

Promoting Effective Drought Management

Gianna Bruno '23

Amelia Chen '23



Gianna Bruno (left) and Amelia Chen

An Act relative to maintaining adequate water supplies through effective drought management seeks to solve the issues of the patchwork drought management plan by unifying Massachusetts under one management system. When a drought is declared, water conservation efforts will be uniform throughout the state. It is important to note that this bill will only require water conservation methods relating to non-essential outdoor watering, for example, limiting one from watering the lawn just to keep it green. All essential uses such as business, agriculture, or indoor water use will not be affected by the bill. One legal change the bill will introduce besides a uniform system will be that citizens who have their own private water source, such as a well, will be subject to the same outdoor water conservation procedures that other citizens will be following. This is an important addition because those with wells are still pulling water from the same larger water sources that any other citizen would be using, therefore, the bill requires uniformity across the state, not just from some citizens. Proper water conservation is essential now more than ever because of the intensity and long lasting nature of the droughts currently affecting the Commonwealth due to climate change.

■ The Bill

H.861/S.475: An Act relative to maintaining adequate water supplies through effective drought management

■ Elevator Speech

Good morning. Our names are Gianna Bruno and Amelia Chen and we are residents of Massachusetts as well as advocates for the Drought Bill. Last year, Massachusetts experienced a statewide drought, and climate change will only increase the number and severity of the droughts the state will experience.

What is needed now are water conservation policies regarding non-essential outdoor watering that will ensure that the state will always be able to have water for essential purposes such as general household use, irrigation for farmers, and business needs.

However, right now Massachusetts has a fragmented drought policy, and each town in a region decides its own water conservation requirements. For example, neighboring towns that use water from the same water source are not required to follow the same drought policies, so one town may strictly enforce a ban on watering one's lawn, while the other town does not, thus creating no positive impact on the already struggling basin.

The Drought Bill would give the drought management task force the authority to require water conservation methods across the region during a drought without having to wait for the governor to declare a drought emergency. The state will therefore be proactive in saving water during droughts by standardizing conservation across regions rather than town by town: one responsible plan for all communities.

We sincerely hope you hold a hearing for the Drought Bill as soon as possible.

The Drought Bill S. 475/H.861

To Maintain Adequate Water Supplies Through Effective Drought Management

Problem

Seasonal drought is predicted to return every summer and we do not have a common plan in the Commonwealth to conserve our state rivers, wildlife, and water supply. We have one water source and need one plan.

Impact

- Drought led to crop failure with a net loss of \$18 million in 2016.
- 1 in 5 streams regularly run dry in the summer from excessive water withdrawals.
- Low flows endanger a million young river herrings because they were trapped in ponds and unable to migrate, which is necessary for their survival.

Solution

Invest in drought management with a standing task force that considers the changing needs of our many regions and responds to our climate crisis.

Call To Action

We ask that you hold a hearing for the Drought Bill as soon as possible.



Both towns above pull from the same water source, but Massachusetts' patchwork drought system allows each town to decide their own water conservation measures during drought. Therefore, some towns impose stringent measures, while others do nothing at all.

Op-Eds

Gianna Bruno

How the Water Rich State Could Run Out of Water

After the hours of rain and snow Massachusetts residents experienced during our most recent nor'easter, it could be hard to believe the state is trending towards more frequent and severe droughts. The issue is that during the winter and spring seasons, there is a large amount of rainfall, but in turn, the summer and fall seasons are becoming more dry. While the state still experiences rain and snowfall, it is not enough to replace all the water that is currently being used in the Commonwealth.

Massachusetts does have a drought management plan, but it does not suffice, which is why a new, better managed drought management plan as detailed in the Drought Bill is more than necessary in this climate.

The first iteration of the Drought Bill was introduced back in 2016 while the entire state of Massachusetts was suffering a 48-week-long drought between June 2016 and May 2017. No drought management plan could have ended the drought. However, if Massachusetts had had one, unified plan (rather than the fractured plan they currently have) that consolidated the state under one water conservation plan, then more water would have been preserved and then used for essential uses, such as for farmers who needed to water their crops.

Since that 2016-17 drought, Massachusetts has continued to experience intense periods of drought that have dried up streams, parts of the iconic Charles River, and even private wells. There are currently regions in Massachusetts that are experiencing mild to significant droughts. While that range does not necessitate an emergency, how inconvenient is it that parts of Massachusetts have to suffer the consequences of those uncontrollable drought conditions?

Due to a lack of a unified plan, those citizens are forced to consider the possibility of running out of water even during non-emergency level droughts.

Let us focus on that line again. Due to a lack of a unified plan, those citizens are forced to consider the possibility of running out of water even during non-emergency level droughts. In the short term, droughts are inconvenient because water sources are running low so that means farmers have less water to effectively sustain their crops. During droughts, farmers experience an extreme loss of crop due to the lack of water which translates into a major loss of money due to the lack of crops to sell.

However, in the long term, there is not a group of people

The Drought Bill S.475/H.861

To Maintain Adequate Water Supplies Through Effective Drought Management

Rebecca Spinner, Students for Environmental Action

The Drought Bill is absolutely necessary. There is less attention on droughts in Massachusetts because there is an assumption that the state is water rich so this story gets pushed aside



Massachusetts River Alliance

The Drought Bill allows states to be proactive in saving water during a drought, rather than waiting until an emergency strikes.

Paul Willard, Owner of Willard Farm

The drought of 2016 yielded our worst crop to date. We did not just have poor production, we had fields of crops that were dying.



For more information, please contact:
and Gianna Bruno

Amelia Chen

who would not be affected by droughts, because depleted water sources means no water for houses to use for washing or drinking as well as no water available for fire control.

Sadly, droughts are uncontrollable and are getting worse now due to climate change. The only recourse for dealing with a drought is to let it run its course, but without a drought management plan that actually conserves water, the plan is unproductive; therefore, a water emergency could be seen in the foreseeable future without action now.

It appears to be a pretty cut and dry situation, pardon the pun: droughts are bad (and are getting worse) so there needs to be a plan set in place in order to conserve water for essential purposes. While Massachusetts has a drought plan, it is so fragmented and confusing that it is producing the opposite of what it intended to do: it is not conserving our state's water!

Let me break it down. In Massachusetts, every town within a region has a different drought management plan. So, right now when a drought is declared, each town decides whether or not non-essential outdoor water uses are either banned, limited, or completely allowed, even though they are all pulling from the same suffering water source. The drought management plan provides us with essential guidance on when and how to make simple changes with a big impact to conserve water when we are running low. For example, all that is asked is that you skip a car wash or refrain from watering your lawn during drought periods.

The current system is as follows: House A (Waltham) and House B (Watertown) are right next door to each other and use water from the same well. When a drought is declared, House A is told that it is not allowed to water its lawn nor wash the cars, but House B is told that it is perfectly fine to water its lawn and wash the cars. So not only is their shared water source depleted because of the drought, but it is also drying up even more because House B is not conserving any water at all. This example demonstrates the necessity of having neighbors cooperating in order to conserve vital resources such as water.

The Drought Bill is essential. It creates one, unified drought management system across the regions. The proposed unified system is necessary because it will be consistent across the regions and will stay updated to handle the various needs in a changing commonwealth. Once this system is in place, when a drought is declared, all towns across a region will be conserving water, which means Massachusetts will be able to conserve water rather than continuing to deplete its precious, yet finite resource.

The Drought Bill has been passing through the Massachusetts legislature since 2016. Email, call, or go talk

to your representatives and let them know that this bill needs to be passed ASAP, before Massachusetts is stuck facing a water emergency.

Amelia Chen

If I ask you to picture a drought-ridden area in the United States, you would probably conjure up some image of Arizona or California. I'm picturing my home state of Massachusetts. We have a real drought problem in the Commonwealth, and even worse, we have a drought management problem. The misconception that the Bay State is water-rich diminishes the severity of our drought problem, and consequently, diminishes regard for the drought management problem in Massachusetts.

As climate change conditions continue to grow more severe, drought conditions worsen. Global warming leads to both wetter and drier global extremes, causing more intense rainfall and more severe droughts. This topic of the dire consequences of global warming continues to be ever-present in our society, and has majorly impacted Massachusetts' economy.

Farmers lost \$18 million because of the 2016 drought. This major loss in crops negatively affects the community, since businesses and people that depend on farming will also lose business and money. Further, because Massachusetts has many rivers, recreational businesses that offer kayaking and fishing supplies suffer from drought due to the low flow. The cost of drought is too high, and we need a drought management system that can address these effects of climate change.

Currently, Massachusetts has a fragmented drought management system. Each town in each region is able to decide what water conservation methods it wants to use during a time of drought, while all pulling from the same struggling basin. So, the city of Boston could require a total ban on all lawn watering, while the town of Waltham could have no water conservation methods at all. This patchwork system does not allow for effective water conservation during a period of drought. Instead, our current system reveals that there cannot be any productive change when Massachusetts is struggling! Climate change is only going to make drought periods longer and more severe, so there must be a change in how Massachusetts conserves water during these drought-ridden times.

The solution to our drought management problem is simple: we must support the Drought Bill (SD. 475 / HD. 861) and push for this bill to be passed. Essentially, the Drought Bill will eliminate our current patchwork drought management system by unifying the state under

one water conservation system. This bill is a crucial first step into improving the drought management system in Massachusetts.

As residents of Massachusetts, or just as socially-conscious citizens concerned with climate change, you must reach out to legislators now and tell them to support “An Act relative to maintaining adequate water supplies through effective drought management.” Earth Day is less than a month away, and what better way to show your compassion for Mother Earth than to protect the life-giving finite resource of water through better drought management?

Call your representative before April 22nd in honor of Earth Day’s celebration of the protection of our natural resources for future generations.

■ Letter to the Legislator

Dear Senator Barrett,

Your office has the opportunity to protect Massachusetts rivers, wildlife, and water supplies for generations. Last year, Massachusetts experienced drought that affected the entire state, and these drought conditions will continue to worsen as climate change persists. As you are the Vice Chair for the Senate Committee on Global Warming and Climate Change, I understand that the effects of climate change are of great concern to you. As residents of Massachusetts, we are asking for good stewardship over our public resources.

Right now, the state has a fragmented drought system. Each town in each region has the authority to decide what water conservation methods regarding non-essential outdoor use to require during a drought. For example, the town of Waltham could require a total ban on any and all lawn watering, while a town over, Lexington could have no ban at all. Since these two towns are a part of the same region, they are getting their water from the same suffering water source during a drought, which means one town is taking more water than the other and depleting the region’s water source, which is not fair. Every town should be held to the same standard when it comes to a shared resource and in this instance, water conservation should be uniform across regions.

The Drought Bill proposes the unification of Massachusetts under one water policy which would cause a net positive effect on the state’s water sources. According to the language of the bill, the Drought Management Task Force would have the authority to enact two things. First, the task force could declare drought conditions and subsequent water restrictions without waiting for the governor to declare a drought emergency. Second, those restrictions would apply to an entire region that is being affected by a drought, rather

than towns deciding for themselves. These measures are absolutely necessary in order to prevent a water emergency in Massachusetts.

There is widespread support for this bill across the state. Young people wish to mitigate the effects of climate change by having plans set in place to protect our water. Advocates wish to maintain the sanctity of Massachusetts water sources, and local farmers need to ensure that they will always have enough water to maintain their crops. There is not enough support in the climate deniers organization to stop the momentum of this bill.

I implore you to vote favorably for the Drought Bill during this session and pass this necessary law to protect Massachusetts water sources.

Sincerely,

Gianna Bruno & Amelia Chen

■ Excerpts from Campaign Journals

Gianna Bruno

On meeting with Mark Zglobicki, General Counsel for the Office of Senator Moore

...Amelia and I met with Mark Zglobicki who is General Counsel for the Office of Senator Moore. I thought we had a great meeting. We were able to share the Drought Bill and Zglobicki had a copy of the bill in front of him as well so he was able to point to aspects of the bill as we were discussing it.

What was interesting was that Senator Moore was not originally a co-sponsor, but Zglobicki insisted that the Senator would be very interested in the bill because a major water basin in Massachusetts lies in his district. Right as I thought the meeting was over, Zglobicki confirmed with us that the Drought Bill has been reported favorably a couple of times but has died each time. After we confirmed he suggested that the sponsor of the bill, Senator Eldridge, introduce the bill as an amendment to the transportation and environmental bond bill. He told us that if it is introduced as an amendment and gets the co-sponsors to co-sign to the amendment, then there was a chance that the bill could be put to a vote faster. Of course, he stated, we only had 9 senators co-sponsoring the bill at the moment which is about 1/4 of the senate, so he suggested getting at least a majority of the Senate [to co-sponsor] because it would be harder for the leadership to deny something with such support.

I did not realize there was another possible call to action besides asking for a speedy hearing or requesting a cosponsorship, so learning about this option really changed

my perspective on the legislative process. This was the first time either Amelia or I had heard of this option so we made sure to ask clarifying questions and Zglobicki was very helpful in informing us about the process and we made sure to confirm his email address before we left as well.

I really appreciated how he did not treat us like students but like advocates coming into his office to discuss a bill and he seemed very interested in moving the bill forward.

Amelia Chen

On meeting with Valerie, the Policy Advisor for the Office of Senator Tarr

Synopsis of the substance of the meeting: During this meeting, which is our first lobbying session at the State House, we met with Valerie, who seemed to care a lot about the drought issue, as well as other environmental issues in Massachusetts. We started off by introducing ourselves and Gianna started off talking about the drought management problem in Massachusetts, and I explained the Drought Bill as the solution, with our call to action being to ask for a speedy hearing. Valerie spoke to us about the environmental advocacy work that she is a part of and her passion for improving the environment.

Reflection: I think the way that Gianna and I introduced ourselves, the problem, and the bill was very smooth and effective. I was very nervous about meeting with these staffers and speaking with them, and since this was our first meeting of the day I was especially nervous. I was worried that I would trip up on my words or that they would ask us a question I did not know the answer to, but after how smoothly this first conversation went, I felt much more confident for our next meetings of that day.

Valerie was clearly more knowledgeable and experienced about environmental issues than other staffers we met with that day, which is probably attributable to the fact that she has more experience since she is older and talked about working in the private sector before coming back to work at the State House.

I think Gianna and I effectively connected with Valerie because she seemed to also be very excited about the Drought Bill and creating environmental change. I think she admired that we were students advocating for this bill, since at the end of our meeting she gave us some life advice. She told us that if we have a conflict or issue now that we will not care about in five years, then we should not let that issue bother us now. I think she told us this because we connected with her well and she might have found it endearing that we are students.

Something that could have gone better might have been to stay on track on the main point of the conversation more, which is to talk about the Drought Bill. Our conversation got more side-tracked when Valerie started talking about other environmental issues she was interested in – like the plovers (an endangered species) and the excellent water filtration system in Aruba. I think it was good to talk to her about these things because I think this helped us establish a connection with her, but tying some of the things she said back to the Drought Bill and the drought issue happening in Massachusetts would have worked even better.

■ Next Steps

The Drought Bill is currently in the Committee on Environment and Natural Resources and the first hearing for the bill this session is Wednesday April 26, 2023. The Drought Bill has been circulating in the Massachusetts legislature since 2016 and each time the bill has been reported favorably but dies once it reaches the Ways and Means Committee.

The bill is well supported by legislators, advocates, and citizens alike, but there is a lack of momentum that prohibits the bill from getting passed in a timely manner. There is a lack of urgency surrounding the bill especially because Massachusetts is not experiencing a debilitating drought. Massachusetts is currently experiencing drought conditions near the southern and eastern regions, but since they are minor, there is little public concern. In the short term, there is no concern for these low level droughts, but this bill seeks to manage the long term effects that droughts will have on the state.

The most difficult aspect of this bill is that it is preventative in nature. Since there is no current emergency we can turn to in order to prove the necessity of the bill, most advocacy asks people to consider the future and the consequences of a broken drought management plan in the long term, which is unrelatable and intangible to most.

Between discussion with advocacy organizations and legislators, as well as the state of climate change having an effect on the nature of droughts in Massachusetts, it is clear that the Drought Bill needs to be passed before Massachusetts experiences a water emergency in the future. Therefore, a new call to action is required in order to get the bill passed this session.

Upon recommendation by the general counsel for Senator Moore, the next step is to push the bill's presenter, Senator Eldridge, to submit the bill as an amendment to

the Transportation and Environmental Bond Bill. As an amendment to the bond bill, this bill would move quicker through the legislature as an amendment and push for support from legislators through a roll call.

After getting the bill submitted as an amendment to the bond bill, the next step would be to get more senators to sign onto the amendment, with the goal of getting at least half the senators to sign on their support. The Drought Bill currently is sponsored or co-sponsored by 9 senators, ...about 1/4 of the Senate. Our goal would be to get at least a majority of the Senate to co-sponsor the amendment because that would make it harder for leadership to deny something with so much support.

■ Update:

As of June 26, 2023: There was a hearing for the bill in the Joint Committee on Environment and Natural Resources on April 26, 2023.

For more information

View the bill (MA legislature website):

S.475: malegislature.gov/Bills/193/S475

H.861: malegislature.gov/Bills/193/H861

Organization or Coalition support:

Mass River Alliance: massriversalliance.org