

# The Great Marsh (Part Two): Our Future Together



## Executive Summary

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This video is the second of a two-part series about The Great Marsh, entitled The Great Marsh, Our Future Together.

This 30-minute video begins with a review of climate change, including the causes of sea level rise and its impact on the marsh, both locally and in the eastern half of the United States. It describes how communities use scientific models and projections to prepare for the future impact of climate change. The marsh has the ability to moderate the effects of climate change through its two “superpowers,” i.e. storing carbon and providing a buffer to storms and erosion. The three main threats to the marsh are erosion, sea level rise, and invasive species. Thankfully, marshes have some natural ability to adapt to climate change through **accretion** and **migration**. The keys to protecting the marsh are **mitigation, resilience, and adaptation**. The video concludes with an impactful message: we need to repair the mistakes of the past and change our behavior moving forward in order to lessen the impact of climate change.



## Using This Video In Class

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### Video Discussion Breaks

This 30-minute video has five pause breaks for discussion listed below. Budget your time accordingly to complete the video in one class period.

Video Discussion Breaks:

- at 3:00      What changes do you imagine will occur here in Newburyport when sea levels rise, and flooding becomes more frequent?
- at 3:25      Look at this map of the East Coast of the United States. How many large metropolitan areas can you name that would be affected by a rising Atlantic Ocean?
- at 8:40      Viewing a graphic representation of carbon stored by the Great Marsh, students are asked to interpret one row.
- at 18:02     What does the marsh have going for it? How is it in harm’s way?
- at 22:45     Compare these two bridges to Plum Island in terms of impact on the marsh.



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## Further Study/Homework Options

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In addition to the suggestions in the Part One Teacher Guide, consider the following:

### Make a change

If we all make small lifestyle changes, it can add up to a big impact on greenhouse gas reduction. Based on the suggestions in the video, determine two significant steps your family can implement to have an impact. Commit to a two-week pilot run of one of these changes. Create a PSA in the form of a poster or video encouraging others to do the same!

*We at Storm Surge would love to see what your students come up with.  
Find out how to contact us at [www.storm-surge.org](http://www.storm-surge.org).*

### Measure your impact

Need more ideas for lifestyle changes? Try out these carbon footprint calculators:

<https://howdoyoufuel.com/quiz>

<https://www.conservation.org/carbon-footprint-calculator#/>

### Lend a hand

Get involved in a local service project on the marsh, such as a clean-up or a pepperweed pull. Find local service projects here:

<https://mvpc.org/eight-towns-and-the-great-marsh/>

<https://www.greatmarshpartnership.com/>

### Send a letter

Write a persuasive letter to your state representative and/or state senator about the importance of maintaining and preserving the Great Marsh.

<https://malegislature.gov/Search/FindMyLegislator>



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## Resources

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### **Great local ideas for sustainable living:**

<https://www.massaudubon.org/get-involved/live-sustainably>

### **Photojournalism: Photos and description of climate change impact on the Great Marsh**

<https://thegroundtruthproject.org/the-great-marsh/>

### **History of human impact on Plum Island's salt marshes**

<https://www.wbur.org/earthwhile/2019/07/02/salt-marsh-sea-level-restoration-plum-island>

### **This map projecting flood levels in 2030 and beyond is powerful!**

[https://coastal.climatecentral.org/map/12/-70.8148/42.7922/?theme=sea\\_level\\_rise&map\\_type=year&contiguous=true&elevation\\_model=best\\_available&forecast\\_year=2030&pathway=rcp45&percentile=p50&return\\_level=return\\_level\\_1&slr\\_model=kopp\\_2014](https://coastal.climatecentral.org/map/12/-70.8148/42.7922/?theme=sea_level_rise&map_type=year&contiguous=true&elevation_model=best_available&forecast_year=2030&pathway=rcp45&percentile=p50&return_level=return_level_1&slr_model=kopp_2014)

### **“Blue Carbon” video - short video, filmed in the Snohomish Estuary in Puget Sound WA demonstrates how coastal wetlands mitigate climate change and reduce carbon pollution.**

<https://www.earthcorps.org/our-story/key-initiatives/blue-carbon/>

