA. Per the LBFC study, nitrogen reductions achieved through stormwater treatment are projected to cost an average of \$386 per pound annually. Again, Bion and other manure control technology can produce equivalent reductions for less than \$10 per pound.*

- 2. Not Address A Huge Part Of The Problem:** Manure treatment technology leaves 86% of the nitrogen problem (manure only accounts for 16% of the nitrogen) and none of the

328 million pounds of sediment reduction problem needs solved to meet the 2017 milestone.

**Bion Response:** *The Commonwealth's Watershed Implementation Plan (WIP) required that 25 million of the 35 million pounds of nitrogen reduction to the Chesapeake Bay was to be provided from agricultural sources, with manure being the single largest component. Bion and other manure treatment technology projects were funded in part to enable the DEP to demonstrate that manure technologies were in existence and could provide the reductions necessary to support the WIP.*

*EPA's recent comments to the DEP were focused on the failure of agricultural reductions as the prime factor in the Commonwealth's default on its nitrogen reduction targets. In fact, CBF published a [report](#) on the challenges of manure's contribution to the Chesapeake Bay challenges, stating that:*

- *"Since many fields where manure is traditionally applied are already saturated with nutrients, governments and industry should initiate and develop incentives for new technologies that show potential for innovative uses of manure."*
- *"This makes animal manure not only the largest source of nitrogen and phosphorus deposited on the land, but also the second largest source that reaches the Bay, behind sewage, which is deposited directly into the water. Animal manure is a major source of the Bay's pollution and must be addressed swiftly and comprehensively."*
- *"Similar to impacts in Bay waters, excess manure nutrients often exceed local waterways' capacity to absorb them, with devastating results."*

*As for CBF/PED's 'new' position that manure only accounts for 16% of the Bay problem, we point out that the Bion and Energy Works (another entity which received PennVEST and other loans) manure technology projects, combined, will reduce in excess of 12 million pounds of nitrogen to the local environment. Further, sixteen percent is not representative as an overall percentage of nitrogen contribution from manure on a comprehensive basis. As for sediment reductions, manure technologies significantly reduce the solids loading to the land, therefore reducing runoff.*

- 3. Manure Technology Doesn't Count:** Manure treatment technology is not a U.S. EPA approved practice and there is no timeline for approval, as a result it does not count toward Pennsylvania's Chesapeake Bay cleanup milestones.

**Bion Response:** Any approach that can produce verified nutrient reductions will be acceptable for verification and Bay modeling purposes. Bion and other manure technology providers have worked closely with the Manure Treatment Technology Panel on this topic for some time. **This is a non-issue.**

- 4. Stakeholders Found The Bill Was Not A Useful Tool:** The consensus of a broadly representative stakeholders group found the legislation added complexity to all already complex Chesapeake Bay cleanup program and manure technology only dealt with a portion of the problem Pennsylvania faces and not in the timeframe we need to face it.

**Bion Response:** It was 'found to not be a useful tool' by those stakeholders who are aligned with CBF/PED's current approach of maintaining the existing system. The issue is whether or not it would reduce cost, and LBFC determined it would significantly reduce costs.

- 5. Much Cheaper Alternatives Count Now:** Other, much cheaper, accepted practices are available and are being implement at some level that deal effectively with the manure issue.

**Bion Response:** BMP's are being implemented and are dealing effectively with manure in certain instances. That being said, are those practices in those locations the most cost effective nutrient reductions available today to meet the sizable mandate? SB 724's competitive bidding program, limited to verified nutrient credits, is designed to select the most cost effective solution at the present time. Since Pennsylvania is presently in default with EPA nutrient discharge limits, it needs to focus on selecting the most cost effective solutions to cure this default or it could face dire economic consequences, per the [Auditor General's report](#). BMP's, such as those favored by CBF/PED, will be eligible to participate in the bidding program to the extent that the new trading baseline determines their credits are verified.

- 6. Unfunded Mandate:** There is no funding provided. Does Pennsylvania really need another unfunded mandate?

**Bion Response:** No. The LBFC study has determined that Pennsylvania is already on a course to spend as much as five (5) times too much (that's what a potential 80% savings means) on compliance with the Chesapeake Bay nutrient reduction mandate, if the current approach is not replaced with a transparent competitive bidding process. The existing approach has a number of taxpayer funding sources that can be reallocated to more cost effective solutions. SB 724 initially focuses on public authorities, with provisions to demonstrate benefits with specific focus on the looming stormwater reduction mandates. SB 724 requires the DEP to provide increased fiscal oversight for the

*costs of solutions proposed by public NPDES permittees to meet their Chesapeake Bay compliance mandate versus the cost of alternatives such as verified nutrient credits resulting from SB 724's competitive bidding program. This fiduciary oversight will make the overall use of public dollars more accountable.*

**CBF/PED:** “Manure treatment technology may have a role to play, but circumstances are limited by scale, cost and on-going maintenance and management issues. As Auditor General Eugene DePasquale reported April 10 there is no silver bullet.”

**Bion Response:** *Whether manure treatment technologies will have a role to play will be a function of cost, as determined by an unbiased competitive bidding program. And Bion agrees there is no silver bullet technology or solution as stated by the AG. However, there is a ‘silver bullet’ strategy---follow the LBFC recommendations and dismantle sector allocation and implement a transparent competitive bidding program limited to verified nutrient reductions.*

**CBF/PED:** “Let’s see, low-tech, low-cost solutions that work and count now toward our Chesapeake Bay cleanup milestones... “

**Bion Response:** *Existing BMP’s have been proven to be inadequate to meet PA’s Chesapeake Bay requirements which are large and require immediate attention. The EPA Region 3 and Chesapeake Bay Commission studies referenced and linked above have stated that their actual nutrient reductions are 50% (or less) than advertised. EPA recommended a 50% uncertainty factor to properly reflect their actual reductions and PA DEP recently increased that to 3 to 1 for its trading program.*

**CBF/PED continued:** “...or building a complex manure treatment system that requires trucking manure to a central facility, people to operate, maintenance and upkeep and has a limited lifespan?”

**Bion Response:** *There are several inaccurate assumptions set forth in this statement regarding the effects of trucking (e.g. where needed – the Bion Kreider Dairy facility involves no trucking at all) and other items – except one. If SB 724 reduces cost to the taxpayer by up to 80% (these costs include the costs of operation, maintenance, and upkeep incurred by the project developers) and provides employment and massive local watershed benefits as well, why would that be a bad thing?*

*As for Bion facilities, there is not a ‘limited lifespan’ as implied. As with any technology solution or manufacturing process, routine maintenance and equipment replacement costs are factored in to the price of reductions.*

**CBF/PED:** “Which would you choose?”

***Bion Response:*** CBF/PED wants the Commonwealth's taxpayers/citizens to choose to continue (and enlarge) the current, failed status quo approach that has spent hundreds of millions of your tax dollars, has never performed as advertised and has resulted in default, rather than adopt SB 724's transparent alternative, based on investment funded by private companies and individuals, and payments based solely on verified performance. Why?