

Dear Arlington ZBA,

I am writing to add my voice to all those who oppose building on Thorndike Place/ Mugar Property.

In my research to better understand this issue, I have learned some fascinating facts about wetlands.

**Our town owes it to ourselves to truly understand the nature of wetlands before we can have an honest conversation about the issue.** If the land is developed, we will realize what was truly at stake, all that we don't yet know, but at that point it will be too late.

Wetlands are important to protect because:

### **Wetlands are the most biologically diverse of all ecosystems**

- There is **more animal diversity** in the wetlands compared to **any other biome** in the world.
- Although they only cover a small portion of the continental U.S., **half of all North American bird species** use wetlands for feeding or nesting.
- Additionally, more than **1/3 of all threatened or endangered species** are dependent on wetland habitat.
- Wetlands host to nearly **1/3 of all plant species** on Earth.
- More than 19,500 animal and plant species depend on wetlands for survival globally.

### **Wetlands are natural water filters, the "kidneys of the landscape"**

- Wetlands can hold pollutants such as heavy metals and phosphorus and can even aid in converting dissolved nitrogen into nitrogen gas.
- Wetland areas can also break down suspended solids thus playing a vital role in neutralizing harmful bacteria.
- Wetlands clean, filter, and store water thereby acting as the "kidneys" of the earth's ecosystems.
- Surprisingly, **wetlands can remove up to 60% of metals contained in the water, trap, and hold up to 90% of sediment from runoff and get rid of up to 90% of nitrogen.** They do this mainly through uptake by plants and percolation through the soil.

### **Wetlands combat climate change**

- The area of earth covered by wetlands is very small, but their carbon-capturing abilities are amazing.
- Wetlands, especially peat wetlands, can store up to **50 times more carbon (the heat-trapping gas) compared to rain forests** thereby helping to combat climate change.

### **Wetlands are the planet's "sponge" and their existence prevent flooding and extreme events such as hurricanes and typhoons**

- According to EPA, up to **1.5 million gallons of floodwater can be stored in an acre of wetland** thereby qualifying as a natural flood control mechanism.
- Wetlands are excellent at absorbing floodwater and freeing it slowly into the ground, serving as "reservoirs" for excess stormwater thus preventing flooding.
- The increasing initiative to protect wetlands, to a great degree, is because they are crucial for keeping rivers at a normal level.
- **This helps to keep at bay the potential of flooding and extreme events such as hurricanes and typhoons.**

The Town of Arlington has the opportunity to

- protect the feeding and nesting sites of up to **half of all North American bird species**
- protect **threatened or endangered species** who are dependent on wetland habitat
- support nearly 1/3 of all plant species on Earth
- **contain pollutants** such as heavy metals and phosphorus
- neutralizing harmful bacteria
- clean, filter, and store water
- combat **climate change**
- retain up to 1.5 millions of gallons of floodwater
- **prevent flooding in nearby neighborhoods**
- maintain normal levels of local rivers, AND
- prevent extreme events such as hurricanes and typhoons
- **if they can prevent building on the Thorndike Place/ Mugar Property.**

Imagine if the property were a rainforest- would we allow development on the land? The majority (~75%) of our nation's wetlands are on private property. Many citizens, including myself until recently, aren't aware of the amazing and necessary role that wetlands play in our ecosystem. And our laws haven't caught up to protect them. But when we know better, we should do better. I urge you to oppose all construction on the property with all the powers you have.

Thank you,  
Erin Freeburger  
20 Parker Street  
Arlington, MA

Sources:

<https://www.conserve-energy-future.com/facts-about-wetlands.php>  
<https://www.nrcs.usda.gov/>