

## Bay Essays for Review

### Essay 1:

Imagine pin-pointing every single toxin that has every entered your body. Every drop of calorie filled soda, every prescription drug, and each slice of cake. All of these and many more harmful pollutants enter our bodies and we do not think twice about it. Our bodies are our homes, and treating them with care is something essential for a healthy, long life. But, why don't we treat the land we live on the same way we would our bodies? The water bottle thrown out of the car window or the candy wrapper thrown on the ground is something that is forgotten in a matter of seconds. If we treated our land the same ways we treat our bodies, as a home and not as a trashcan, the results would be astonishing. Narrowing down on certain problems and solving them individually are the first steps in restoring our Chesapeake Bay. The Chesapeake Bay cannot, and will not be restored and improved over a matter of a few years, but will require generations to vastly improve. Tackling the different pollution contributors is something that can be difficult, but necessary.

One of the biggest problems that correlates to the downfall of the Chesapeake Bay is the amount of pollution build up. The thought of crystal clear waters is something unthinkable compared to the murky, trash infested waters that make up the bay today. Removing all of the pollution from the bay is something that would take generations, but that does not mean that there cannot be significant improvements made over time. One of the contributors to the waste that is dumped into the bay is poultry waste. Chicken houses periodically require to be turned out, leaving millions of pounds of waste materials to have nowhere to go but to be dumped into the bay. Utilizing all of the waste instead of irresponsibly dumping it into the bay is an idea that has been introduced to the state of Maryland. A company called Green Planet proposed the solution to eliminating all poultry waste. Green Planet suggested building waste to energy plants to state officials representing Maryland. These waste to energy plants take all of the collected waste from the chicken houses and burns it down to ashes. During the process of the burning, green energy is being produced. After the renewable energy is made through this process, the result is millions of pounds of ashes. These ashes can be utilized beneficially for farmers as fertilizers. The benefits of using the waste and turning it into pure, green energy do not end there. With these plants being implemented, many new jobs are created as well. This will boost the renewable energy economy in Maryland while also eliminating all of the poultry waste that is being dumped into the bay. While this will only put a dent in the pollution problem, it is something that is essential to solving the pollution problem. One of the goals listed in the Chesapeake Watershed

Agreement is improving the water quality and this program would directly stop chicken waste from entering bay waters. The chicken waste to green energy project is estimated to cost around 75 million dollars. While this number is staggering to Maryland state officials and causes doubts, it is essential to get this program on track fast. I would like to donate 350 million dollars to this program because of its importance. Now, this number may seem to be overkill but it would push Maryland and Delaware state officials to get this program implemented fast and efficiently. A program so seemingly easy to get started has been exceedingly slow. With this large amount of money, state officials would have no other excuse but to get this program going, stimulating the economy and improving the water quality of the bay significantly.

Another large project that is essential to maintaining habitats surrounding the Chesapeake Bay is land conservation. In 2013, a million and half acres of land were conserved in Maryland alone. The surrounding states have also achieved millions of acres in conservation efforts as well. But, this only puts a dent in the other millions of acres that need to be conserved as well. These prospected lands hold a great significance in creating a balanced and healthy bay. Instead of pouring money into projects building new malls or a new rising department store, putting money into a home for all living things would be more useful long term. Land conservation holds many benefits that include a better human relationship with nature, improved habitats for wildlife, enhanced water quality and also improved air quality. More money is spent on funding companies and factories that pollute the Chesapeake Bay with harsh chemical waste rather than conserving it. With more land conserved, comes less run off as well. The more land conserved, come more opportunities for forestry that slows down the run off, if there is any to begin with. With another large sum of my billion dollars I would like to donate to the Chesapeake Conservancy for their adamant efforts in order to protect the health of our bay through conservation. I would use 300 million of my remaining 650 million to help purchase acres of land. This would help reach the goal in the Chesapeake Watershed Agreement to conserve land significantly.

A parallel project would be putting more money towards planting trees. The endless possibilities for improving the ecosystem of our Bay can start with planting more trees. With more forest areas come more beneficial outcomes such as cleaner air, more habitats for wildlife and plant life, better water quality, and a better sense of community for surrounding citizens. Starting more forests would provide habitat for animals and plant life that are dying out because of the diminishing number of trees. Trees provide a natural filtration system for our air by absorbing harmful gases so the more trees, providing less air pollution. And by conserving more land for planting trees like in the previous proposal, the less air pollution by factories. So by doing both of these projects simultaneously, the harmful air pollution would be diminished by less factories/companies being built through land

conservation and more planting of trees. I would like to donate 50 million dollars to the non-profit program American Forests that's sole purpose is planting trees locally, nationally and internationally. Their wide range of programs includes education programs about some of the largest and oldest trees in the country, protecting endangered species of trees, and planting trees all across the globe.

Lastly I would like to donate the last 300 million dollars to Chesapeake Bay education programs in school for children. This last large chunk of money is for the program that I believe is the most important in the journey of restoring the Bay. By putting these education programs in practice, children will learn the importance of putting an effort towards saving the land that they call home. Youth need hands on experience when it comes to learning something new and there are numerous projects that could be introduced to their education on the Bay. For example, promoting recycling is already proven to help children understand the importance of where their waste goes. Another project that would be funded with the 300 million dollars is building butterfly gardens at available schools. Creating a butterfly garden that would introduce native plants that help attract all sorts of species of butterflies would greatly help the Bay. These gardens prosper with more natural fertilizers to prevent pesticides and added compostable materials for nutrients in the soil. Planting native plants that create a more diverse environment to species and actually utilizing these ideas in the school community go hand in hand. The hands on experience that comes with tending the garden teaches students the importance of stopping run off, learning about native and invasive plants and how they as individuals can help. Frankly, the older generation that wrote the Chesapeake Watershed Agreement will die out. That is why it is so important to stress the importance to the younger generation of their huge role in saving the Chesapeake Bay.

All in all we should consider our Chesapeake Bay as we would our own bodies, with care and respect of what we put into it. Creating waste to green energy plants will not only benefit the bay but will also improve the economies of the States that go through with this program. Conserving land creates a bright future for opportunity of a cleaner, more well rounded habitat for all living things. Along with this, creating programs that plant trees will provide a healthier atmosphere while also creating more habitats. And to tie it all together with supplying the younger generation with education on how they will be able to take on the task of recreating our environment for the better. With this 1 billion dollars I wanted to demonstrate the importance of a well-rounded solution with projects that can be easily implemented with the right funding.

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Essay #2:

The Chesapeake Bay is a precious natural resource. Today it is in danger for a variety of reasons. I have chosen to spend 1 billion dollars to advance its recovery. Of course, it would cost much more, the estimate is nearly nineteen times more, than what I am contributing, so I must choose my donations wisely. After all, every little bit helps, and little by little all goals are achieved. The Chesapeake Bay Program is the bay's main source of long term protection. The program is a unique and complex cooperation between multiple states and the federal government. Pennsylvania, New York, Delaware, Maryland, Virginia, D.C., West Virginia, the Chesapeake Bay Commission, and multiple federal agencies, all partners in the program, have signed the Chesapeake Bay Watershed Agreement, once again recommitting themselves to saving the bay.

For over 30 years the program has been the nation's best restoration effort. The 2014 agreement outlines the many goals the partners would like to achieve in the near future. The major goals include creating sustainable fisheries, restoring vital habitats, improving water quality, reducing toxic contaminants, promoting healthy watersheds, advocating stewardship of the bay, promoting land conservation, expanding public access, developing environmental literacy, and ensuring climate

resiliency. These goals are not secluded from each other, instead they are intertwined. Many statements within the agreement recognize that since all aspects of the ecosystem are related the goals and outcomes in the agreement are related. It is impossible to say that one is more important than the others for the reason that they are all equally vital. I have chosen to donate to organizations that do not focus solely on one of the goals because of this connectivity.

The program is mainly funded by federal, state, and local grants as well as non-governmental organizations. Two major overarching sources of funding for protecting the Chesapeake Bay and achieving the goals in the agreement come from the Chesapeake Bay Foundation and the Chesapeake Bay Trust. To these two organizations I wish to give 25% of the one billion, or \$250,000,000, to be divided evenly. Interestingly, the agreement does not state how the goals will be achieved. Instead it states that within a year of being signed management strategies will be designed that will identify what steps everyone, including signatories, local governments, and nonprofits, can take. This collaboration will greatly increase the speed and efficiency of recovery. The strategies will aim to address issues in a strategic, cost effective manner. When these strategies are created they will need to be enforced because, however noble the ambition may be, the agreement and the resulting laws have little impact if they are not enforced. Recognizing the need for enforcement if the goals are to be achieved, I have chosen to donate 10%, or \$100,000,000, to the Environmental Defense Fund with the restriction that it must be spent on enforcing laws that protect the Chesapeake Bay and its watershed.

Two goals that I am very happy to see in the agreement are promoting environmental literacy and advocating stewardship, which involve ensuring that students have the necessary skills to take care of the ecosystem. The future of the bay rests in the hands of the future generations. Educating them is, of course, of the utmost importance. Without quality education we are liable to repeat past mistakes or make new ones that could have easily been avoided. Likewise, educated children make the best stewards for the environment. They will be the ones to see that the future is better than the present by achieving the goals outlined in future agreements or even creating the agreements. I greatly admire organizations such as the Student Conservation Association who provide young adults the opportunity to connect with and help protect the environment through a wide variety of programs. I wish to give the association \$100,000,000 to be spent on programs that provide students an opportunity to improve the Chesapeake Bay.

One of the biggest challenges to promoting stewardship is ensuring that citizens feel the connection and the desire to protect the bay. I like to believe that saving the bay takes three elements: knowledge, determination, and passion. Creating this passion, though, can be a problem and, fortunately, it is a problem that can be solved. Passion is created through personal connection, and

personal connection is created through public access, another one of the agreement's goals. To expand public access the Chesapeake Conservancy uses and creates bonds between citizens and the bay to promote conservation, which will lead to the restoration of vital habitats and healthy watersheds, the creation of sustainable fisheries, the reduction of toxins, the betterment of water quality, and a more resilient ecosystem. Most importantly, the Conservancy recognizes the historical and cultural importance of the bay, which I believe can be too easily overlooked. Thankfully, the historical and cultural aspect of the bay is not overlooked by the agreement, either. \$150,000,000 is to be donated to this very admirable group.

The prestigious Smithsonian Environmental Research Center located on the Chesapeake Bay not only provides excellent education, but also spearheads innovative research. The education they provide based on the latest research to individuals, businesses, and policy makers lead to better more environmentally friendly decisions, which will improve all aspects of the Bay. \$100,000,000 is designated to the Center so that their amazing research and education can continue.

Research is perhaps, just as important as education, because it is futile to teach without accurate and up to date information. This is especially true today because of the rate of climate change. In the agreement the signatories realize they will need to conduct careful research and closely monitor the environment in order to be as adaptable as possible. Studies suggest that most of the environmental damage is locked in for at least the next few years, but after that the future is in our hands today. We need to make the best decisions to prevent any more damage from becoming irreversible. Research will lead to badly needed solutions for improving water quality and land conservation, reducing toxic contaminants, and creating healthy watersheds, sustainable fisheries, vital habitats, and climate resiliency.

The Chesapeake Research Consortium recognizes the connectivity of the environment. Their research and solutions are based upon the understanding that the Chesapeake Bay is not isolated, but is impacted by, not even just the watershed, but the globe. It is easy to focus on all the little streams within the watershed and forget about the rest of the world, but if we are to have a healthy bay we must take into account the effects the globe has on the bay. This wisdom is the reason I wish to give them \$200,000,000 to continue their incredibly helpful work.

An important aspect to recognize is that the bay's watershed crosses multiple state boundaries. The Alliance for the Chesapeake Bay recognizes this and therefore works in all six watershed states helping to improve local streams in order to stop pollution before it reaches the bay. In the preamble to the 2014 agreement the signatories recognized that implementation occurs locally, so while an agenda at the state level is important, it is essential to incorporate local governments as well. It is through local

action that all goals will one day be achieved. Furthermore, I appreciate how the alliance does not focus on the waters in one political jurisdiction, especially considering that the environment does not recognize political boundaries. Additionally, the idea of starting small in order to have a large impact is one that I greatly admire and therefore I choose to donate \$100,000,000 to the alliance.

Each goal meets unique obstacles in its race to be met. I feel confident by donating to the above mentioned organizations that I am helping in my own small way to have these obstacles overcome. My donations may have little impact but they will still bring us closer to realizing all the goals in the 2014 Chesapeake Bay Watershed Agreement. One of my favorite sayings is “It does not matter how slow you go, as long as you do not stop.” No where is this more true than in our effort to save the Chesapeake Bay. Change is going to take many, many years, in fact most of the damage is locked in for the near future, but that is absolutely no reason to be discouraged. As long as we keep moving forward, the situation will most certainly one day get better. Donating these billion dollars is my step forward.

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Essay #3:

#### How \$1,000,000,000 Could Save the Bay

The Chesapeake Bay Watershed is a vast, complicated expanse of waterways connecting several states and the District of Columbia and so is the agreement protecting it. The projected cost to save the Bay as of 2009 was about 18 billion dollars. In the scheme of things, 1 billion doesn't look like much. If I were to put 1 billion dollars towards saving the Bay, then I would do it using a source, clean-up, maintenance strategy that would prove to make the biggest impact for the least amount of money. One billion dollars cannot save the Chesapeake Bay Watershed, but if utilized correctly it can surely put a large dent in the process.

The main organization associated with saving the Chesapeake Bay watershed isn't an organization at all. It is in fact a partnership maintained by seven states, Washington D.C., and the federal government. On top of that, the program, according to Communications Director Margaret Enloe, is “composed of a network of people working for other businesses and organizations who were assigned to work on this initiative”. This program is officially called the Chesapeake Bay Program and was formed in 1983 when Maryland, Virginia, Pennsylvania, Washington D.C., and the federal government signed the first Chesapeake Bay Agreement. New York, Delaware, and West Virginia would later join this partnership in 2000 when a new agreement dubbed “Chesapeake 2000” was to be signed. 14 years later, another updated agreement was signed. This new agreement essentially renewed the vows of the old agreements while adjusting the the watershed's new, worse conditions. The

preamble of this new agreement states that “the Partnership recommits to the Bay watershed restoration effort based in and guided by science and the lessons learned from our experiences“ □ “experiences” (or lack of) being the key word in this particular phrase. The previous measures taken to save the bay were not nearly enough, and eventually caused the bay to get worse rather than improve.

The Chesapeake 2000 agreement was composed of 117 goals and a 2010 deadline. The years passed and as 2010 finally approached, it was discovered that the goals were not even remotely close to being met. After this failure, the Chesapeake Bay formed a new agreement that, “unlike in the previous agreements, the governors and mayor who signed it vowed to go beyond [pollution control], they pledged to investigate the effects of chemical contamination and toxins, look at how land use impedes the Bay’s improvement and study the threat of sea-level rise” (Washington Post). The new agreement has less goals than Chesapeake 2000, several of which I will be contributing to. “The most controversial part of this is the money” says Enloe. The expenses tend to vary by geography. For example, the agreement would not spend as much money on wetland management in New York as it would in Maryland because New York is a headwater state. That is why when dividing 1 billion dollars, I will be taking into account every different aspect and every different perspective that can be had on this agreement. From campaign donations to education and resiliency, not one penny will be wasted on mindless spending.

Every single event that has ever occurred in the history of the universe has a chain of events trailing behind it, and the pollution of the Chesapeake Bay tends to be a prime example of this. The number of events leading up to a fish changing sexes or a wetland being destroyed can be infinite, so the following is a very basic breakdown. Let’s end with the initial water quality of the Bay deteriorating. Before that happened, contaminated waters flowed into this bay. These waters travelled from several different states and in those states they flowed from the land into their respective rivers from a form of pollution such as runoff. Before that runoff made it into the watershed, a state official made the executive decision not to enforce the containment of said runoff and therefore fish are unwillingly changing sex and oysters are dying. But again this is a very broad description of the chain of events that occurred. In this example the source of pollution is not technically the runoff which enters the watershed. This pollution would have never entered the waters had the state government not made the decision to enforce pollution control, and so technically the source in this case is the government. Farmers and developers aren't going to make their own changes to prevent “runoff from farms [that] laces the water with fertilizers and other chemicals that are thought to affect fish... [and] home building, commercial development and farm expansion [that] has robbed the watershed of forested land that can filter runoff that carries pollutants” (Fears) if they aren't required to because it is



much cheaper for them to not care about the environment than to build \$50,000 buffers or rework irrigation systems to name a few. In order to truly strike the source of this problem and put the stopper in the proverbial drain, I will be putting a considerable amount of money into different political campaigns around the watershed that will help to put the right people into office. These people will propose new laws regarding pollution in their respective states and also work to enforce said laws.

There are two ways that I could approach this form of giving that I am going to touch on. One way is to simply write a check and send in private donations to different candidates over the states. This means that the donation is coming straight from my name. The other way that I could do this, and which I believe could yield the best results, is by forming a political action committee (PAC). A PAC is “a popular term for a political committee organized for the purpose of raising and spending money to elect and defeat candidates” (opensecrets.org). A PAC donation comes from many different contributors instead of one single person. Beyond that, as of 2010 there is a new type of PAC called a Super PAC. While individual campaign donations and PAC donations have a dollar restriction to how much one can give to a candidate, super PACs do not because they “make no contributions to candidates or parties...they do, however make independent expenditures in federal races...that specifically advocate the election or defeat of a specific candidate” (opensecrets.org). Using this method, I would be able to distribute as much money as I would like, which leads us to our next stage of campaign spending.

As previously mentioned, all expenses involved in this project vary by geography. While the Maryland government is very involved in saving the Bay, the Pennsylvania government could use some more convincing. Therefore, might need to spend more money in Pennsylvania to elect someone who will make the right changes and enforce the right laws. Based on this judgment, I would choose to create a super PAC and give \$10,000,000 in campaign spending for West Virginia, Pennsylvania, and New York for one gubernatorial election and one presidential election (for governors and senators). Next I would give \$7,000,000 in campaign spending to D.C., Virginia, and Delaware for the same election times and \$5,000,000 to Maryland running by the same structure. This leaves a balance of \$893,000,000.

After striking the source, the next step in saving the Bay would be clean-up. The waters in and surrounding the Chesapeake Bay have two important self-cleaning mechanisms called wetlands and oysters; both of which have deteriorated greatly due to pollution and over-harvesting. The Bay can essentially clean itself as long as we rebuild the wetlands and restore oyster populations to their former glory. To do this, I would donate to different organizations affiliated with the agreement that focus on these specific projects. The Chesapeake Bay Foundation works across the entire spectrum of

saving the Bay, and according to its website, “the Chesapeake Bay has lost half of its forested shoreline, more than half its wetlands, nearly 80 percent of its underwater grasses, and more than 98 percent of its oysters”. These numbers are astounding, and CBF is doing everything it can to combat them. On the Foundation’s donation page it explains that \$25 can plant five native trees as a streamside buffer, \$50 can grow 5,000 native oysters, \$500 can send seven students for a day of learning in and around the Bay, \$1,000 can remove 600 pounds of trash from the Bay and its tributaries, \$1,800 can send a teacher on a five day professional development course. I would be giving to their land restoration cause to help restore wetlands and submerged aquatic vegetation and judging by this information, \$300,000,000 would be able to plant 60,000,000 buffer trees along watershed shorelines. And that is just trees. I would also advise the Foundation to use this money on anything that involves physical landscape restoration which includes rebuilding wetlands and submerged aquatic vegetation. Another \$300,000,000 leaves \$593,000,000.

To help restore oyster populations, I would be donating to the University of Maryland Oyster Hatchery Program. Their Horn Point Laboratory spawning projects “have resulted in the deployment of over one billion oyster spat to the waters of the Chesapeake Bay in the hopes of slowing the Chesapeake Bay oyster decline and restoring the health of the Bay” (umces.edu). I believe that oyster restoration requires more research than the landscape restoration and so I will be donating \$400,000,000 to the University of Maryland specifically for oyster research and restoration on the Bay. That leaves a balance of \$193,000,000.

After the Bay has seen progress in cleaning, the last step is maintenance. The states and their citizens can do all they want to save the Bay now but if people aren’t utilizing the same practices 50 years from now then the Bay is just going to go back to its unhealthy state. In order to maintain this process, we need to educate the next generation on what we did wrong and what they can do right in order to show them that keeping the bay clean is extremely important and not something to just forget about in the file cabinet. Just like the plan that we need to keep the idea of a better Bay in the minds of our future generation, we also need to make sure that the lands surrounding the bay remain resilient to these forces that continue to deteriorate it. To put it into a different perspective, think of the Bay as a person who has a cold. Right now it is sick and trying to fight off the pollutants in its body. With a little help from some prescribed antibiotics such as wetland restoration and stricter laws, the bay will be able to overcome its sickness and then healthier practices will cause its body to become resilient to these outside pollutants.

For education I will be going back to the Chesapeake Bay Foundation and donating \$96,500,000 towards their education program and ask that they also start a scholarship or build a new facility similar to the Karen Noonan Center which allows students to go on week long Chesapeake Bay education excursions. The remaining \$96,500,000 would go towards research focused on climate and pollutant resilience that could develop strategies which would later be implemented in the field. This donation would go to the Maryland Sea Grant which conducts research in this area.

One billion dollars is a lot of money, but when its amount is compared to the projected costs of saving the Chesapeake Bay Watershed, it doesn't look like much. That is why I chose to spend my \$1,000,000 dollars in a way that would cause chain reactions and do more than what was originally intended. Whether it is striking the source by electing the new governor of Pennsylvania who plans to completely cut off all pollutants to the Bay or maintaining the process by funding a future president's Chesapeake Bay learning experience, I know that these donations would make an impact that could last for generations.