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Ms. Johnston

ENC 1102

July 28, 2017

Dear Chairman Lamar Alexander,

Introduction

I am writing to express my concerns about the current issue about our nations freshwater supply. Currently, the leading controversy about Earth's environmental threats are based off our main resource: water. Almost all aspects of environmental concerns derive from our freshwater resources, this raises questions about how our nation is planning on taking steps to preserve our freshwater supply? Only 3% of freshwater out of the entire ocean volume on Earth. Most of this water is sealed away in ice caps and glaciers, the rest of the freshwater supply in beneath us in underground aquifers. With 1% of all the freshwater found, humans have quickly made it accessible for our use. However, the growing demand for freshwater resources are increasing faster than it can be produced, and the water resources available are consistently being consumed by intensive agricultural industrial use and domestic sectors. These tendencies are what's the leading the growing concern for our freshwater supply.

The phrase "clean water access" is not simply implying just a clear cup of water to drink. Growing crops, making food, bathing and cleaning, and other basic domestic functions are all

supported with freshwater as its source, which raises eyebrows as to how developed regions can practice these functions daily but in underdeveloped regions it is a rare occasion. In 2001, scientific evidence concluded that almost half of the world's accessible runoff is already made for human use and that nearly 1.1 billion people still lack access to fresh water. These deprivations created approximately 250 million cases of water related diseases which caused millions of deaths each year.

However, there is a solution to these threats, by enforcing our current legislations on water use can be a direct solution in regulating water management. Establishing these clean water acts will help in educating the nation about our water crisis and to promote a more environmentally conservative lifestyle in all sectors of water use in our nation to ultimately balance the current and future demands for water supply. I believe that we as a nation must attempt to create a more efficient plan on enforcement and educating the public on our water management crisis.

If the U.S initiates this proposal, it can bring global recognition to this issue, grabbing the attention of other regions dealing with similar issues for a better freshwater resource plan and to take the steps to become involved in the United States plans to transform our water management system. Addressing the global concern of this water crisis and lead a global resolution, with the U.S leading the way.

I felt addressing this particular committee directly would be effective in considering my proposition as a concerned citizen of the new generation who will have to deal with the outcomes of this issue if not addressed immediately. The U.S passed the Senator Paul Simon Water for Poor act designed to address concerns for equitable access to safe water and unfortunately it

wasn't fully funded to be fully enforced. Our nation has made efforts to address these water issues throughout the years but have yet to flourish in these acts because it is never being introduced as a top priority so the act was not fully funded to develop its full potential. However, the freshwater supply issue has only gotten worse, according to the EPA, right now in the U.S there is 41 states that have reported in the last 3 years higher than acceptable levels of lead in their drinking water. Even though there has been a steady progression in handling this issue, a crucial step in alleviating our water crisis is for the US government to fully fund the Water for Poor act and other water-related legislations that can support this proposal. In Appendix I, you can see the United States overall efforts to maintain the water system for our nation and what policies have been passed to preserve our freshwater supply.

Executing this project would have to begin through a team effort, calling all aspects of the US government to consider this proposal to then create a plan for funding. Involving other environmental organizations worldwide to help initiate these acts to ultimately enforce them in sectors of agricultural and industrial used would definitely be a step in the right direction. As well as proposing this idea to United Nations to get their viewpoints on this agenda to see how we could create a stronger team effort in creating funding for this proposal. Then focusing into transitioning towards informing and educating the public about these issues and legislations to encourage these domestic sectors to monitor their water use as well as enforcing these legislations can't support the resolution for our freshwater supply.

As a political figure, you can create an abundance of new opportunities for our nation. Supporting this proposal from your position will help strengthen the crippled plans for water restoration that have been set aside for years. Your committee has already made the blueprints to address our water crisis issue in the nation and with the growing demands for water increasing,

the controversy on water supply is something that we as a nation can no longer ignore. With your support and with the ranking you have, you could potentially create a whole new agenda in expanding these acts that are already established to their fullest potential to create a revolutionary project to better our water supply. Your connections in the U.S government as well as your connections with global leaders could bring light to this issue as well as recognition for taking the initiative to reinstate these legislations.

Imitating this agenda can save lives and save our planet as well as helping our nation preserve its water supply. Taking part in this proposal is meant to resolve the environmental risks our nations and nations worldwide are facing everyday due our poor water management as well as resolving any further problems we could face. Initiating this agenda now can address the many concerns our nations faces as well as resolving any further demands about clean water in our nation, unlocking a definite security for clean water for now and for the future generations to follow in the footsteps we place now to be environmentally efficient and successful in our nation and for nations worldwide.

Appendix I

Timeline of Water Management Policies in the United States

1948: Congress creates the Federal Water Pollution Act, the first comprehensive legislation for clean water.

1956-1961: Federal legislation had increased funding available for clean water supply and maintenance.

1972: Congress creates the Clean Water Act, setting national standards for wastewater treatment.

1974: Congress creates the Safe Drinking Water Act, providing the Environmental Protection Agency (EPA) authority to regulate contaminates in drinking water.

1987: Amendments to the Federal Water Pollution Control Act passes out the grants program for the Clean Water Act and replaces it with a loan fund for financing the wastewater infrastructure.

1990: The EPA issues regulation requiring water systems to filter and treat surface water supplies to prevent contamination.

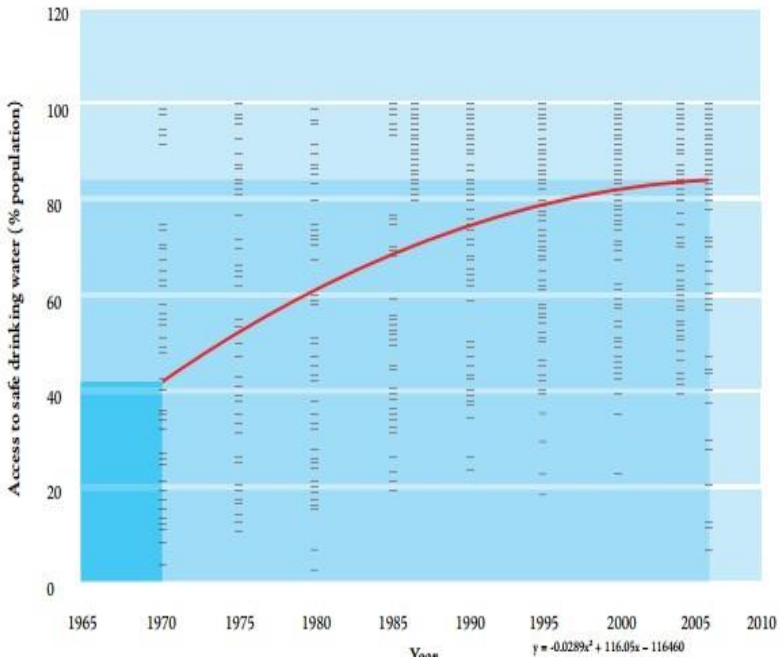
1994: EPA issues a policy to control overflows from combined sewers, forcing many cities to undergo renovations for their sewer system

1996: Amendments to safe drinking water establishes Federal loan fund for financing water supply infrastructure.

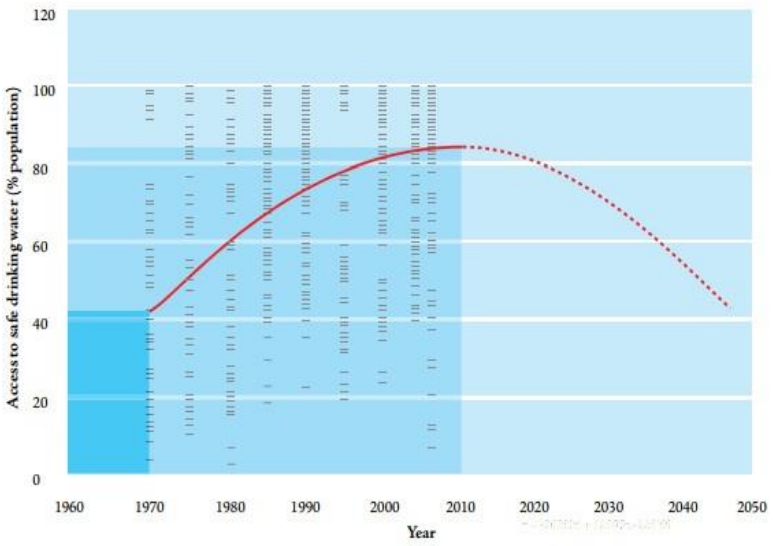
The history of instating these legislations since the beginning of our industrial revolution is what has kept our water management steady as we continued to develop as a nation. As we took a turn into the new era, our water access has only taken a turn for the worst and not just in our nation but, on a global scale. Following in Appendix II, we are presented with graphs that show a visual timeline of our worlds water access through the decades and its projections.

Appendix II

These figures show that one a global average, the access to freshwater resources has declined as early as 2010 despite the recent legislations being made to stabilize the dropping percentage. I mention from a global perspective because the Unites States is one of the top developed countries in the world and we serve as a large contribution to these numbers and if it effects the world, it is going to affect us. This also shows that we as a nation cannot continue to disregard the research being made about this issue and act against this decline before we face the possibility of safe drinking water falling below the level it was in during 1977 when the international community first launched their attempt to increase access to safe drinking water. Ironically only a few years after the United States passed its first legislation for clean water. Working on reinforcing our



legislations to work on a better water management plan can reverse these projections for the better before we face even more environmental consequences from the water decline.



Appendix III

The Causes and the Effects

On a global perspective, rainfall dispensation has always been uneven throughout the planet, majority of the precipitation falls in the tropic zone leading to a larger runoff such as areas like the Amazon. However, areas like Australia where the average runoff is 4cm per year have a different situation. There has always been a natural uneven dispersal of water across the lands, however that is not the culprit behind the issues of freshwater access.

Throughout the past 30 years, there has been an international understanding about our freshwater resources. There have also been collaborative international efforts to increase the rate of freshwater access such as a $1.5 billion investment in non-concessionary funding by the World Bank in addition to a staggering $3 billion per annum aid spent on water sectors from 1970 to 2006. Throughout all these efforts there was only 2.4% rise in population's access to safe drinking water, which poses many grey areas on this issue. Leaving us to continue to ask the question, "What is the cause?"

The leading causes revolving around the freshwater access issue is supply and demand, the use of water has grown more than twice the rate of population growth. This peak in population growth and demand for water is divided for uses of agriculture, industrial, and domestic functions and has been one of the leading contributors towards the water access decline. Aside from those demands when we analyze the domestic aspect of water use amongst regions, we can see the divide that has been established for water access. On average, a regular person in a developed region uses approximately 200-800 liters per day compared to the 60-150 liters a person in an undeveloped region uses. Basically, implying an average American can use

almost twice the amount of water a family in Uganda uses in barely a day, which puts a perspective on the uneven water access on a cultural scale.

Considering the environmental aspect of the issue, another contributor to the freshwater access decline is the rising level of biological and chemical pollutants that are being found in our so called “freshwater”. The source of these pollutants derives from industrial waste runoff entering the water system. The international use of intensive agriculture to meet the demands of food supply also poses as a risk factor to the safety of our water supply.

While all these factors are continuing to play a role in the freshwater controversy, there are still significant efforts being made to fix this situation one nation at a time. Currently, the European Commissions provided an addition 5million in humanitarian aid to help victims of the conflict in the Republic of Congo, where access to basic resources such as water are limited. Totaling to 28 million in funding towards Republic of Congo and their people in need of water and many other resources daily. While this funding is giving progression these regions, it raises the question of how much longer can funding these regions prevail to create an overall solution to the freshwater access crisis happening worldwide.

The world has acknowledged the facts, the statistics, and the projections about our debate with freshwater supply so, moving forward we must analyze our options to devise a plan for a solution.

One major option that is being excersied is the advancement of modern technology teaming with environmental sectors to create more environmentally effiecient technology to better regulate our water usage. Modern technology is being researched and developed as we speak to find new methods and practices that could help our current freshwater crisis for our nation and nations worldwide. Institutions such as the New York Institutuion of Technology and

the International Society for Water Solutions of the American Institute of Chemical Engineers have partnered with international universities such as the Peking Univeristy and Wuhan University in China to devise a plan for resolving the poor water management system.

These partnerships are jointly advancing in creating water quality models, water montoring tools, as well as water scarcity and hydroloic simulations. Their research is being executed through a combination of pilot demonstration projects, research for next generation, and community outreach through conferences and workshops. This apporac can help support waste conservation,management and overall water quality for the U.S. To potentially reach regions worldwide in helping to foster our water crisis on a global perspective. If everyday students with the same concerns for our water supply can branch out and develop such research and elaborate solutions towards water for our future, imagine what could be done a poltical standpoint, from your standpoint and what could be now.

When we look around at our surroundings, from automatic sinks to refillable water fountains and other technological advances for water are already around us, the solution for water surrounds us and it is up to the us, political leader, engineers, to everyday people to succeed in developing a more eco-friendly society to make a difference in our water supply and the overall sancity of our nation to nations worldwide.

Annotated Bibliography

Water in the Changing World

Jackson, Robert B , et al. “Water in a Changing World.” Esa.org, Issues in Ecology, 2001, www.esa.org/esa/wp-content/uploads/2013/03/issue9.pdf. Accessed 1 July 2017.

This article focuses on the issue of the growing demands of freshwater resources. Addressing how half of our clean water on Earth is being occupied for human use and the issue on the tremendous lack of access to clean water, that’s effecting approximately 1 billion people across the world. The authors propose that a possible solution for this issue based in their research would be implementing better monitoring and forecasting of water resources. This plan would also assist government agencies to allocate water more efficient among competing needs. This is just one of the few probable solutions towards addressing this environmental issue.
I find this source to be credible towards providing reliable information towards annotating my objective while further giving support to my topic focus on the global uneven distribution of clean water access and the poor investment on water management we face on a global scale.

Access to Safe Drinking Water

Fogden, Josephine, and Geoffrey Wood. Access to Safe Drinking Water. HaloSource, 2009, faculty.washington.edu/categ/healthanddevgbf/wordpress/wp-content/uploads/2010/03/Access-to-Safe-Drinking-Water.pdf. Accessed 1 July 2017.

This article was based on a research study by HaloSource, published by Josephine Fodgene and Professor Geffry Wood. Its purpose is to acknowledge that despite international efforts, there is still a significant decline in investments and educational campaigns towards safe

drinking water. Their ultimate goal for this article is to educate the public on the possible reasons behind this decline and the impact it can potentially cause if not address as a priority.

I chose this source as a support to my previous source since they both have similar focuses but with a more updated research that could help presenting my papers topic question.

Global Safe Water

"Global Safe Water." Nrcd.org, Natural Resources Defense Council , Mar. 2012, www.nrdc.org/sites/default/files/safewater.pdf.

This article addresses the issues of uneven distribution of clean water and how the simple solution of improving sanitation and protecting and treating water can led to great advances to resolving our global demand for clean water. Their overall purpose is to explain to the public the issue of the growing need for freshwater access and the probable causes of the uneven distribution and how it is creating an urgent need to link research with improved water management to overall led to a plan to resolve this issue.

I found this source credible based on the multiple credible sources on articles supporting their research and their purpose poses as a benefactor towards present the solution to my paper's topic focus.

How Can We Increase The World's Access To Clean Water?

"How can we increase the world's access to clean water?" Concern Worldwide U.S, 2012, gcc.concernusa.org/content/uploads/2014/08/Water.pdf. Accessed 1 July 2017.

This article primarily focuses on Haiti's issue on their lack of access to clean water however, the information and plans set towards improving Haiti's issue can be uses as a guide towards the issue of water distribution on a global scale. This article explains how the effects of lack of clean water has not only led to critically poor conditions in 3rd world regions but also leads to millions of children dying due to dehydration or illness from contaminated water. It also goes to showing projections of how much water is wasted in 1st world regions, showing how there such a difference between water access and how it is being used in different regions, 1st world regions get to use it for a necessity and for luxury while poorer regions get only a small percentage of what 1st world regions use as an everyday luxury. Explaining how the growing demand for freshwater supply for population growth, agriculture and development are using water faster than it can be renewed, and that these careless monitoring of water waste is what is leading to such a divide in clean water access. The article also focuses on proposals and options that exist to try and ensure that there is likely future of equal water access worldwide if the right actions are put forth. Examples such as drip irrigation, water conservation, and rainwater harvesting are just a few of the possible solutions that can take place to provide more clean water access to these undeveloped regions.

I found this source credible based on its facts presented and its credible references and resources such as National Geogaphic, World Bank, and BBC News to develop this article and its information provided that can support topic focus solution.

Current Events on Water-Related Issues

Cragg, Kayla. “EU Increases Humanitarian Aid to War-Torn DRC.” Circle of Blue, HotSpots H2O , 6 July 2017, www.circleofblue.org/2017/hotspots/hotspots-h2o-july-6-eu-increases-humanitarian-aid-war-torn-drc/. Accessed 8 July 2017.

Walton, Brent. "UN Prepares First Evaluation of Higher Standard for Water and Sanitation." Circle of Blue. Water News, Water Quality , 6 July 2017. Web. 8 July 2017.

These 2 new articles are current events addressing global issues about freshwater resources and what actions are being made to resolve. I used these articles to help support my information about current problems that people are facing everyday in developing regions. Also presenting current events that discuss some solutions being made currently to slowly progress towards equitable safewater actions on a global scale.

Gusovsky, Dina. "America's water crisis goes beyond Flint, Michigan." CNBC.com. N.p., 24 Mar. 2016. Web. 26 July 2017.

This article explains recent water crisis currently going on in the United States. I chose thia article to display current events that support my claim on enforcing more water legistlation to sae our freshwater resources.

Water for the Future

EcoPartnership on water quality management and conservation in the U.S. and China. Journal of Renewable & Sustainable Energy. Jul2015, Vol. 7 Issue 4, p1-11. 11p. 1 Color Photograph, 1 Diagram, 2 Maps.

This is a peer reviewed journal that explains the partnership of the New York Institute of Technology with international univiersities such as Peking University and Wuhan University in China joining together to do research on technological propsal for advancments in better water conserving technology. I chose this article to show what current actions are being done by everyday people attempting to create new solutions for being a more economical effiencient society by applying new technology to preserve our freshwater supply.