

Testimony in opposition of Council Bill 52-2015 – Betsy McMillion 1/19/16

My name is Betsy McMillion. I live at 6759 Athol Avenue, in Elkridge, Maryland and have lived, worked and played in the lower Patapsco River watershed area since 1986.

I am opposed to Council Bill 52-2015, which reduces the rates of the current Watershed Protection and Restoration Fee.

I am one of only a few folks in this room who have physically walked many of the stream and river sections in the lower Patapsco River watershed area and can give you first-hand accounts of the problems with our waterways.

Since 2005, I have the honor to set up and run a volunteer stream watch program for the lower Patapsco River watershed for the Patapsco Heritage Greenway who will be testifying tonight for our organization. We recruit, train and work with volunteers to monitor local stream and river sections. Our volunteers pick up litter and report any observed problems which we report to local officials.

We have made a difference in recruiting over 100 volunteers to monitor waterways in this watershed, removed over 453 tons of junk and trash from the waterways, removed over 13 tons of invasive plants and conducted over 100 free watershed workshops to local citizens. But there is still much work to be done. Volunteers can only do so much.

My concern is that the needed funding for restoration/construction projects that will improve Howard County's existing storm water infrastructure and a much needed storm water public education campaign for both businesses and residents, will be put on the back burner once again. It took years for the environmental community to prove and convince our local officials of the problems facing our waterways and to fund projects that would help improve not only Howard County's local waterways, but the Chesapeake Bay as well.

Please do not support Council Bill 52-2015. Thank you for your support.



HOWARD COUNTY ENVIRONMENTAL SUSTAINABILITY BOARD
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■

Ned Tillman, Chair

http://www.howardcountymd.gov/OES/OES_Board.htm

Testimony by the Howard County Environmental Sustainability Board on CB52 - 2015

January 19th, 2016 - The creation and funding of a stormwater utility was one of the main recommendations of the 2007 Howard County Environmental Sustainability Commission. The Howard County Environmental Sustainability Board (ESB) was created in 2008 to advise the County Council and the Executive on how to balance economic, social, and environmental interests on major initiatives such as stormwater management. The Board is made up of technical experts, business people, and concerned citizens. Stormwater has been one of the major topics evaluated over the past 8 years. This Board offered testimony in 2013 in support of creating the utility and in favor of dedicated funding for this utility. We have now had the opportunity to watch over the past few years as the public education on and implementation of the utility have gotten underway. Prior to the fee and our new stormwater regulations, few organizations were following best practices. Since we passed the fee the county has been making significant progress in this regard. If anything it may need to strengthen its efforts to meet our society's needs.

With respect to CB52, we have the following three concerns:

1. **Dedicated Funding** – As we do for other essential public services, such as drinking water, sewage disposal, and trash removal, Howard County, like hundreds of jurisdictions across the country, has set up a dedicated source of ongoing funding via a stormwater utility fee (watershed protection fee). This helps to ensure that the work is done. We are concerned that the work will not get done in a timely and efficient manner without this fee. We are concerned that other essential needs will not be funded if stormwater costs come out of the general fund to meet these state and federally mandated actions. In the proposed Financial Assurance Plan, we are concerned that money will be taken from the Agricultural Preservation Fund.
2. **Social Fairness** – Our environmental regulations have been built over the past 50 years on the concept of the polluter pays. Yes, we all contribute to the polluting of our stormwaters. But there are some organizations that pollute far more than others. The current watershed protection fee was constructed to be as fair as possible. The proposed bill burdens the average tax payer unfairly and gives relief to the largest polluters.
3. **Economic Incentives** –The county government cannot achieve its stormwater management goals without the engagement and actions of the public. Much of the restoration will have to be done on private residential, commercial, and nonprofit property. This will require effective incentives and education to inspire each of these sectors to act. How can this be done if there is no fee or credit incentive for the largest polluters to act?

The Board recognizes that the current watershed protection fee is imperfect and may benefit from changes, such as addressing the effect on commercial leases. We are ready to support the Administration and County Council in their deliberations. In conclusion, the board is concerned that the proposed change in the funding source for watershed protection will disrupt the progress currently being made not only to meet Clean Water Act requirements, but to reduce flooding, improve our water quality, and protect our critical green infrastructure that makes Howard County a safe and healthy place to live.

Respectfully submitted,

Ned Tillman

Ned Tillman, Chair, Cathy Hudson, Vice Chair, Sherman Howell, Sandi Olek, Olivia Farrow, Chein-Chi Chang, Betsy Singer, Georgia Eacker, Mark Southerland, Ed Wilson, Tom Paxton, John Dove, Catherine Strawley, Student Rep

Testimony in opposition to CB 52-2015

Presented by Nancy Fayer

January 19, 2016

Good Evening and Thank you for this opportunity to testify. I am a member of the Watershed Steward Academy of Howard County.

POSITION: Please do not repeal of the Watershed Protection fee. Repeal the fee and taking funds from the general budget suggests that:

- 1) very important watershed protection work may not get done and
- 2) that fund will be cut from other County services programs, particularly services to the elderly and to populations in need.

THANK You COUNCIL MEMBERS for your wisdom and foresight in passing the **Watershed Protection and Restoration fee**, You made possible the installation of many successful stormwater management projects in the County, so we care for and protect our stream, lakes, and the land around them.

STORM WATER MANAGEMENT WORKS:

- 1) I am particularly familiar with how two stormwater problems were solved at First Presbyterian Church. The first was a problem of water flooding the church basement which was caused by two broken drain pipes under the church. The problem was completely solved by channeling the water from the 5,000 sq. ft. roof into a large rain garden, which was built by the Howard County READY program.
- 2) The second storm water management solution was the **installation of a conservation landscaping garden**, working in tandem with dry creek beds, to slow the flow of storm water and pollutants off a 13,000 sq. foot parking lot. , which is 19,000 gallons during a 1 inch rain, and to infiltrate the water into the soil before it runs into a nearby creek, and eventually into the Chesapeake Bay. **Storm water management works, we know what needs to be done and how to do it.**

LET'S ALSO LOOK TO THE FUTURE:

Will you consider the projections are that the **need for storm management** is going to increase, not decrease, particularly in our region of the country? As storm water events increase, the cost to repair and mitigate them will increase, not decrease.

Storm water event are going to increase in Howard County and throughout the entire Northeast area. The most recent **Climate Change Impacts Highlight** compiled by the 13 U.S Government agencies that deal with climate, reports as a Key message that:

“Heat waves, coastal flooding, and river flooding will pose a growing challenge to our region’s environmental, social and economic systems. This will increase the vulnerability of the region’s residents, (you and me), but especially our most disadvantaged populations.

I love lakes and streams in Howard County. They make life better, calm our stress and make our world more beautiful. **We need to take care of them. We must take care of them**

Thank you

Date: 19 January 2016

Subject: Howard County Citizens Association Supports CB52

The Howard County Citizens Association, HCCA supports CB52 and commends the County Executive and Councilman Fox for introducing this Bill. From what we see, this Bill in no way decreases the focus of attempting to protect one of our most precious commodities the Chesapeake Bay. It does not take away the goal of watershed protection.

Too often we have a tendency to be ready to criticize and sometimes this is because of politics. This Bill is not about the Democrats, the Republicans, Independents or any other party affiliation. It is simply about doing the right thing. We need to trust our elected officials for attempting to act on a measure that is beneficial while at the same time not harmful to the environment.

We are especially optimistic when one reads the contents of the Bill on page 1, lines 8 thru 25 that the intent is not harmful to one's health. When one reads the contents it is indeed very encouraging and well drafted as it states the following:

WHEREAS, the County has a plan to maintain funding for the Watershed Protection and Restoration program and is able to continue to finance the stormwater remediation work required under our federally mandated National Pollution Discharge Elimination System ("NPDES") Municipal Separate Storm Sewer System ("MS4") Permit (the "Permit"); and

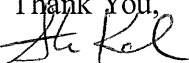
WHEREAS, the County will continue to implement the numerous programs required by the Permit, including the development of restoration plans that will identify projects to treat untreated impervious acreage; and

WHEREAS, the County Executive believes that the Watershed Protection and Restoration Fee, as enacted by the County Council through passage of Council Bill No. 8-2013, is an excessive burden on the residents and businesses, especially small businesses, of Howard County; and

WHEREAS, the County Executive is confident that the County will continue to exercise fiscal prudence in selecting projects to pursue, as well as utilize innovative practices, in an overarching strategy to address requirements that the federally mandated Permit has on the County.

HCCA is encouraged when looking at page 3 of the Bill because it clearly states the Watershed Protection and Restoration Fund shall only be used for its sole purpose of ensuring only this subject is covered. So it is essentially no harm – no foul.

We are further encouraged because the rates currently being paid by both residents and businesses will be decreased. We should trust the Watershed Protection Act that it will not deteriorate because of the passing of this Bill. It is only controversial if you make it that way! HCCA is hopeful and sees no reason why the County Council should not pass this Bill. We are asking for you to work as a team in full cooperation to do the right thing and pass this well thought out Bill.

Thank You,

Stu Kohn
HCCA, President

January 19, 2016

Re: CB 52-2015 Watershed Protection and Restoration Fee

Chairman Ball and members of the County Council:

I support the Watershed Protection and Restoration fee and oppose CB 52.

My home on a half-acre has Watershed Protection annual fee of \$45. The fee is the equivalent of two 3 D tickets to Star Wars, popcorn and 2 drinks. It is not an excessive burden.

Howard County has at the moment 19,000 acres of rooftops, driveways, roads and parking lots.

Howard County has 757 miles of streams. Howard County has 750 miles of pipes and swales that transport storm water to our local streams.

Over 250 residents have become active users of a free app Stream Mapper and are providing information about streams near their homes.

We have reimbursed 135 residential property owners for stormwater mitigation projects on their properties in the past two years.

Howard County has spent \$4.8 million on watershed and restoration efforts in both the Patapsco River and the Patuxant River Watersheds. These projects have included stream restorations, bioretention projects, tree plantings, permeable pavements, underground storage and filters, and a parking lot in Ellicott City.

The mitigation work has enhanced the work of independent contractors and provided work and skill learning opportunities for Howard County youth.

It is clear that we need to do much more to attain the requirements of the Federally mandated Permit targeted at reducing Pollution Discharge.

Critical to the establishment of the Watershed Protection and restoration Fund was that Howard County established it as a dedicated non-lapsing Enterprise Fund. With a list of specific uses the fund can be used for. The first priority of expenditure is to pay the debt service on bonds, notes and other obligations issued to finance or refinance capital improvements and expenses related to stormwater management systems and facilities.

CB52-2015 eliminates the fee and the funding mechanism. What will happen in the future is that stormwater systems and facilities will compete with other County capital projects like libraries, fire stations, public schools, bridges, Community College buildings and impact the County Bond debt.

Howard County needs to focus and change the impediments that currently are not attracting large non- residential entities to participate, retrofit and minimize the effects of the impervious surfaces existing on their property.

The County Council and the Administration should amend CB 52 to provide proposed incentives for non- residential properties.

Thank you for listening.



**Grace Kubofcik
4801 Carman Drive
Ellicott City, MD 21043**

Chairman Ball and Members of the County Council:

My name is Erin Oliver and I am Action Chair for the League of Women Voters of Howard County. I am here tonight to express the League of Women Voter's concern about 52-2015. This Act would reduce the Watershed Protection and Restoration Fee until it is eliminated in 2018. Our watershed needs to be protected and funded. With the elimination of the fee and without a designated source of funding, it is unclear what will be the funding source to maintain the watershed. Just stating that the fund will come from the general fund does not quiet our concerns.

We want to ensure that a funding source is designated to fund the watershed restoration as stated under the current law. If this bill passes, funding for the watershed will come from the General Fund and Howard County Executive Alan Kittleman has not expressed what will be the trade off from funding from the general fund instead of having a designated funding source through the designated Watershed Protection and Restoration Fee.

Without more clarification and a dedicated funding source, we ask the Council to not vote for 52-2015.

Sincerely,

A handwritten signature in black ink, appearing to read 'Erin Oliver', with a large, stylized initial 'E' and a long horizontal stroke at the end.

Erin Oliver, January 19, 2016

Action Chair

League of Women Voters of Howard County

January 19, 2016

Thomas J. Kasuba
2917 Rosemar Drive
Ellicott City, MD 21043-3332
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301-688-8543 (day)

SUBJECT: Please SUPPORT CB52-2015 Watershed Protection and Restoration Fee

It wasn't until I tried to get reimbursement for some storm water remediation when I realized that the "rain tax" wasn't really about Green but was about green (\$ that is). I did the paper chase and ran the gauntlet of bureaucracy to show that I installed a rain barrel to catch run off from my roof. Well, apparently that wasn't enough and I was told what it would take to get any money back. That would have involved putting 9 rain barrels on a house that only has 6 downspouts. Therefore, I gave up; told my friends and they gave up too.

Can someone think of a greater waste of human skills and potential than the created bureaucracy that I experienced? Taxpayer dollars paying a county employee to administer a meaningless set of arbitrary rules that I found were mostly meant to force the paying county resident to just give up. Is that how we use the talents of our county employees? What is their life accomplishments given these arbitrary rule enforcement for a tax that most counties have now rejected? What about their quest for meaningful accomplishments and a fulfilling life? Can't their skills be applied to something that actually does something rather than serving this paper shuffle? It seems to be a classic "one employee digs a hole, another fills it while a third completes paperwork showing how much dirt was moved." Terminating this program based only upon the elimination of menial paperwork seems justification enough.

Have you experienced the embarrassment of out of state people (and family) mocking Maryland for having a "rain tax"? I have. What do you say except shaking your low hung head and hoping that it will one day go away because the mockery sure isn't. You now have the chance to put this all behind us, have our county employees focus on meaningful tasks, and restore our state's honor. Please support CB52-2015.



Thomas Kasuba

Good evening, I am John McCoy; I live at 11965 Simpson Rd in Clarksville and work for the Columbia Association as their Watershed Manager. I am a member of the Patuxent River Commission and am a member of the Board of Directors of the Middle Patuxent Environmental Foundation. I am here representing myself this evening.

I oppose Council Bill 52-2015.

The Watershed Restoration fee for my property was \$210. I have implemented my Soil Conservation and Water Quality Plan and my fee was reduced to \$90. I do not find this to be a burden.

The County's plan to maintain funding for the Watershed Protection and Restoration Program is vague. Most of the County is in a low priority funding area for the State's Chesapeake and Coastal Bays Trust Fund, which has been the County's source for big ticket restoration grants. Using the transfer tax would require State legislative approval. Competing for General Funds with Education and Public Safety will be difficult given the County's priority on Education and Public Safety.

County staff has repeatedly stated that the permit requirements for stormwater management cannot be met on public property alone. The Watershed Restoration Fee provides an incentive for property owners to address the stormwater generated from their properties. Repealing the fee sends a clear message to property owners that stormwater management is not a priority. Repealing the fee also removes any vestige of fairness in funding stormwater management. Instead of paying for stormwater management based on impervious surface or lot size, we will pay through our county taxes and fees that support the general fund and again when we pay for debt service on bonds used to fund stormwater projects.

I believe that stormwater management is a shared responsibility between the public and private sectors. I ask you to keep the private sector involved and vote against Council Bill 52-2015.

Thank You

Good evening Dr. Ball and members of the Council. My name is Paul Lemle, and I am here tonight on behalf of the Howard County Education Association's five thousand-plus educators. My main points are simple, and I'll be very brief:

- The Storm water fee is good public policy.
- The fee is necessary revenue.
- All revenue is important given the increasing enrollment of our schools.

The Chesapeake Bay is both a natural treasure and an economic engine for our area. It's good public policy to protect it. This, of course, takes political will, and it takes investment.

Regarding revenue, the most recent Spending Affordability committee (FY16) wrote, "*The Committee recommends that the County not remove the Storm Water Remediation Fee prior to establishment of an alternative fee structure. Otherwise, those mandated costs would further stress the General Fund budget by approximately \$10 million.*" The Association agrees, and we've got about 55,000 reasons why—our students. We can not recall any period of declining enrollment in this school system, and true to form, we expect over one thousand new students next year. The Board of Education's budget request represents a significant and necessary increase in funding to support continued enrollment growth its attendant costs.

As you are probably aware, HCPSS' economic impact extends far beyond the students we prepare for a challenging world. According to the recent Sage Policy Group report, over \$16,000 of the median home price in Howard County is directly attributable to the quality of public schools. It's both the biggest employer and the biggest job creator, with over 2,000 jobs created by over \$275M in increased consumer spending driven by the outstanding performance of our students and teachers. (See: <http://www.hcpss.org/f/aboutus/sage-report.pdf>)

It would be a tremendous disappointment to see the County Executive cut revenue now, and then argue that full education funding isn't possible.

Finally, as a teacher, I would not use the intellectually dishonest term "rain tax" with my students. It is misleading and unnecessarily divisive. It fosters misunderstanding among taxpayers about what the storm water remediation fee is, and what it does. That's not good governance, and educators expect a high level of responsiveness and discourse from the officials who represent us.

Thank you.

Paul Lemle, HCEA president

From the FY16 Spending Affordability Committee Report
(<http://www.howardcountymd.gov/departments.aspx?ID=499>):

The Committee recommends that the County not remove the Storm Water Remediation Fee prior to establishment of an alternative fee structure. Otherwise, those mandated costs would further stress the General Fund budget by approximately \$10 million. Where it correlates with the priorities established by the Office of Sustainability, the County needs to ensure that the revenues are used for capital projects that would otherwise be bond funded. Another thought might be to use the fees as a revenue source for bonds issued specifically for storm drainage capital projects using the fees to leverage the debt.

- *Property Tax: Property tax is the number one revenue source of the County and contributes nearly half of our total General Fund revenue. An increase of 1 cent of County real property tax rate equates to \$4.5 million of revenue annually. While the impact of*

any increase in the property tax must be considered carefully the Committee recommends that it remain on the table given the magnitude of potential new revenue capacity generated by raising this tax by one cent or two.

January 19, 2016

Testimony on Council Bill 52-2015 to Repeal the Watershed Protection and Restoration Fee

Good evening County Council Chair Ball and Council members.

I am here to testify on behalf of my own business in favor of Council Bill 52-2015 to repeal the Watershed Protection and Restoration Fee, but I would like to begin my testimony by expressing support for the intent of the Fee, which is to provide a funding source for Howard County's contribution toward cleaning up the Chesapeake Bay.

I favor repeal of the Fee for the following reasons:

1. The Fee as currently structured places an inequitable burden on commercial property owners. My company owns a 730,000 warehouse in Jessup which I will use to illustrate this point. The County Property taxes on this property are \$320,000, and the Watershed Protection Fee is \$62,000. The Fee amounts to almost a 20% surcharge on top of our property taxes. This fee is the equivalent to the fee paid by 688 large homes, 1,377 average size homes, or 4,130 townhouses. At an average of 2,500 sf of impervious surface for each average size residential property, those same 1,377 residential units would generate 67% more impervious surface than the commercial property used in this example while paying the same total Fee.
2. As a commercial property owner, I must compete with surrounding jurisdictions to attract and retain the tenants. Property in Howard County is already more expensive than in most surrounding jurisdictions, and retaining the Fee in Howard County while many surrounding jurisdictions have eliminated it, puts Howard County at a competitive disadvantage. In the example mentioned above, the Fee adds over \$.08 psf to the occupancy costs. For warehouse users who are paying rents averaging \$4-5 psf, every penny counts. The \$62,000 fee could be the difference in adding or eliminating a job.
3. The fee can result in a loss in property value. If over time I must lower rents to make up for the Fee charged in Howard County, my Net Operating Income could be reduced by \$62,000. At a cap rate of 6-7% for Class A industrial properties, the loss in value is approximately \$1 million. Even if I only have to absorb the Fee on the vacant space, there is still a reduction in NOI and loss in value.

In summary, I ask that you vote for CB 52-2015 to repeal the Watershed Protection and Restoration Fee because the Fee places an inequitable burden on employers, places Howard County as a competitive disadvantage in attracting and retaining employers, and the Fee results in a loss in value for commercial properties.

Thank you

Cole Schnorf

1/19/16 testimony on county council bill 52-2015

My name is Pete Mangione and my family owns and operates Turf Valley Resort here in Ellicott City. I am here to testify in support of county council bill 52-2015 which would amend the existing Watershed and Protection Fee and actually phase it out over the next 2 years. To me this is another tax or fee being put on business because many people seem to think that we can absorb it and the simple fact is, we can't. I am sure this is contrary to public opinion, but our business is one that operates on small margins as we have a tremendous amount of overhead for a property the size of Turf Valley. I know many of you have attended events at Turf Valley and on many nights we are very busy where one has to think this place has to be very profitable and while that happens most Saturdays in season and maybe another day of the week that comes to 100 days a year leaving 265 days where there may not necessarily be a lot going on. And while I'd prefer not to share our financial information publicly here now I'd be happy to provide it to you separately and discuss it with you further in a separate meeting. The fact is we cannot continue to take on another additional expense. Last year the minimum wage increase cost my company an additional \$67,000. I understand that is the law and a business expense we have to deal with and we have and will continue to do so but we have had to reduce positions because of it. This year the state delegation will again bring back discussion on mandated sick pay which if passed would be extremely costly to my business. I currently pay employees 3 paid sick days per year in addition to their earned vacation, the proposed 8 sick days being discussed would be extremely costly. These continued expenses will drive many businesses out of business. My point is there is a public perception that businesses are so profitable that we can keep charging these fees to them and I just want to say that is not always the case. Passing these fees onto the customers is not always an option for a business that is already so price competitive. And while it certainly doesn't apply to Turf Valley's case now because we are already here but if I was a prospective business owner looking to relocate my business I would have to take into consideration these type of fees that put Howard county at a competitive disadvantage over some of our neighboring counties. I believe we want to create jobs, not discourage them.

In closing, I have worked at Turf Valley for 32 years and I am not afraid of hard work. It is a challenging business, every day is different and we deal with all the issues that can come up and the only thing that concerns me in the future as I look down the road are continued anti-business measures that one day will make my business unsustainable for my family.

Thank you for your time and consideration.

Pete Mangione
2700 Turf Valley Road
Ellicott City, Md 21042

TESTIMONY IN SUPPORT OF COUNCIL BILL 52-2015
Jeff Agnor, Chair Elect, Howard County of Commerce
January 19, 2016

Council Chair Ball and members of the Howard County Council:

I am pleased to testify on behalf of the Howard County Chamber of Commerce in support of Council Bill 52-2015. Let me say up front that, like you, the Chamber is concerned about the future health of the Chesapeake Bay, and we recognize the vital importance of remediating the environmental impact from storm water runoff. We are also aware that the County must comply with specific storm water management and remediation mandates under the MS4 Permit issued to the County in accordance with the Clean Water Act. This is not a question of whether or not the County should expend the funds necessary in order to comply with these mandates. Rather, in our view, this is an issue of how to fairly distribute the fiscal burden of meeting those obligations.

The original expectation was that the Watershed Protection and Restoration Fee would be proportionately spread among the County's residential, commercial and agricultural users. As it turns out, however, commercial enterprises have borne the brunt of this fee. The current fee assessment places a disproportionately greater burden on employers, and particularly small businesses. You are hearing testimony tonight from property owners whose fees are as high as 20% of their entire property tax bills, while residential property owners pay a relatively low flat fee based on the type or size of the property, and governmental entities are exempt altogether.

In addition to the issue of fiscal fairness, this fee places Howard County at a competitive disadvantage with our neighbors. Frederick County, Carroll County and Harford County do not have stormwater fees. In November of last year, the Baltimore County Council voted unanimously to revoke its stormwater fee over the next two years. In the high stakes game of economic development and business recruitment and retention, exorbitant fees or high tax rates can be the determining factor as to whether or not an employer locates, expands, or even remains in our county.

Elimination of the stormwater fee will not in any way reduce the County's obligation to comply with its storm water management and remediation obligations under the Clean Water Act. Passage of CB 52-2015 will, however, enable the County to do its part in preserving the Chesapeake Bay in a fair manner which does not disproportionately burden employers and small businesses.

Thank you for your consideration of our position.



Howard County Council
George Howard Building
3430 Court House Drive
Ellicott City, MD 21043

January 19, 2016

Re: CB52-2015 Amending and Abrogating the Watershed Protection and Restoration Fee

Dear Members of the Howard County Council,

The Sierra Club is concerned that the proposed bill CB52-2015 will undermine the County's watershed restoration program and interfere with the County's ability to comply with the Municipal Separate Storm Sewer System (MS4) Permit.

The bill removes the dedicated funding for watershed protection, while not providing a clear alternative source of funding. Furthermore, by removing the fee and therefore the associated credit system, the bill would remove the only incentive that the County currently employs for implementing projects on private property.

To save your time and avoid redundancy, the Sierra Club requests that you review the testimony regarding this bill that was submitted by the Chesapeake Bay Foundation (CBF), dated December 17, 2015. The Sierra Club believes that the CBF testimony clearly states our arguments against CB52-2015.

The Sierra Club asks that you reject CB52-2015, and that you also reject any future legislation which removes the fee without providing similar or better funding and incentives.

Ken Clark
Chair, Sierra Club Howard County Group
9515 Red Rain Path, Columbia MD 21046
kenclark7@live.com

Rain Tax Repeal Bill Testimony

My name is Corey Andrews, I reside at 6166 Hooks Lane, Elkridge, Maryland 21075.

I am here today to speak against the bill to repeal the watershed protection and restoration fee, commonly but wrongly referred to as the "rain tax." The rain is not being taxed, polluted runoff into the bay is.

The Chesapeake Bay and its watershed have had problems with pollution for a long time, and they've consistently gotten worse. This storm-water remediation fee is a step in the right direction in cleaning up the Bay. The funds raised from the fee are used for programs to do so. If we pollute the bay, we have a responsibility and financial obligation to clean it up.

The Bay is in danger and those supporting this repeal may not realize that doing so will further hamper our ability to protect one of Maryland's most important natural resources. A vote to repeal this bill is a vote to further damage the natural eco-system of the bay, including crab populations. A vote to repeal this bill is denying that the situation in the Chesapeake Bay poses a serious threat NOW, not tomorrow. Destruction of our natural environment is one of the greatest threats to public health and national security, and this fee is one of the ways to combat such destruction.

Just a few days ago, the Governor announced plans to halt oyster restoration in the Bay, something that will cause further damage and cause more problems down the line. Governor Hogan has allies in our county government that seem to bring the same approach: ignore the environmental problems of today so we have a couple extra bucks in our pocket.

It has been suggested that existing funds could be used for remediation programs, but where would that money come from? What would you cut, Mr. Kittleman? Education? Citizen services? Road funding? Police? What other necessary public service would suffer because of this.

Please do not repeal the watershed protection and restoration fee or "rain tax."

Thank you.

Elisabeth Hoffman, 5917 Gentle Call, Clarksville

I volunteer on a watershed committee in Columbia and I'm a graduate of the HoLLIE program, short for Howard County Legacy Leadership Environmental program.

I urge you to save the watershed protection fee – and give it a makeover to fix its “rain tax” image.

With no complaint, Howard County homeowners pay \$210 annually per household for weekly garbage pickup. Because of that system, we don't have garbage piled up in the streets. No one calls it a tax on our freedom to buy stuff, although it is a fee to dispose of all the ~~unrecyclable~~ stuff we buy.

But we haven't been picking up the garbage we send unwittingly into our streams. That garbage is harder to see, but it includes salt, herbicides, insecticides, fertilizer, sediment, gasoline, oil, plastic and, of course, dog waste. All the rain rushing off our roofs, roads and driveways heads for our streams and sweeps up toxic chemicals and debris along the way. For decades, we have not been picking up after ourselves. We have a lot of cleanup to do, and this fee will start to pay for that. Those with the biggest roofs and more pavement pay a bit more. Once we clean up and start doing a better job of slowing and cleaning all this rushing stormwater, we can eventually discontinue the fee. We are not there yet. And we won't find nearly enough money by trimming a bit here or shaking the couch cushions there.

Volunteer Stream Waders, who sample aquatic creatures in Howard County streams, have found that all of our streams fall in the poor or very poor range. So, our streams are not fit for life. It's our responsibility to clean up after ourselves. This fee is not a tax on rain. It's merely a fair way to start paying our way, to start picking up the garbage in our waterways.

TESTIMONY AGAINST CB 52-2015, 19 January 2016

From Cheryl Arney

THE HEALTH OF THE CHESAPEAKE BAY IS IMPORTANT TO ME! REALLY IMPORTANT!

I moved to Maryland in 1967, the same year the Chesapeake Bay Foundation was formed. It seems to me we've been trying to "Save the Bay" ever since then, and yet the Chesapeake is still in trouble. Last year I heard a scientist from the Chesapeake Bay Foundation speak at Earth Forum, sponsored by First Presbyterian Church HC. Her message was simple. We've studied the Bay, we know that stormwater is a huge factor in determining its health, and AT LAST we have an opportunity to do something serious about it through the EPA's mandate to states to act. Hence the Watershed Protection and Restoration fee, which provides REAL MONEY to make infrastructure improvements and support community projects that work. This funding is predictable, DEDICATED, and AFFORDABLE! I can think of NO VALID REASON why we should repeal it – NONE!

And I'm not alone. I had lunch with friends today and asked them what they thought about "the fee". They all said they thought it was a good idea. One said, "My husband thinks so, too." I met another friend for coffee. What did she think? "Great idea." Too often the Council hears only from those opposed to something. I'm here to stand up for the many who are FOR the Watershed Protection and Restoration fee.

Sometimes we have to put money behind what's important to us. That's what the Watershed Protection and Restoration Fee does. If it is shown to be ineffective after a fair trial, then repeal it. But GIVE IT A CHANCE TO SUCCEED. Imagine a Chesapeake Bay that is thriving with healthy grasses and shellfish, one that no longer has to be "saved" year after year after year.

Cheryl Arney
4361 Wild Filly Ct.
Ellicott City MD 21042

Good evening. I am Sarah Blaik and I am from Ellicott City.

I oppose CB52-2015. I feel that the storm water fee should not be reduced, because:

**In section 20.1102. "Watershed Protection and Restoration Fund"- (c) *Expenses*:

- "Public Education and outreach relating to stormwater management or stream and wetland restoration"
 - Just as BGE gives free information to its customers about ways to decrease energy usage to save money, part of the money raised from the stormwater fee will go into educating the public about how they can decrease their fee by planting rain gardens and native plants.
- "Mapping and assessment of impervious surfaces"
 - With G.I.S. mapping, we can make detailed maps from satellite images to get a handle on how much nitrogen and phosphorus is going into the Chesapeake Bay, in order to comply with the Clean Water Act and Total Maximum Daily Load.
 - It will also allow us to map changes in pollution levels as more people plant more rain gardens.
- The stormwater fee will create local, green jobs, in: G.I.S. mapping, non-profit organizations' for education and outreach, READY rain garden program, and a lot more.

I ask the County Council to vote against CB52-2015. I thank the committee for their time and energy on this issue.

Re: CB52-2015, CR181-2015, CR182-2015

Council Chair and Council members,

Thank you for your commitment to protect Howard County's Watersheds.

The Watershed Protection and Restoration Fee is a fee to remediate pollution in stormwater running off roofs and pavement, eroding soil and carrying pollution into our waterways. Watershed restoration is required as part of Howard County's MS4 permit from the Maryland Department of the Environment. Approval of an adequate financing plan is also required.

The source of the Pollution is not our forests, our fields, and our open spaces. Pollution is coming from impervious surfaces which were created by development without embracing the spirit of protecting our environment. Standards did not, and still do not exist, to prevent the cost burdens which now fall on us to pay. Consider the below recommendations to adjust the fee. Also, county regulations must be updated to prevent damage. It costs nothing to prevent the damage. If damage to our watersheds is not prevented now, it will cost incalculable millions of dollars to remediate in the future. The health of our citizens and the health of Howard County must be prioritized.

Restoration of 20% of Howard County's impervious surfaces is required by 2019. Howard County has 11,453 acres of untreated impervious surfaces. The cost to comply with State Law over the next two years is estimated to be 23 million for fiscal year 2017, and \$25 million for fy 2018. Actual costs may be higher. The Stormwater fee revenues are currently \$11 million. The County expects \$1 million from grants, and will apply for \$1 million from the transfer tax which is now going to the Agricultural Land Preservation Program which is expected to have available money in the future. The plan is that \$1.8 million in funding will come from the General fund in FY 2017, and the county will issue \$19 million in General Obligation bonds to meet expected costs. The financial plan does not meet anticipated expenses. Also, the plan eliminates important incentives.

It is clear from the associated Council Resolutions CR-181 and CR-182 that the cost of watershed protection is not being eliminated. Using General Obligation Bonds for funding watershed restoration simply moves funding from a special fee -- to a funding source which can be diverted to other use which are not the ones specified in the existing legislation. The funding source should not be moved from a special, designated purpose fee to funding by a general bond. Also, bond financing has disadvantages, and costs, and should be strictly limited to protect Howard County's existing bond rating and unanticipated priorities.

It is better to use the existing Stormwater Protection Fund that is dedicated to remediation efforts, encourages clean construction, and provides education and incentives for property owners to remediate the source of pollution on private property.

Incentives are especially important in Howard County because the county administration does not have authority to compel private property owners to remediate pollution. Private property owners need incentives to undertake restoration projects --- such as rain gardens.

SOLUTIONS:

Resolve the unfairness to those who are burdened by unreasonable fees to pay for damages caused by others. The fee could be adjusted. Developments which caused the damage should pay a proportionately higher fee.

Credits are currently available but the standards for obtaining the credits should be clearly articulated and uniformly applied. Credits should be available for those who actively participate in the READY program.

PREVENT THE DAMAGE BEFORE IT OCCURS: It costs nothing to prevent the damage before it occurs. Currently, there is a proposed development that will irreparably damage the last best Tier II stream and its supporting watershed. Review zoning regulations to adopt criteria to stop the damage before it happens.

Limit impervious surfaces. For example, Zoning Conditional Use Regulation Section 131 C. 2. c. Provides: “No more than 30 percent of the parcel on which the conditional use is located will be covered by structures or impervious surface, including roads, parking lots, loading or storage areas, and sidewalks.” Add this criteria to the development approval process. This provision does not apply to the RR zone.

Adopt alternative revenue sources which are successful in other jurisdictions. A “bottle and plastics bill” in 10 other states substantially decreases litter, increases recycling percentages, reduces plastics propelled by stormwater into streams and bays, and bottle deposits are a revenue source for those who pick up trash.

Add a provision which helps developers as well as existing communities. In Prince George’s County development is expedited provided that the developer hires an independent environmental expert to provide a comprehensive environmental report to the Planning Department.

Upgrade the analysis of watershed protection to include the forests as a element to be considered in evaluating watershed protection. Such a provision has been proposed in Montgomery County.

There is currently no strict liability for those who damage our water or our watersheds. Enacting strict liability for environmental damage would motivate environmental protection.

In conclusion, do not roll back the stormwater protection fee. Do not use bond funding. Adopt modifications to adjust the fees so that those who cause the problem pay the fee, retain credits, and upgrade watershed protection criteria.

Sincerely,

Alan Schneider
Clarksville, Md 21029
Sierra Club Howard County Group

For more information on Stormwater utility fees and how they have been used to improve local communities go to “The Value of Stormwater Fees in Maryland” by the Center for Watershed Protection, a national nonprofit corporation based in Ellicott City. A copy is available at www.cwp.org.

See also the Countywide Implementation Strategy “CIS” by the Howard County’s Stormwater Management Division, a copy of which is available on its Howard County website.

My name is Lori Lilly and I reside in Woodstock, MD. I am representing only myself with this testimony and my family is here to support me. In 2013, I sat in this exact seat and testified in favor of adoption of the Watershed Protection and Restoration Fund to four of you sitting in those exact same seats. Very little has changed since 2013 except the very beginnings of project implementation. The politics are different but the regulatory requirements and results of decades of environmental neglect have not yet gone away. Meeting the requirements will require millions and millions of dollars. Ellicott City flooding, a tried and true stormwater issue, will require more millions and millions of dollars. With all these millions of dollars needed, there is no need to willingly give up 10 million dollars of dedicated, secure and accountable funds that can be applied to these exact issues in lieu of an insecure alternative. State grants are not secure. Transfer tax dollars are not secure. The general fund is not secure – that is why Council voted for implementation of the fee back in 2013.

In 2014, over 1 million dollars went to Ellicott City projects from the stormwater fee – these projects improved parking lots and failing infrastructure in environmentally sensitive ways. As an employee of the READY program, which receives only a small portion of the overall fee money, I can see firsthand how the fee money benefits Howard County residents like READY employees and Howard County businesses like Kendall Hardware and Sun Nursery where we buy supplies. This 10 million dollars of fee is an opportunity for all of us. Have you followed these dollars? This money is mostly going to capital projects – that means surveyors, designers, engineers, truck drivers, equipment operators, landscape companies, nurseries. You could be doing even more to ensure that this money stays as close to Howard County as possible – this stormwater management money can infuse, boost and benefit our local economy.

Your millions can be used to leverage billions of dollars of Chesapeake Bay funds that are available to address these problems. This fund is an opportunity for Howard County to work with private entities to leverage additional dollars to be innovative and creative in solving problems to the benefit of our local resources, towns like Ellicott City and to our local economy as a whole.

This fee is not a burden – my survey of 88 HoCo citizens showed 77% of those respondents did not think that fee was a burden or hadn't even noticed that they were paying it. Howard County needs this money. Many of us in the public want this money. We need the incentive programs that are a companion to these funds. The Nonprofit Partnership Program helps to get the work done at no cost to the non-profits. Hardship credits are available for those that need it. The fee money is a benefit and an opportunity for our County that has not yet been fully realized.

I am a small business owner in Howard County. I do not pay the fee because my family rents and I operate my business out of my home. Even though I am not required to pay the fee, I will be dropping off this \$225 check to the cashier's office tomorrow as a private investment into the Watershed Protection and Restoration Fund. This is what I estimate would be my fee if I owned a home and operated out of space in downtown Ellicott City (outside the floodplain of course). I want to invest in the solutions with you. We need to work together to get this work done. Feel free to contact me if you would like to see first-hand how this money is helping our community.

Testimony 1/19/2016

My name is Alan Pflugrad and I live at 7454 First League, Columbia Md 21046. I am a volunteer Watershed Steward among other related volunteer activities.

Thanks to the County Exec for his well-meaning and stated intention to “do all we can to support and improve the Chesapeake Bay”.

Also, I want to thank the CE for NOT using the term "rain tax" in his latest watershed protection communique. As he knows the phrase is both inaccurate and misleading yet an excellent counter play by those opposed.

I support the continuation of the fee.

The CE’s proposed Financial Assurance Plan relies on money from the General Fund rather than from fee money collected specifically for storm water remediation. I have asked for clarification as to how program budgets in the general fund will be manipulated or cut to replace the fee? (No answer)

I think that this approach is prone to failure because similar CB master improvement plans (over the decades) that relied on resources “not so dedicated” failed. Despite good intentions of political leaders past and present, there is risk that the needed dollar resources won't be actually allocated to remediation unless they are committed.

So who should pay the fee and how much? Well who polluted? As a volunteer with MD DNR, I teach an educational program called "who polluted the bay" for HoCo 4th graders where each child role plays dumping a pollutant into a fish bowl and at the end we ask them “who polluted" and the kids easily answer "everyone". But our county passed the burden along more precisely targeted to the pollution source and therefore varied the fee by how much storm water our homes, businesses and churches generate (from their impervious surface). It was a struggle but after much angst we put something in place which is working IMO. We also provide reimbursement and credits to incentivize practice that off sets our pollution.

(It’s working – look around at all the rain gardens on our churches, residential and some businesses).

Howard county rivers, lakes and streams are generally considered “impaired” by most measures and I can confirm that. In 2015, working with the HoCo Watershed Stewards and State DNR, I led a biological survey of eight streams co-located with Home Owner Associations and then used that stream data to educate residents. All eight of the streams were determined to be poor or very poor. I also would not swim in Centennial Lake after a Thunderstorm (and I’m not very squeamish).

In Howard County, we are fortunate to have a large network of watershed improvement volunteers. If the storm water utility fee is repealed, volunteers can’t promote best practice by advocating credits and reimbursements and in general, it’s demoralizing to me.

Hello,

My name is Bonnie Sorak. I am a resident of the Centennial Community in Ellicott City. I serve on the Board of the Chateau Ridge Lake Community Association, I am the Green Team Chair for the Columbia Jewish Congregation and I work for a small non-profit organization called Interfaith Partners for the Chesapeake. As a mother of not one, but two READY participants I know just how important the funding for this program is. Until my oldest son began working in the READY program our family was unaware of the problem of polluted stormwater runoff or what steps could be taken to fix it. Through the truly difficult work of digging in hard compacted soils both of my boys have been able to make in-the-ground improvements at local churches, schools, homeowner's associations and retirement communities. Perhaps more importantly they have been engaged in outreach efforts speaking to groups at public and religious schools and churches multiplying the impact of their work. Why jeopardize the stability of this model program just because it sounds good politically?

Additionally, as a resident of the Chateau Ridge Lake Community my property backs up to a tributary of the Northern Little Patuxent watershed. Over the 12 years that we have lived here we have witnessed this stream degrade. I attended the meeting held by the county in June to learn of the potential projects to help put a stop to such degradation. I learned at this meeting that even with the current funding levels the county will be hard pressed to carry out the planned projects that will keep the county in compliance with our MS4 permit. With the current funding the county is doing great work. I do not understand why you would jeopardize the progress you are making at this point in the game?

With the current level of funding the County was able to install the first pervious pavement on a sidewalk project in our neighborhood. As the Chateau Ridge Lake Community Association Board member in charge of communications I was able to highlight this project to our neighbors - - yet so much more could be done to educate property owners to spread the message further, **IF** the funds are there.

I started working in this field professionally about two years ago. As I researched the topic I was astounded to learn that the scientific community has known about the devastating effects of polluted stormwater runoff for over 40 YEARS! What has stood in the way of fixing the problem was the resolve to set the money aside. Now that we have it, why back track?

It is your responsibility to fix this problem for ourselves, our children and our children's children, not to mention all the other living creatures that depend on a clean, sustainable environment. Do not kick this can down the road. Please stand up, do what is right, and keep the current fee intact.

Respectfully Submitted
Bonnie Sorak
10226 Shirley Meadow Court
Ellicott City, MD 21042
410-465-0427
bssorak@yahoo.com



MARYLAND LEAGUE
OF CONSERVATION VOTERS

To: Howard County Council
From: Benjamin Alexandro, MD LCV
Date: 1/19/2015
Re: Testimony for CB 52-2015 (please vote no)

Good evening Honorable Howard County Council members,

My name is Ben Alexandro. I am the water policy advocate for the Maryland League of Conservation Voters, and representing over 550 supporters in Howard County and many more voters. I am also the Maryland State Lead for the Choose Clean Water Coalition, a coalition of over 200 nonprofits throughout the mid-Atlantic region, where I lead for over 75 nonprofits interested in water issues here in Maryland. On behalf of our voters, supporters and partner organizations I implore you to vote no on CB 52-2015.

Thanks to the watershed protection fee, Howard County has been a model for the whole mid-Atlantic region. This funding propelled the Clean Water Howard program to a place where I have other counties and municipalities asking how they can be more like Howard. This funding created win-win-win success stories around the county. It stops flooding in places like here in Ellicott City known for its flooding issues. It deals with a polluted runoff problem while beautifying the community. This fee will save the 370 miles of impaired waterways in this county while creating good middle class jobs. It will make the communities and our drinking water healthier. It creates rain gardens full of flowers for wildlife and kids of all ages to enjoy. But without the fee, this great progress the county made will start to whither.

The fee ensures a dedicated funding that is equitable. Those that pollute more pay more. Without it the budget is strained and we will either have to give up on clean water, or cut back on other essential services in the county or tax more in other areas. The county itself and several agencies stated multiple times how important this funding is to saving our streams. Howard County residents appreciate the benefits that they see from the program and support the fee.

I look forward to working with you on a campaign we are launching to share the successes of this fee throughout the east coast. We want to showcase the great work the fee has done, not repeal it. So please, vote no on CB52-2015. Thank you for your time.

Sincerely,

Ben Alexandro

86 Maryland Ave, Annapolis, MD 21401
(410) 280-9855

- Good Evening.
- My name is Anna Mudd and I am the Maryland Program Coordinator for Clean Water Action, an environmental organization with over 50,000 members in the State of Maryland.
- Tonight, I am here to urge the County Council to oppose Council Bill 52 on behalf of our 7,690 members who live right here in Howard County.
- Council Bill 52 would eliminate the funding source for the County's polluted run-off program and jeopardize the health of local and state waterways.
 - Polluted runoff flows off of our streets, parking lots, and building rooftops.
 - It picks up fertilizers, pesticides, oil, and automotive fluids, pet waste, sediment, and other pollutants.

- This runoff pollutes our rivers and streams and threatens our drinking water.
- It also causes problems like local flooding of streets and homes, which we have seen time and again in Ellicott City over the years.
- Howard County's own experts have determined that the polluted run-off fee is absolutely necessary to support the work being done by the County and their contractors.
- Relying on general budget revenue, which this bill proposes, forces county services to compete against each other, and also relies on unrealistic legal changes that would allow the County to spend Agricultural Preservation dedicated funds on storm water work.
- In the end, the numbers don't even add up to the County's estimated cost for permit compliance.

- On behalf of Clean Water Action and our Howard County membership, I respectfully ask the County Council to vote “NO” on Council Bill 52.
- Thank you.

January 19, 2016

Howard County Council
George Howard Building
3430 Court House Drive
Ellicott City, MD 21043

RE: Bill No. 52-2015 Amending and Abrogating the Watershed Protection and Restoration Fee

Dear Members of the Howard County Council,

The South River Federation (SRF) thanks the Council for this opportunity to present testimony in opposition to Bill No. 52-2015.

Addressing stormwater management practices and restoration work of stormwater infrastructure and streams is a central part of SRF's work in the South River watershed. The first opportunity to put those funds to work in Anne Arundel County came in a request for proposals that closed in December, 2014. In May, 2015, SRF was awarded funds for four projects, of which three have been completed.

SRF recommends retention of the existing fee structure based on first-hand experience with how transformative well-funded stormwater restoration projects can be, both ecologically and economically.

Of the stormwater fee grants received last year, SRF directed approximately \$277,000 into four stormwater projects in the local economy in Anne Arundel County. We submitted seven proposals in December, 2015 and are on track to receive at least \$500,000 for those proposed projects in 2016. Upon securing grant funding for these projects, SRF and other organizations retain the services of private contracting firms to perform the work, who in turn employ workers, purchase equipment and supplies from local businesses, and create a positive ripple effect in the local economy.

In addition to the positive economic effects generated by the stormwater fee, we are already seeing significant improvement in the quality of stormwater reaching our river and creeks, and which ultimately flows into the Chesapeake Bay. Three of the four projects SRF received funding for last year have already been completed. One of these projects was the stabilization of a heavily eroded gully on property owned by the Girl Scouts Council of Maryland. Over the past several decades, the erosion at this site deposited tons of sediment into Broad Creek on the South River. Using stormwater fee funding, SRF and its partners in the private sector restored 190 feet of stream bed, halting the previously existing erosion in its tracks and enabling the pollution flowing into the regenerated stream bed to settle out and be filtered before reaching tidal water.

In addition to providing the opportunity for transformative restoration projects, maintaining a dedicated stormwater fee facilitates access to open space for communities with flooding concerns and

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promotes community engagement and interaction through ongoing maintenance of projects installed in community areas.

Finally, the projects made possible by dedicated stormwater fee funding provide educational opportunities for small organizations like SRF, local government, and private businesses to discuss the effects of stormwater with private citizens and describe how partnerships between NGOs, government, and the private sector have worked (and can continue to work) to create jobs cleaning up the Bay.

Sincerely,



Jesse L. Iliff
South RiverKeeper
South River Federation, Inc.
2830 Solomons Island Rd.
Edgewater, MD 21037
(410) 224-3802

Angela Boyter
3914 MacAlpine Road
Ellicott City MD 21042
410 465-1444

angie@boyter.net

When I was a little girl, I loved going with my grandfather to Baltimore's inner harbor to buy fish, crabs, and oysters off the boats from the Eastern Shore. I still mourn what has happened to my Bay and regret very much that today's children can't do what I did.

I want my Bay back, and I am more than willing to pay increased taxes to restore it and keep it clean. That being said, good intentions do not excuse bad laws, and, as presently constructed, the existing act is not well-drafted. The intent is to pay for necessary government actions by taxing properties on the basis of impervious surfaces and to encourage owners to take action to reduce a property's impact on stormwater runoff.

First of all, the fee structure for single-family dwellings is not just and is, if anything, backwards. A home on a quarter-acre lot pays \$22.50. Two such homes, many of which look very much like mine, would fit onto my half-acre lot. Their impervious surface and impact would accordingly be about twice as high as mine. I do not suggest their fee be higher than mine, but surely it makes no sense to make me pay \$45 and charge each of them only \$22.50!

The existing act also provides for credits for implementing any of the best practices specified in the Maryland Stormwater Design Manual. I support the idea in theory, but when you look at it, it seems cumbersome and overly expensive. For example, a very popular idea is the rain garden. In order to be effective, rain gardens must be properly and regularly maintained. I sincerely doubt many property owners will keep up the required maintenance. It would be very expensive for the county to perform the inspections needed to determine if a property is in compliance. Again I like the idea of encouraging actions to reduce our environmental impact, but the details need to be more carefully worked out than they have been in the present Act.

All that being said, I support bill 52-2015, with an amended fee for single-family detached dwellings, as a first step to improving how we pay to protect our Chesapeake Watershed. I encourage you to pass it, but don't stop there. Please work to develop intelligent, effective, well-crafted approaches to improving and funding stormwater management so that someday our children will again regularly see our Bay watermen in action.

**Statement of Bruce A. Gilmore On Behalf of the Maryland
Stormwater Consortium
Before the Howard County Council**

Re: CB52-2015p

January 19, 2016

Members of the Howard County Council, my name is Bruce A. Gilmore and I am appearing this evening on behalf of the Maryland Stormwater Consortium in opposition to the proposal to reduce and then end the Howard County stormwater remediation fee.

The Maryland Stormwater Consortium is a group of organizations throughout Maryland which participate in advocacy for strong stormwater management to reduce pollution of our waterways and Chesapeake Bay. In 2005, several of our organizations focused on the MS4 permit for the State Highway Administration and Montgomery County and also focused on expanding the three existing stormwater fees to other jurisdictions. In 2007, we worked for the enactment of the Maryland Stormwater Management Act of 2007 and its implementing regulations. We also sought enactment of the stormwater remediation fee so that jurisdictions could fund stormwater runoff abatement programs and implement their MS4 permits. In the last several years the Consortium has been working to establish strong Phase I MS4 permits among the nine Phase I jurisdictional permittees and SHA.

Advocating for the vigorous implementation of Phase I MS4 permits includes working State wide and in local jurisdictions like Howard County. This is because the theory of these permits is that not only is water quality improved within the permittee jurisdiction but water quality in Maryland as a whole will be positively affected. The waterways covered by the Howard County permit affect the waters of several other jurisdictions and Chesapeake Bay. This is why there is such great interest in keeping the funding source level for permit implementation in Howard County: improved water quality here means improved water quality is likely to be achieved in other parts of Maryland. The aggregated water quality improvement means, finally, that Chesapeake Bay is restored.

There is great concern that the proposal to reduce and then to terminate the stormwater remediation fee in Howard County will result in reduced funding resources for its Phase I MS4 permit. The theory of the fee as enacted by the Maryland General Assembly was that the permittee jurisdictions would have a stable, identifiable source of funding for stormwater

management and permit implementation and not have to compete with other calls upon each jurisdiction's general fund or even the capital project fund sources. The fee as established by Howard County achieved these ends. Without the fee, there is doubt as to whether adequate funds would be found for the important permit implementation tasks.

Our message here this evening is to urge the County Council to keep the fee in place. We believe that this policy is well founded and strongly supported by a review of the County's own estimates of the costs it needs to incur to establish and implement the permit.

Just days ago, the County released what is called the Countywide Implementation Strategy which sets forth the map by which Howard County determines it can implement the MS4 permit and reduce the water pollution resulting from stormwater runoff. The CIS sets forth in great detail the unit costs for pollutant removal projects on a per year and per watershed basis to meet the water quality goals set forth in the permit. These costs combine for a total of \$222 million. The CIS also sets out the need to accelerate expenditures in FY2017 through FY 2020 to meet fully the terms of the permit by 2019.

So the burning question is: where will these funds come from if not the fee? Will any other alternatives be sufficient?

Thank you very much for the opportunity to present this statement this evening.

Bruce A. Gilmore, Coordinator

Maryland Stormwater Consortium

Dan Smith

Anacostia Watershed Society

Anne Pearson

Alliance for Sustainable Communities

Ian Wright

Friends of the Bohemia

Jesse Illif

South River Federation

Stephanie Head

National Parks Conservation Association

Rebecca Hammer

Natural Resources Defense Council

TESTIMONY RE: CB 52-2015

Good evening.

My name is Dede Newport and I oppose CB 52-2015. I've lived in Howard County for 35 years because I like the quality of life here. Over the years I've walked on my neighborhood paths that parallel the Little Patuxent and have delighted in the variety of plants and wildlife that I've seen there, such as hawks, pileated woodpeckers, cardinal flowers and skunk cabbage. But I've also seen the riverbanks eroding badly from increased stormwater runoff and invasive plants crowding out our native species. This degradation of our environment has saddened me and has made me wonder how we could prevent this from continuing in our county. Stopping polluted stormwater from entering our watershed is really important to me.

In the last few years I've joined the Earth Care team at First Presbyterian Church of Howard County. We've looked for ways to prevent the polluted runoff created on our church property from entering the local stream. The hard work of a READY team provided one solution--a large rain garden, and a second answer was a conservation landscaping garden created by Watershed Stewards. Both are effectively capturing stormwater runoff. I appreciate what the county has been able to do for our church environment, thanks to the dedicated fund that the stormwater fee provides.

I heartily support Howard County's watershed protection and restoration fee and urge you to vote no on CB 52-2015.

Thank you.

Dede Newport
Ellicott City
21042

BENCHMARK ENERGY & ENVIRONMENT
Do No Wrong in Energy and Environmental Issues¹
10860 Beech Creek Drive
Columbia, MD 21044
410-992-4232

January 19, 2016

Dr. Calvin Ball, Chairperson, District 2
Mr. Jon Weinstein, Vice Chairperson, District 1
Ms Jen Terrasa, Councilmember, District 3
Ms Mary Kay Sigaty, Councilmember, District 4
Mr. Greg Fox, Councilmember, District 5

Howard County Council
George Howard Building
3430 Court House Drive
Ellicott City, MD 21043-2015

Re: CB52-2015, CR181-2015, CR182-2015 and CB 5-2016

Dear Members of the County Council:

The Benchmark Energy & Environment represents several families in Howard County who take to heart the admonition of the Maryland Constitution, viz *"... the doctrine of non-resistance against arbitrary power and oppression is absurd, slavish, and destructive of the good and happiness of mankind."* We recognize the meaning of the words may have changed (softened) over time but we embrace the intent.

Although we sympathize with the noble goals of all parties, i.e. preservation of the natural environment, we firmly believe the Federal, State, and this County Government is misdirecting resources, and we seek to redress the issue by underscoring the defects, and by recommending priorities we believe will be more effective.

Sincerely,

Salvator Cosentino

¹ "A man has not everything to do, but something; and because he cannot do everything, it is not necessary that he should do something wrong.." — Henry David Thoreau, (b. July 1817- d May 1862)

Benchmarc Energy and Environment

Testimony Re: CB 52-2015, January 19, 2016

We herewith request that the ACT entitled Watershed Protection and Restoration Fee be eliminated since it is a misnomer to call it a fee, and since it lacks meaningful provisions to accomplish its presumed ultimate goals. It is an example of questionable governance, and more questionable rationale.

In one instance, it blurs the distinction between a FEE and a TAX. The ACT is in opposition to the meaning of a FEE.

The public understanding of "tax" aligns with the widely understood definition of a tax as a charge imposed with the primary purpose of raising revenue.

This is in contrast to a "fee," a charge imposed for the primary purpose of recouping costs incurred in providing a service to the payer, and a penalty, a charge imposed for the primary purpose of punishing behavior.

(see <http://taxfoundation.org/sites/taxfoundation.org/files/docs/TaxesandFeesBook.pdf>)

The so called fee provides no service (but rather a burden), and it cannot be connected to any act on the part of Howard County Citizens requiring that they be punished.

In another instance, it ignores the healthy tension between the Federal Government (see ART 2 of the Maryland Constitution) vis-à-vis the sovereign State of Maryland (see ART 4).

In one more instance, it is not possible to connect the activities, thus far done under the ACT, to the presumed benefit of protecting the overall environmental quality of the Chesapeake Bay.

Since the last instance requires time to detail, BENCHMARC ENERGY & ENVIRONMENT will be available to discuss them with the County Council, the County Executive, and interested Howard County Citizens at their respective request.

Benchmarc Energy and Environment

Testimony of January 19, 2016

Re: CR 181-2015 A RESOLUTION amending schedules, etc.

We refer the County Council to our testimony relating to Bill No 52-2015 for opposition to this species of legislation.

Benchmarc Energy and Environment

Testimony Re: CR No. 182-2015, January 19, 2016

We herewith request a delay in approving CR No 182-2015 since fails to detail future expenditures, and because appendix 1 thereto is irrelevant to the issue to be decided, and otherwise ambiguous.

We refer the County Council to our testimony relating to Bill No 52-2015 for an explanation.

BENCHMARK ENERGY & ENVIRONMENT

Do No Wrong in Energy and Environmental Issues¹

10860 Beech Creek Drive

Columbia, MD 21044

410-992-4232

January 19, 2016

Dr. Calvin Ball, Chairperson, District 2

Mr. Jon Weinstein, Vice Chairperson, District 1

Ms Jen Terrasa, Councilmember, District 3

Ms Mary Kay Sigaty, Councilmember, District 4

Mr. Greg Fox, Councilmember, District 5

Howard County Council

George Howard Building

3430 Court House Drive

Ellicott City, MD 21043-2015

Re: CB52-2015, CR181-2015, and CR182-2015 (addendum)

The Rationale for Opposing the Watershed Protection and Restoration Plan in Howard County in particular, and the relationship between the County, State, and Federal Government in its application, in general.

Dear Members of the County Council:

Our reference to J.G. Kemeny (see footnote) is pertinent to the distinction between facts of science, interpretation of the facts, and decisions based on those facts. Unfortunately Federal, the State, and County entities have cooperated in making decisions that are not consistent with good scientific practice (see figure #1).

Good science in the pursuit of a better Chesapeake Bay implies asking the questions:

- 1) What is depreciating the water quality? This implies determining quantity, and nature of pollutants, as well as the proximity of the source of the pollutants to the Bay.
- 2) Which is better; (a) sequestration, or (b) remediation of the pollutants, or (c...z), methods? Evidently option (a) has been adopted, but we argue that option (b), interdicting and treated sewage before it reaches the Bay is better (especially at the venues closest to the Bay, i.e. Baltimore, MD, and Washington, DC).

Much of the background research has documented pharmaceuticals as causing transgender fish in the Bay near Baltimore City. Moreover the lack of sewage treatment capacity in Baltimore City has caused significant health problems (see copies of Washington Post articles enclosed).

The saying, "A word to the wise is sufficient." is both an invitation and a challenge.

Salvator Cosentino

¹ "Science can't tell us where to go, but after the decision is made on other grounds, it can tell us the best way to get there."
John G. Kemeny, (b) May 1926, (d) December 1992.

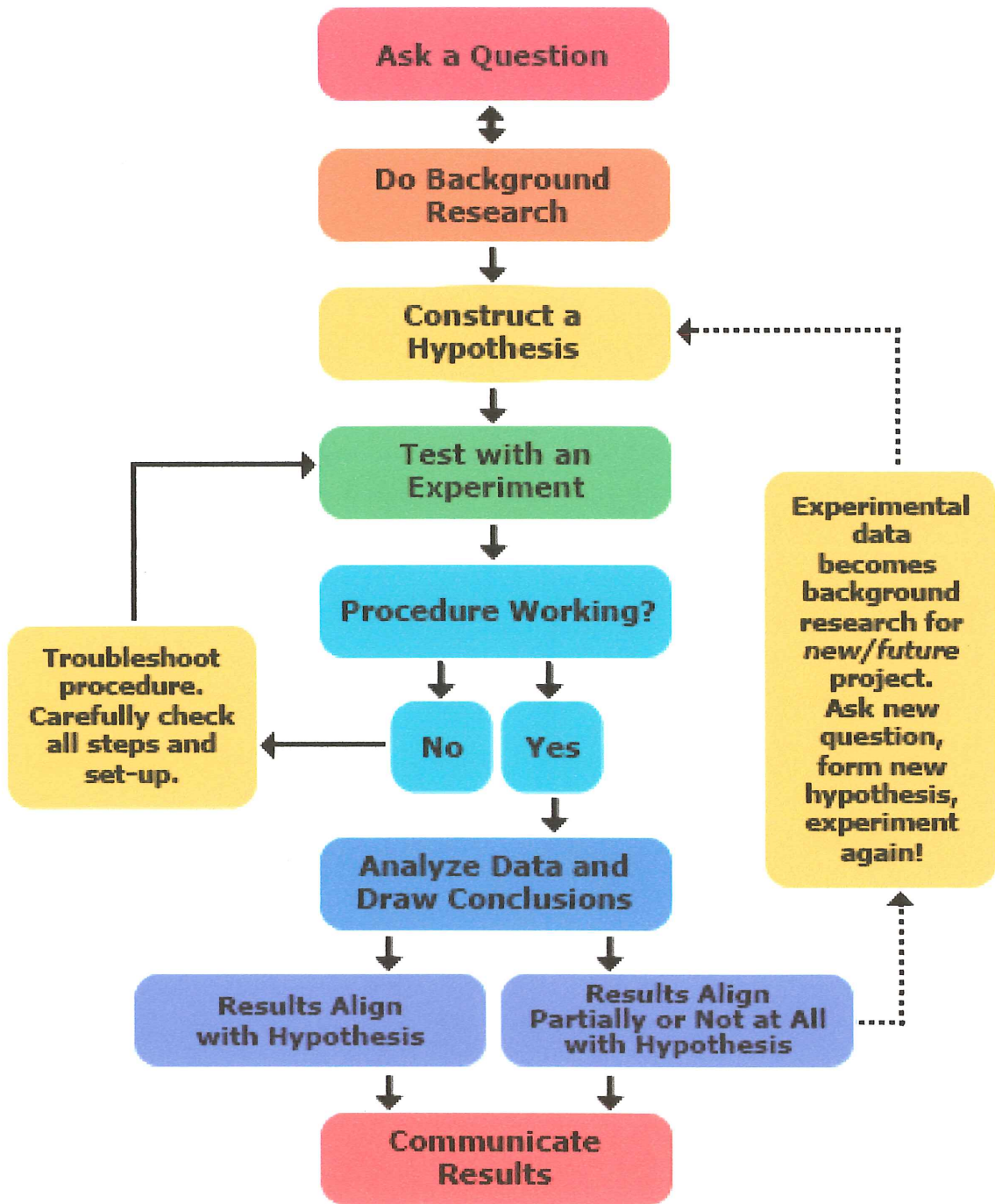


Figure #1 Scientific Method

STORMWATER REMEDIATION PROJECTS

APPENDIX 1

	TITLE	ABBREV.	ACRES	%ACRES	DOLLARS
A	PERMEABLE PAVEMENT	APRP	0.66	0.32%	\$26,468.83
B	BIORETENTION	FBIO	0.09	0.04%	\$3,609.39
C	FORESTRATION	FPU	36.74	17.92%	\$1,473,431.71
D	UNDERGROUND FILTER	FUND	12.75	6.22%	\$511,329.73
E	INFILTRATION BASIN	IBAS	2.58	1.26%	\$103,469.08
F	ENHANCED FILTERS	MENF	0.18	0.09%	\$7,218.77
G	DRY WELLS	MIDW	0.06	0.03%	\$2,406.26
H	MICRO-BIORETENTION	MMBR	68.38	33.36%	\$2,742,331.53
I	RAIN GARDENS	MRNG	24.6	12.00%	\$986,565.60
J	RAINWATER HARVESTING	MRWH	2.2	1.07%	\$88,229.44
K	BIOSWALE	MSWB	0.27	0.13%	\$10,828.16
L	GRASS SWALE	MSWG	0.34	0.17%	\$13,635.46
M	DRY SWALE	ODSW	0.22	0.11%	\$8,822.94
N	EXT DET STRUCTURE WET	PWED	2.64	1.29%	\$105,875.33
O	SW to the MEP	SPSC	3.63	1.77%	\$145,578.58
P	STREAM RESTORATION	STRE	7.14	3.48%	\$286,344.65
Q	SHALLOW MAESH	WSHW	1.57	0.77%	\$62,963.74
R	SPETIC UPGRADES		40.04	19.53%	\$1,605,775.88
S	RAIN BARRELS		0.3	0.15%	\$12,031.29

TOTAL ACRES= 205 99.70%

TOTAL DOLLARS **\$8,221,380**

\$/ACRE \$40,104

\$4,348,107.41
52.89%

Baltimore faulted for dumping raw sewage

more than 330 million gallons sent into Jones Falls in past 5 years, report says

BY TIMOTHY B. WHEELER

A new report details how Baltimore has deliberately dumped more than 330 million gallons of raw sewage over the past five years into the Jones Falls, which flows to the Inner Harbor.

Elsewhere in the city's 1,400-mile network of aged underground pipes, the report by the Environmental Integrity Project notes, there have been more than 400 complaints of sewage backing up into homes.

The intentional overflows — releasing 15 times as much sewage as the city has reported spilling from pipe breaks and blockages — are coming from two openings in the sewer system that the city was supposed to close years ago, according to the Washington-based environmental group. The releases are intended to avoid sewage backups into homes from the city's leaky, overloaded sewer system.

The report, based on public information requests, comes as the city is nearing a deadline for

fixing the system that it will not meet.

City officials say they have spent \$700 million on sewer repairs to comply with a consent order signed in 2002 with the U.S. Environmental Protection Agency and the Maryland Department of the Environment. The order, settling a lawsuit brought against the city for polluting local waters, requires an end to chronic overflows by Jan. 1.

But with just over two weeks to go before the deadline, the city has completed only about half the repairs and upgrades it pledged to make, according to the report.

Jeff Raymond, spokesman for the city's Department of Public Works, said municipal officials hope to get an extension from state and federal regulators. But he added that he couldn't discuss how much longer the overhaul would take until a new timetable is filed with the federal court. Officials previously said they expect to spend more than \$1 billion to complete it.

The environmental group and local activists are calling on state and federal regulators to grant the city no more than five more years to finish its sewer work, in keeping with a campaign the city has embraced to make the harbor swimmable and fishable by 2020.

"They need to get it done," said

Eric Schaeffer, a former EPA official who directs the Environmental Integrity Project. "It's been 13 years now," he said. "They need to pick up the pace."

Activists also are insisting on alerting people around the Inner Harbor to the health risks of kayaking, sailing or otherwise coming into contact with water frequently contaminated with sewage.

"We're seeing a lot more people out on the water boating and fishing," said David Flores, the Baltimore Harbor Waterkeeper, contending that the city ought to be more open about how much sewage is being spilled into the harbor and the streams that feed it.

Decades ago, the city designed its sewer system to overflow into the nearest stream whenever sewage backed up in the lines. Since signing the consent decree, the city has closed 60 of 62 built-in relief valves. But officials say that if they close the last two overflow outfalls on the Jones Falls, it could cause sewage to backup into homes and businesses throughout much of the city.

"Our regulators are aware that these are open," Raymond said. City officials plan to plug the overflows "down the line," he added.

Many of the overflows are occurring because of a problem with the pipe feeding into the century-old Back River wastewater treatment plant, officials say. The city planned to issue a contract last summer to remedy the backups by pumping sewage into

massive holding tanks, but officials rejected the low bid because it was more than \$100 million over the \$300 million municipal engineers had estimated.

City officials are reviewing the project to figure out how to lower the cost, Raymond said. Construction is now projected to begin in 2017 and take three years.

Activists contend that the city isn't being open enough about how much sewage is being spilled or what risks the public faces. Water samples taken regularly by the city since 2009 show potentially unsafe levels of fecal bacteria occur frequently in the Inner Harbor and the lower Jones Falls.

The city is required by state regulation to alert the public whenever there is a sewage spill or overflow of more than 10,000 gallons. But the much larger releases from the two built-in overflow valves on the Jones Falls are not reported promptly and only rarely get announced to news media or the public, the report noted.

Edward J. Bouwer, professor and chairman of the Department of Geography and Environmental Engineering at Johns Hopkins University, said he believes the city ought to be posting warning signs around the Inner Harbor. "I suspect that people out there have no idea," Bouwer said.

"I wouldn't say, 'Kayakers, don't kayak.' Just be aware that the water has high fecal levels. If it gets in the mouth, that could cause someone to get sick."

Halle Van der Gaag, executive

director of the local environmental group Blue Water Baltimore, said she'd like to see regulators and the city address the residential sewage backups detailed in the report. Any plan to correct the overflows also should offer relief to residents whose homes have been fouled through no fault of their own, she said.

"This isn't just about kayakers on the Inner Harbor," she said. "It's about people being impacted in their homes. It's disgusting."

Sewage backups have been reported from all over the city, according to the report, but there has been a flurry of them in a few Northwest Baltimore neighborhoods.

Charles and Doris Brightful, longtime residents of Grove Park, say their basement has flooded with raw sewage twice in the past two years during heavy rainstorms. In the most recent episode in late September, foul-smelling waste seven or eight inches deep filled their basement, they said. They wound up having to replace the furnace, hot water heater and the furniture they had recently purchased to replace what they had tossed after the backup from the year before.

The city also is eyeing installing a "backflow preventer" in the sewer main in the Brightfuls' neighborhood, he said.

"That is still on the drawing board," Raymond said. "We don't have a solid time frame for that."

Meanwhile, Charles Brightful said, "Every time they mention rain, I get paranoid."

— Baltimore Sun

CAMBI Thermal hydrolysis Sludge Treatment: Medium to large-scale application

The Norwegian company Cambi AS has developed and installed worldwide its unique "steam explosion" thermal hydrolysis process (THP), a technology for the treatment of wastewater treatment plant (WWTP) sludge prior to anaerobic digestion

June 2012, by Drs. Lex Menco



The Norwegian company Cambi AS has developed and installed worldwide its unique "steam explosion" thermal hydrolysis process (THP), a technology for the treatment of wastewater treatment plant (WWTP) sludge prior to anaerobic digestion. Cambi THP optimizes biogas production and has many other benefits, which are described below, along with a look at some real-life experiences at medium and large-scale facilities.

Introduction

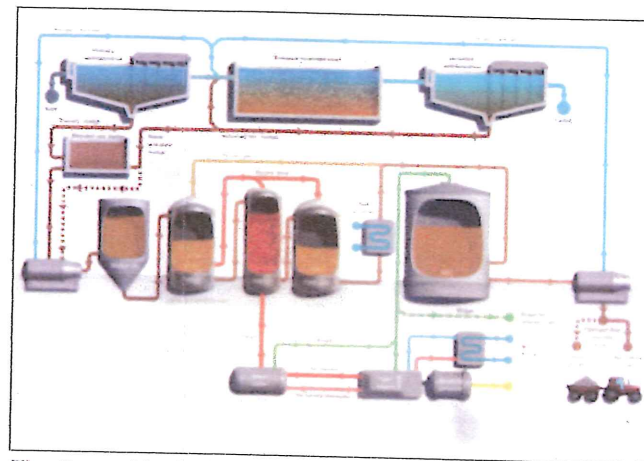
- Established in 1989. Offices in Norway, Denmark, UK, and USA
- Global industry leader in our segment (advanced biogas production from sludge and biowaste) with 26 plants worldwide (530,000 metric tons DS/y) and 5 plants under design/construction
- Treatment capacity for sludge and biowaste equivalent to 26 million people and 768,000 metric tons of DS (dry solids)/year
- Production capacity of 1,900 GWh thermal energy (biogas) and 760 GWh electrical energy, when using gas engine cogeneration.
- Green energy production replaces 760,000 tons of fossile CO₂ emissions. Avoidance of methane emissions from landfills, less transport, etc. comes in addition (about 2.5 mill tons CO₂ equivalents)
- Cambi THP is an eco-friendly "Paradigm-shifting Technology", dramatically improving design and operations of biogas plants worldwide.

The use of the thermal hydrolysis process in sludge treatment for WWTPs presents some major advantages in terms of energy, public health and environmental protection. Medium-sized plants can be converted, with the import of sludge from other nearby plants, into strategic sludge treatment centers. Here biogas production from anaerobic digestion is maximized using existing capacity, generating a pasteurized sludge with high dry solids

content. The generation of electricity from renewable sources, produced from biogas, allows the energy costs of the WWTP plant itself to be reduced and the WWTP may even have surplus energy production.

Thermal hydrolysis "Steam Explosion" process

The thermal hydrolysis process (THP) patented by Cambi AS is a pre-treatment of sludge combined with anaerobic digestion. Cambi THP works by dissolving and disintegrating sludge using pressure and temperature. Primary, biological or mixed sludge is pre-dewatered and introduced into a reactor where the direct application of saturated steam hydrolyzes and changes its internal structure. This reduces sludge viscosity and increases its biodegradability and shortens hydraulic retention time. The thermal hydrolysis increases the production of biogas in digestion, reduces the volume needed for digestion, increases the dryness of the final dewatering of digested sludge, eliminates odors, and provides pasteurized final sludge Class A, a valuable and natural fertilizer.



The thermal hydrolysis is part of a wastewater treatment plant as a pre-treatment prior to digestion

The Cambi thermal hydrolysis process disintegrates the cellular structure of the bacteria in bio-sludge by solubilizing exopolymers (proteins protecting the bacteria), producing an easily digestible product. This is done by means of a temperature of 165 degrees for 20 minutes, at 6 bar, followed by a sudden drop in pressure, resulting in so-called "steam explosion", unique among all thermal hydrolysis technologies available in the market. The steam explosion tears cells and fibers apart, further improving the disintegration effect.

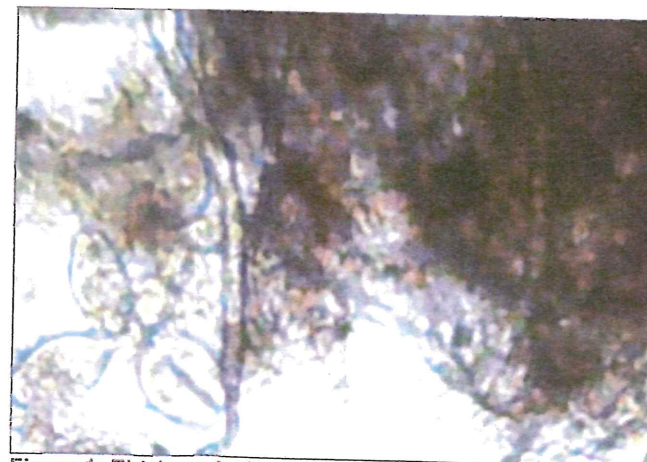


Figure 1: Thickened mixed sludge without treatment, Photo = 400x550 micras

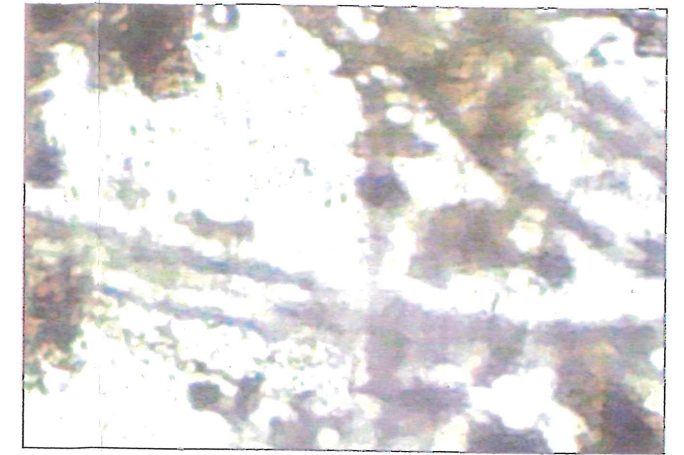


Figure 2: Thickened mixed sludge, with thermal hydrolysis at 165°C in 20 minutes – without pressure drop

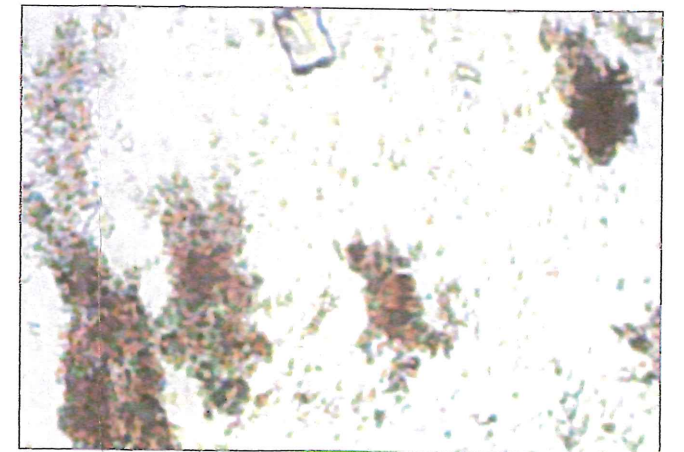


Figure 3: Thickened mixed sludge, with "steam explosion" after hydrolysis process at 165°C and 20 minutes.

The Cambi hydrolysis system allows maximum disintegration of the cells and it enhances the production of biogas in the subsequent anaerobic digestion and allows high loads in digesters. In the Cambi plant at Thames Water's Chertsey WWTP (London, UK) our process operators have tuned the plant to the exceptional capacities of up to 7 kg VS m³/day and retention times as low as 10-12 days.

The use of Cambi thermal hydrolysis achieves the following:

- Generates more energy (higher biogas production).
- Reduces the final amount of sludge. It improves sludge dewatering up to 40% DS.
- Treat organic food wastes and edible fats and oils
- Ensures sludge pasteurization, i.e. a pathogen-free sludge
- Produces a stabilized an compost-like product, with 70% decrease in odour^[1].
- Increases the speed and capacity of digestion (less digestion volume).

- Reduces carbon footprint.

A medium-scale sludge treatment center: The case of Lindum (Norway).

Cambi hydrolysis system for medium capacities (15-40 dry tonnes per day) is based on 6 m³ reactors. The system is modular, permitting its expansion up to 3 reactors. For lower sludge productions, Cambi has developed an even more compact plant (see press release, IFAT). The whole system of hydrolysis is closed without leakage of odor and energy loss.

Drammen (Norway) has recently installed a medium-scale sludge treatment center for dewatered sludge from 9 municipalities (18,500 wet t/year), fats from the food industry (3,000 t/year), sludge from septic tanks (7,000 t/year) and other biological substrates (2,000 t/year). The project's main objective was to generate biogas and produce a safe product. Investment, operation and maintenance costs were also considered. The use of the 2 reactor Cambi B6 hydrolysis system in Lindum allows the generation of 16 GWh/year of biogas and 12,000 t/year of dewatered biosolids product used as fertilizer. This plant shows that it is possible to develop sludge treatment centers on a medium scale where you can optimize the energy efficiency of equipment by importing sludge from outside the WWTP.

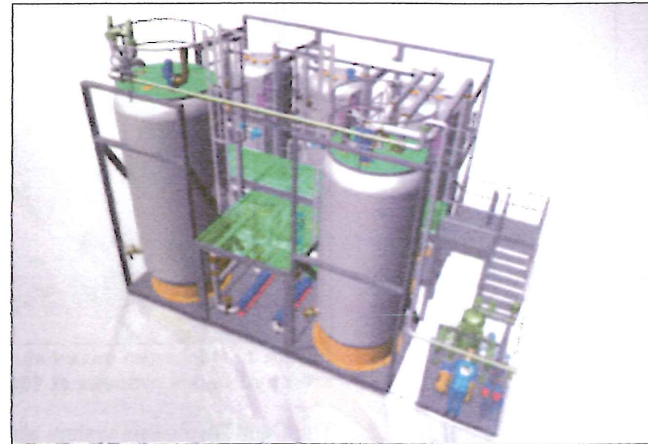


Figure 4: Cambi hydrolysis system with three reactors of 6 m³.



Figure 5: THP at Lindum under construction

Large-scale thermal hydrolysis: The case of DC Water (Washington DC, USA)

The District of Columbia Water and Sewer Authority (DC Water) in its Blue Plains plant treats a sewage flow of 370 MGD (15 m³/s), the largest wastewater treatment plant with advanced treatment in the U.S. DC Water will be the first to build a thermal hydrolysis plant in North America. This thermal hydrolysis plant will be the largest in the world and will be built by Cambi AS in Washington

DC, with start-up in 2014. The plant will treat up to 450 t DS sludge/day, and 149,000 t DS sludge/year. Only four digesters, each with a 14,400 m³ capacity, will be built. The biogas will go to a cogeneration facility which will cover the entire steam needs of the THP process itself and generate 13 MW_e of power with initial savings of USD 20 million/year from the energy produced, the reduction of the amount of biosolids to agriculture, and by avoiding the use of lime. The carbon footprint will be reduced by about 60,000 t CO₂/year. The final dewatered biosolids quantity will be reduced from 500,000 t/year to 200,000 t/year, with safe application to agriculture as a pathogen-free product with no odor problems. The project demonstrates the effectiveness of feeding the digesters at a digester load of more than 4 kg VS/m³, twice that of conventional digestion, with low retention time in the digesters. The Cambi THP consists of 4 lines of equal capacity.

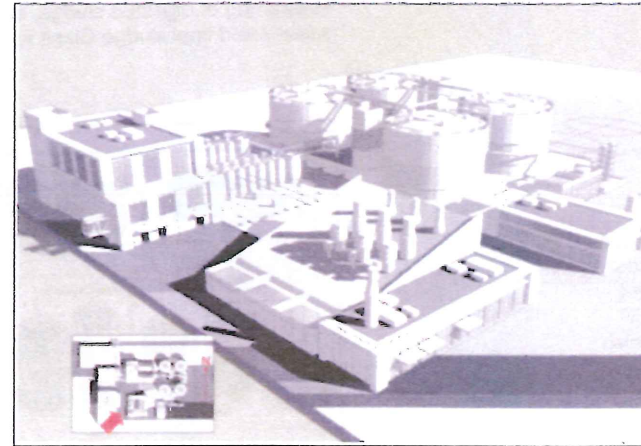


Figure 6: Overview of Project of Cambi Thermal Hydrolysis and digestion in DC Water (Washington – USA)
Comparative hydrolysis parameters vs. conventional digestion

The advantages of applying thermal hydrolysis are summarized in the table below, which compares conventional digestion values with thermal hydrolysis and digestion for mixed sludge.

CONVENTIONAL DIGESTION versus CAMBI THERMAL HYDROLYSIS		
Parameters	Digester "Cambi" Primary + Secondary	Digester Conventional Primary + Secondary
Retention time	12-15 days	20 days
Volume	1/3 - 1/2 versus Conventional	1
Load DS	9 - 12 %	4 - 6 %
Load VS	5 - 7 kg/m ³ /day	2-3 kg/m ³ /day
pH	7.5 - 8	6.8 - 7.5
Temperature	38 - 42 °C	35 - 37 °C
VFA / Alkalinity total	0.1 - 0.5	0.1 - 0.5
Ammonia	2900 - 3000 mg/l	600 - 1000 mg/l
Biogas quality	65-88% CH ₄ , H ₂ S ↓*	60-65% CH ₄ , H ₂ S ↑†
Biogas quantity	+50%	
Foaming	No	Nocardia, Microthrix
Biosolids type	Class A	No Class A
Dryness % DS		
Dewatered biosolids.	32 - 40% (**)	20 - 25 %
Destruction % MS	< 60 %	40 - 45 %
(*) Cambi give very low H ₂ S in biogas, avoiding H ₂ S removal systems for cogen		
(**) Usually 32 - 36 % with belt press or centrifuge. Up to 40% with filter press.		

Conclusions

From 1996 to the present, Cambi thermal hydrolysis units installed and under design/construction worldwide have a capacity of 768,000 t DS/year, to serve a population equivalent of more than 26 million. It is a fully proven technology for small to large scale

anaerobic digestion plants.

With the Cambi thermal hydrolysis process you can:

- Improve the energy efficiency of the WWTP. More biogas = more power.
- Increase the productivity of your digester by 250%
- Reduce the final volume of dewatered sludge by 40%
- Treat organic food wastes and edible fats and oils
- Obtain excellent stable Class-A type bio-solids, perfect for agriculture, with low odor, and without pathogen regrowth risk.
- Eliminate or reduce the need for subsequent composting, thermal drying or incineration.
- Have a smaller carbon footprint.
- Have an installation that is reliable and robust with high availability and automation.

Lex Menco M.Sc. BioChemistry, Microbiology
CEO [Relex Process Consultancy](#)

[1] "[Cambi] Reduced biosolids odor production by 70% - Biosolids produced from Cambi-MAD reactors were consistently less odorous and of a higher solids concentration than those of Control-MAD", Virginia Tech (Dr. Novak) paper on Cambi choice by DCWATER, US Biosolids Conference, 2008

SHARE