



FROM SPECTATORS TO STEWARDS

A REPORT ON LOCAL CONSERVATION AND THE CAMPAIGN TO SAVE OUR BACKYARDS

Taylor Brokesh
Boston University Earth and Environmental Science – EE 538
Fall 2023

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This report could not have been created without the help of Professor Richard Reibstein. I would also like to thank Jim and Jean Williams, Charlie Wyman, Elle Baker and Ali Hiple for assisting with my questions and providing guidance, Michele Girard, Dorothy McGlincy and MACC for their help and coordination to allow me to attend their annual conference, and my fellow classmates in EE 538 for their amazing feedback.

Cover photo: *Phragmites* at Gibson Park, Revere. Taylor Brokesh 2023.

THE STATE OF CONSERVATION:

CONCEPTUALIZING THE PROJECT MISSION

As of October 2023, there are 45,000 acres of natural salt marsh in Massachusetts. That may sound like a sprawling amount, but MassAudubon and the Conservation Law Foundation estimate that this is only 59% of the historical salt marsh acreage of the state.¹ Human activity and development are to blame for this loss, and with the advent of climate change beginning to make itself known in our environment, it is imperative that these important ecosystems are able to continue their ecological functions for both the sanctity of nature and also to mitigate global warming's worst effects.

There were two components that spurred me to pursue this project. The first factor was that in Massachusetts, there exists state and local agencies specifically dedicated to preserving wetlands; and since there are, how can there be wetland loss? The primary duty of conservation commissions is to enforce the Wetlands Protection Act (1972), which essentially requires commissions to ensure that human development does not encroach on natural wetlands.² Therefore, what I wanted to understand was **what obstacles or challenges are preventing these agencies from doing their protective and restorative duties at the rate and efficiency that climate change is demanding.**

The second component came to me anecdotally in the form of two very different cases. First, I learned of the Gibson Park Resiliency Project in Revere, MA. For several years, the project has been stalled by permitting obstacles and rigid guidelines. I decided I would have to visit the site myself and speak with Elle Baker, the project manager, to learn about what is needed for agencies to be able to overcome bureaucratic-red-tape-like barriers. Second, I learned of retired math teacher and environmentalist Jim Williams, a lifelong resident of Lexington, MA, who is also the sole caretaker of a plot of wetland near Lexington High School. With his case, I wanted to learn **how interested parties could motivate others – from individuals to cities – to increase their conservation efforts.**

With these two questions in mind, I set out to develop a comprehensive set of guiding concepts that would aim to improve the state of conservation in Massachusetts. Ideally, these concepts will set us on a path to be able to efficiently protect our vulnerable ecosystems and our indispensable natural resources.

CONSERVATION COMMISSIONS:

FREQUENTLY ASKED QUESTIONS³

What is a conservation commission?

Conservation commissions are municipal community boards made of up to seven volunteers, each having three-year terms. Each of the 351 towns and cities in Massachusetts has their own conservation commission. As established in the Conservation Commission Act of 1957, conservation commissions are tasked with protecting the natural environment in their community.

What is the Wetlands Protection Act?

The Massachusetts Wetlands Protection Act (1972) designates the responsibility of protecting wetlands to each community's conservation commission. Any party interested in doing work in or around wetlands must file for a permit from their municipality's conservation commission. The municipality may also have local regulations or bylaws related to wetlands protection that the conservation commission can also carry out; this is known as home rule.

What are other jobs of conservation commissions?

Conservation commissions are able to purchase land within their municipality's borders and designate it as conservation land. They also oversee and maintain land already deemed conservation land, with any regulations they create for these spaces to be treated as law. They can also inventory a municipality's natural resources and create Open Space and Recreation Plans, which account for future conservation efforts.

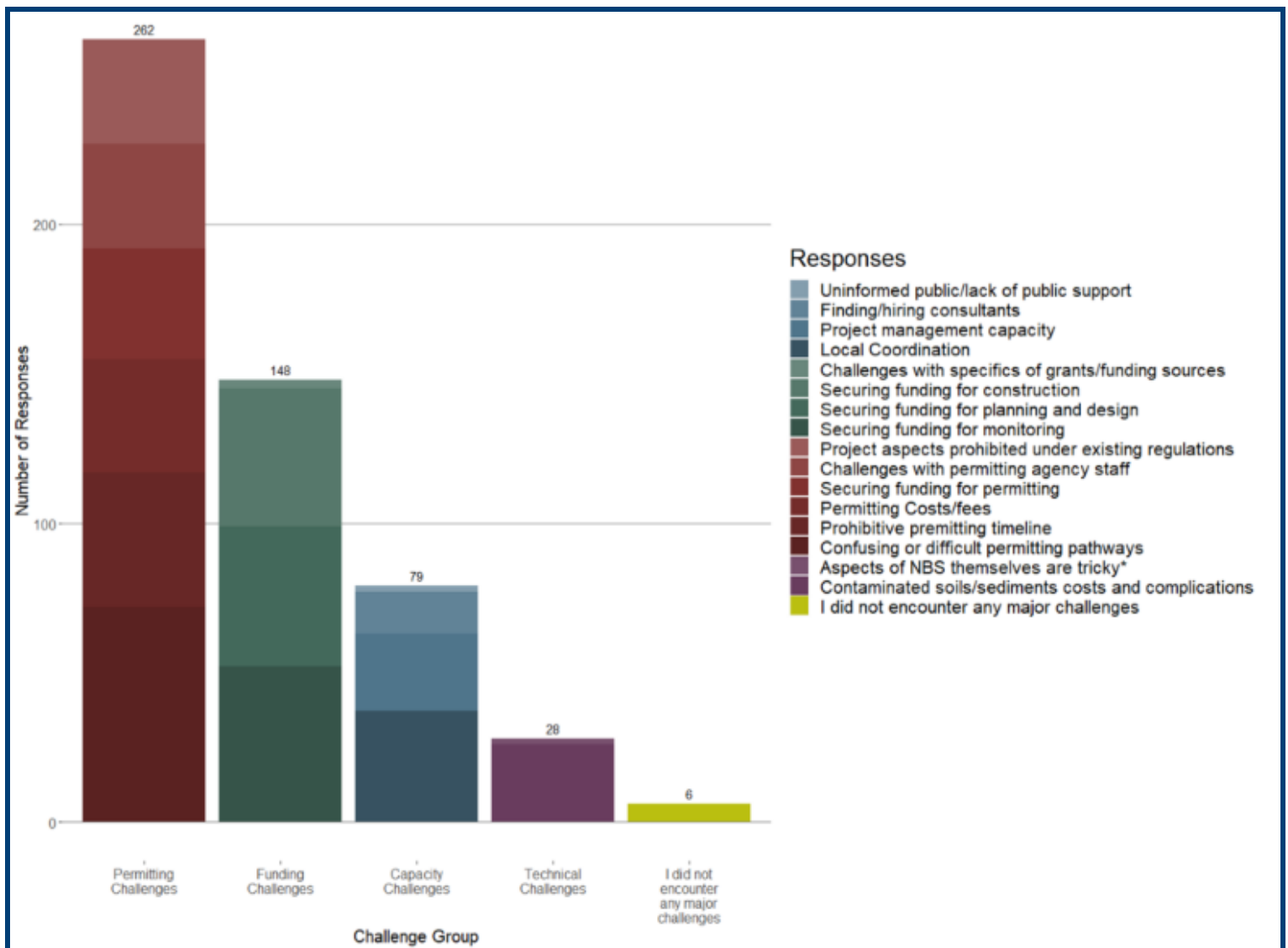


Photo: mass.gov

THE MASSACHUSETTS ASSOCIATION OF CONSERVATION COMMISSIONS

ANNUAL CONFERENCE - OCTOBER 28, 2023 - DEVENS, MA

The MACC annual conference provided some context for the first component of this project: helping to spell out exactly what roadblocks conservation commissions and other parties interested in wetlands restoration were facing. Commissioners and other environmentalists from all over the state convened in Devens to discuss matters that were most important to them and their work, and to brainstorm collaborative solutions to large-scale problems. In particular, the presentation by MassAudubon and the Conservation Law Foundation – represented by Heidi Ricci and Ali Hiple, respectively – showcased survey results from environmental practitioners across the state that pointed to these potential roadblocks.



Graph: Conservation Law Foundation/Ali Hiple

Quotes

"The 401 dredge permit, that is one that we've literally been talking with them for probably 2 1/2 years at this point, going back and forth to make sure that we had all the data that they wanted, you know, **depending on who you talk to on any given day, it was different data that they were likely to want.**"

"Quite frankly, it's not just simply tweaking how the regulatory world operates and the applicants work, but **more literally a true partnership. We need a new model** that says we're gonna work together to solve the problem, pool our land pool, our resources, our knowledge."

"The permitting system, the regulatory system, needs to **allow innovation to proceed, but not just give it a blank check.**"



Slide: Conservation Law Foundation/Ali Hiple

These survey findings appear to point toward the following conclusions:

- ☐ **Permitting challenges** are the primary reason that environmental practitioners reported they are unable to make rapid progress towards wetlands conservation projects (the largest amount of complaints related to "*confusing or difficult permitting pathways.*")
- ☐ Securing funding is also a major challenge, both for permits/permit applications and for the restoration projects themselves.
- ☐ Both of these issues can lead to project timeline extensions, and likely are indirectly leading to wetland loss.
- ★ To address these problems, a solution would need to incorporate **1)** a streamlined, simpler permitting process, **2)** increased local funding, and **3)** increased cooperation and communication between permitting agencies and practitioners, but also between practitioners and their municipal governments.

CASE 1: GIBSON PARK, REVERE



Gibson Park in Revere is one site that is currently serving as a concrete example of some of the challenges environmentalists at the MACC annual conference reported. It is unique in that it is experiencing so many environmental challenges, which is why the Gibson Park Resiliency Project's relatively slow rate of progress is all that more confounding.



Photo: Gibson Park's baseball diamond, Wheelabrator Saugus in the background. Taylor Brokesh 2023.

Referring to the map on page 7, we can observe the myriad of climate resiliency obstacles affecting Gibson Park.

1. Inset: The Abandoned Boathouse

A small yellow square on the inset of the map indicates the site of 193 Mills Avenue, which, according to Elle Baker, was a former boathouse. Google Street View images from 2011, the latest available date, suggest that it was once the site of an Evinrude Outboards shop, a chain manufacturer of boat engines.⁴ Currently, the site sits empty, the building that is still standing falling into disrepair. Baker says her team has tested the soils for contaminants and found residual paint chemicals. Additionally, there is a small neighborhood directly adjacent to both the boathouse and the Pines River. Baker is very concerned about flood risk for these residents.

2. Wheelabrator Saugus

Directly across the Pines River from Gibson Park is the trash incinerator plant known as Wheelabrator Saugus, operated by the company WIN Waste. Tall plumes of smoke are constantly visible billowing from the smokestacks. The plant has been in production since 1975 and the trash incineration generates energy for many surrounding communities, however there have been concerns for decades about air quality and noise, particularly since the Rumney Marsh Reservation immediately surrounding it has been designated as an Area of Critical Environmental Concern. The City of Revere has no jurisdiction over the site as it is technically within Saugus borders.^{5,6}

3. Ample Pollutants and Flood Risks

The geographical location of Gibson Park also must be considered. Route 1A is immediately adjacent to it, and the Newburyport/Rockport Commuter Rail line is visible across the river. Additionally, air traffic from Logan Airport, less than seven miles away, is frequently passing directly overhead. This means that Gibson Park is constantly being exposed to several different sources of pollutants, not to mention the pollutants that come along with the construction of a new housing development right next to the park on the northern side. It is also located on a small peninsula, surrounded by the Pines River on the western side and the Broad Sound on the eastern side.

Photo: The new housing development under construction next to Gibson Park.

Taylor Brokesh 2023.



The Gibson Park Resiliency Project

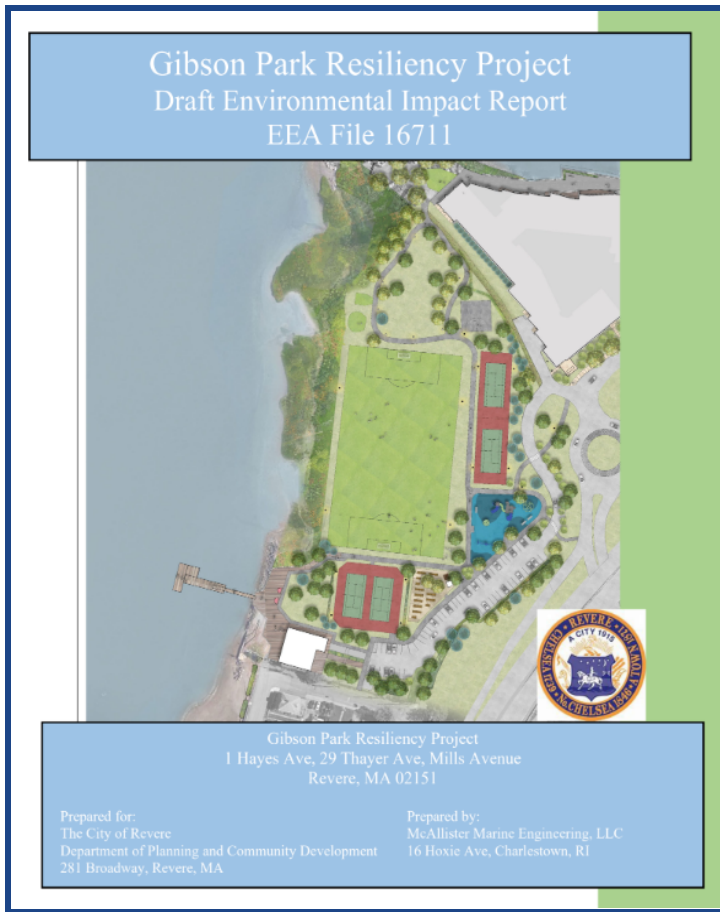


Photo: Cover of the 128-page environmental impact report for the Gibson Park Resiliency Project. McAllister Marine Engineering, LLC, 2023.

An example is this patch of invasive *phragmites*, circled in pink on the right, near the abandoned boathouse. Baker says she and her team are unable to remove this patch – no larger than a bus stop – to create a berm because it has been designated as salt marsh. Therefore, they had to redraw plans and added even more time to their already tight deadline.

Baker has said this project sometimes feels like an “uphill battle.” She wants more communication between her (the City of Revere) and state agencies so they can address Gibson Park’s many problems as a team, for the benefit of the neighborhood.

Planning to make Gibson Park more climate resilient began in 2019. Locals submitted comments about what they would like to see, which included vegetative berms near the riverbank and a more comprehensive flood prevention system.⁷

At the start, the project needed eleven different permits: two local permits, five state permits (four of these from the MA Department of Environmental Protection), and four permits from the federal government. As of late November 2023, Baker said five of those permits had been acquired. Baker hopes they will be able to reach their goal of being able to break ground in July 2024, but first, all of these permits must be acquired. Baker said there has been a lot of back and forth on specific aspects of the plan that has held up progress.



Photo: The “salt marsh.” Taylor Brokesh 2023.

CASE 2: LEXINGTON HIGH SCHOOL

Jim Williams is a lifelong Lexington resident. He was a math teacher at Lexington High School when Nancy Sofen, a member of the town's Tree Committee, earned a town grant that enabled her and interested Lexington High students to work on restoring several acres of wetland near the school. Williams teamed up to assist with this endeavor, having been passionate about these particular acres for a long time. The grant eventually ran out, Sofen and the student volunteers stopped their conservation efforts, and Williams retired – but now, after that initial investment of time and resources, Williams continues to dedicate about ten hours a year to ensuring the area's upkeep by removing invasive plants.



Photo: Jim Williams' marsh by Lexington High School. Google Maps 2023.

Williams says caring for the wetland is an enjoyable activity and that lots of people in the retired community would probably benefit from the low-grade recreation. Most people, however, don't know that the *phragmites* and the bittersweet plant, pictured below, are invasive species, nor do they believe that their individual efforts will amount to any sort of visible progress against climate change or toward conservation efforts.

The task at hand, then, was to determine the best ways to both convince individuals to become more interested in conservation and also to distinguish pathways for agencies to conduct their conservation duties on a larger scale than Williams' one-person operation.

Photo 1: *Phragmites*. Forest Preserve District of Will County 2023.

Photo 2: Bittersweet. Chesapeake Bay Program 2023.





Photo: New England forest. Mongabay 2016.

GUIDING CONCEPTS

HOW WE CAN MOVE TOWARD A MORE CONSERVED WORLD



The result of all of these observations, discussions, and research are the following four “guiding concepts.” They were devised not as the straightforward, be-all and end-all solution to the problems outlined previously, but as a suggested pathway that may be beneficial for municipal governments to study and work off of. More work likely has to be done besides following these concepts, however these concepts are a good framework for starting up more conservation efforts at the local level. These concepts are also more general to be applied across the state and have their own challenges related to implementation.

These concepts were also designed to be implemented in Massachusetts, but they could easily be adapted to fit the needs of other states around the country. Conservation commissions do not have the same purposes nationwide, but many ideas can still apply.

CONCEPT 1:

Empower Conservation Commissions to be able to carry out their duties in a more streamlined and efficient way.

Conservation commissions need to be able to do what they were designed to do. They are overburdened with permit applications for development and have less and less capacity to be able to carry out their other duties, particularly wetlands restoration and management. Several things must happen in order for this to occur:

- ☒ There needs to be a significant increase in the budget allocation toward every conservation commission, particularly those hurting the most with larger projects needing addressed. The budget comes from the municipality's government, and therefore either the municipalities need to find a way to fund commissions more or there needs to be a statewide investment.
- ☒ Communication and collaboration needs to be improved and streamlined between commissions and their respective governments, but also – very crucially, as the CLF/MassAudubon survey revealed – between commissions (and other environmental practitioners) and permitting agencies, such as the MassDEP, in order for productivity to pick up the pace.

Challenges include:

- ☐ **Home rule.** If municipalities can enact their own bylaws, it makes things more complicated and less likely to be uniformly streamlined.
- ☐ Conservation commissions have to abide by the **Wetlands Protection Act**, a piece of statewide legislation very unlikely to be streamlined (it hasn't in over fifty years.)

CONCEPT 2:

Have conservation commissions/municipal governments purchase open spaces that already exist to preserve them, since new open space is unlikely to be generated.

Open land reclamation is already one of the jobs that belong to conservation commissions, but there needs to be an increased sense of urgency when reclaiming land due to the looming pressures of climate change. We must also ensure that commissioners themselves are able to do their jobs – open land reclamation cannot happen if there is no hearing, and a hearing cannot happen if any commissioner is absent. Therefore:

- ☒ Conservation commissioners need to be treated with a higher importance than they are currently, since the law is on their side. Town managers should not be able to dismiss any volunteer unless there is a violation of ethics or the law.
- ☒ Any development conservation commissions permit near wetlands (and really, all developments in general) should be built sustainably and responsibly. To financially incentivize developers, a tax on carbon could be implemented.

Challenges include:

- ☐ **The housing crisis.** Massachusetts severely lacks affordable housing, and with newer regulations such as the MBTA Communities Act⁸, there is the possibility that open land may be used for more housing development. A balance would need to be struck between conservation land and land allocated for housing.

CONCEPT 3:

Connect open spaces to create sustainable, self-maintaining, self-reliant ecosystems, or "wildlife corridors."⁹

Wildlife corridors, created by connected open spaces, are small ecosystems that contain everything a particular or multiple species need. By connecting open spaces reclaimed by conservation commissions, wildlife corridors may be able to be constructed and therefore maintain themselves. To do this, the following would have to take place:

- ☒ As a society, we would have to reframe our conception of wilderness – hundreds of wide open, forested acres may no longer be possible at the rate of our development. But if we consider it to be more like the wildlife corridor model, we may be able to save what we have left by treating it more manageably.
- ☒ "Gardening by subtraction," a concept from Jim Williams, means that once you remove invasive species from a certain ecosystem, that ecosystem should be able to survive and thrive on its own, as it had done for all of its previous history. Therefore, removal of invasives is of the utmost importance for our conservation goals.

Challenges include:

- ☐ **The realm of authority** that conservation commissions have extends only to their municipality's borders. Some corridors may cross over town boundaries, and therefore, there would need to be an established goal to create the corridor from all involved commissions. Otherwise, state intervention might be necessary.

CONCEPT 4:

Increase and bolster public education initiatives about caring for conserved areas, removal of invasive species, and conservation in general.

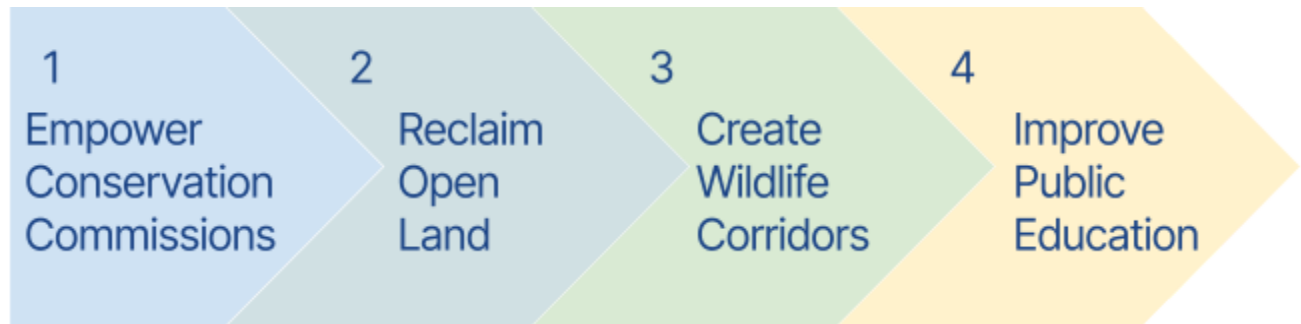
Increasing public awareness about the simplicity of maintaining small-scale natural spaces – thinking of Jim Williams' example – could mean that while larger agencies tackle similarly larger swaths of land, towns and cities could improve their overall conservation efforts solely from volunteers. And it *would* make a difference. These education initiatives would need to communicate:

- ☒ What invasive species look like and how to safely and effectively remove them.
- ☒ What local areas need in terms of conservation efforts and how often upkeep would be required.
- ☒ More in-depth knowledge of the Wetlands Protection Act, in order to avoid violations, and the overall process involved with obtaining permits from conservation commissions.

Challenges include:

- ☐ What would this program look like, and **who is it actually, realistically aimed toward?** Would it be aimed toward schoolage residents, retirees, another demographic?
- ☐ **The costs of continued implementation.** This would be a long-term, wide-reaching public education campaign, and depending on the education method, it could be costly.

CONCLUSIONS



More research and work is needed to be able to solve our conservation crisis, but to be quite honest, not as much as probably one would anticipate. This report took about three months of off-and-on dedication. Imagine what could have been accomplished with three months of pure dedication, or a team, or funds backing its production. Now, imagine what could have been accomplished if all of that time was spent outdoors, pulling at weeds, restoring the natural health to an acre or two of wetland.

It goes without saying that conservation is important. But the issue arises when people agree with that statement, and then everyone moves on. We all need to be dedicated to the issue of conservation, because while it may feel like a far-removed issue to some, it almost never actually is.

I know that, personally, producing this project has opened my eyes to the way that anyone with a few hours to spare can make a difference, simple as that. There are roadblocks in the way to make big differences – as there are with any challenge – but progress *is* being made by many people who genuinely do care. I ask that we keep our nose to the grindstone and do what we can to ensure our future is conserved. Now, we know what that takes. All that is left is to demand it from those who are able to deliver.

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