

Coastal Flooding and Salt Marshes in Connecticut: A Survey of Landowners



A study conducted by:

UConn
UNIVERSITY OF CONNECTICUT

This survey is for all coastal landowners in Connecticut. All opinions matter and are valuable, even if this is a new topic for you.

The purpose of this survey is to learn about your opinions on increased coastal flooding and salt marshes in your community. You were chosen as part of a random sample of people who own land in areas that will likely convert naturally to salt marsh in the future. Our report on this research will be shared with state and local officials so that the opinions of people like you are considered when developing coastal management policies and programs that could benefit landowners in your area. Even if you aren't very interested in these topics or live far from existing salt marshes, we still would like you to answer the questions and return the questionnaire. Please be assured that your identity will be kept strictly confidential and **your responses will never be associated with your name or address.**

In this questionnaire, a **salt marsh** is a coastal wetland that is flooded by salt water brought in by the tides at least twice each month. As increased coastal flooding continues, salt marsh will likely move inland into areas that are **not currently marsh**, as shown below. We are interested in your thoughts on this process and how it might affect you.



Please complete this questionnaire as soon as you can, place it in the envelope provided, and drop it in any mailbox; return postage has been paid. Your participation in this survey is voluntary and you may stop at any time, but we encourage you to respond to all questions.

THANK YOU FOR YOUR HELP!

This survey is an effort of the University of Connecticut and will contribute to a graduate student's dissertation research, as well as inform coastal management policies and programs that could benefit landowners in your area.

What are the characteristics of your coastal property in Connecticut?

Coastal property includes land within one mile of the coast.

1. Is your coastal property your primary residence? *(Check one)*

Yes No

2. Approximately how many acres is your coastal property? *(Fill in the blank)*

_____ number of acres

3. How many times has the first floor of the house on your coastal property flooded in the last 10 years? *(Fill in the blank)*

_____ number of times the first floor of my house has flooded

4. Did the first floor of your house flood as a result of Hurricane Sandy (October 2012)? *(Check one)*

Yes No

5. What percent of your property is currently salt marsh (coastal wetland that is flooded by salt water brought in by the tides)? *(Fill in the blank with a whole number from 0-100)*

_____ percent of my property is salt marsh

The next several questions concern your thoughts about increased coastal flooding, whether it will impact your coastal property, and what actions you will take on your property. Shoreline protection is any construction designed to prevent water levels from rising on your property. Common examples include bulkheads, revetments, and concrete sea walls.

6. Research by The Nature Conservancy (<http://coastalresilience.org>) suggests that part of your property is likely to convert naturally to salt marsh in the future as a result of increased coastal flooding. What are your thoughts about the likelihood of water level rising on your property and your potential response? *(Check one box for each row)*

Within the next twenty years, how likely is it that...	Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
...water levels will rise naturally on any part of your coastal property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...rising water levels would create salt marsh in new locations on your coastal property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...you will use shoreline protection (such as bulkheads, revetments, and/or concrete sea walls) to prevent water levels from rising?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...you will allow water levels to rise naturally?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Assuming that water levels may rise on your coastal property in the next 20 years, what are your thoughts about allowing water levels to rise naturally (not using shoreline protection) on your coastal property? (Check one box for each row)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Allowing water levels to rise on my property would be bad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most people who are important to me think I should allow water levels to rise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most people who are like me will allow water levels to rise on their coastal property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allowing water levels to rise naturally on any part of my coastal property is up to me (as opposed to other people).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. If water levels are allowed to rise naturally on your coastal property in the next 20 years, how likely are each of the following outcomes for your coastal property? (Check one box for each row)

Allowing water levels to rise naturally on my coastal property will result in ...	Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
...losing my land to the sea.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...more habitat for saltmarsh wildlife.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...more salt marsh for storm protection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...others thinking I am neglecting to care for my property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...more mosquitos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...more expensive insurance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...reduced property value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...increased risk of my house flooding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How good or bad would each of the following outcomes be for your coastal property? (Check one box for each row)

Outcomes	Very Bad	Bad	Neither	Good	Very Good
Losing my land to the sea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More habitat for saltmarsh wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More salt marsh for storm protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others thinking I am neglecting to care for my property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More mosquitos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More expensive insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced property value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased risk of my house flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. In the next twenty years, do you think the following situation will occur? How will it influence your ability to allow water levels to rise on any part of your coastal property? (Check one box for each row)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I will be offered a <u>monetary incentive</u> to allow water levels to rise on my coastal property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being offered a <u>monetary incentive</u> would enable me to allow water levels to rise on any part of my property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How important are the thoughts of others when it comes to your coastal property? (Check one box for each row)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
When it comes to my property, I want to do what people important to me think I should do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When it comes to my property, I want to be like people important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Is there currently shoreline protection on your coastal property? (Check one)

Yes, I built it. Yes, it was on my property when I bought it. No I don't know

13. In the **past**, have you allowed water levels to rise on any part of your coastal property? (Check one)

Yes No Not applicable (water levels have not risen on any part of my property)

14. Do you think that sea level rise is happening? (Check one)

Yes No

How sure are you? (Check one)

Very Unsure	Unsure	Neither	Sure	Very Sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. To address some people's concerns about coastal flooding in Connecticut, non-profit organizations that focus on land conservation are offering a variety of voluntary agreements to interested landowners. We are interested in whether the following agreements might be of interest to you.

A. A conservation easement is a binding agreement with a conservation organization that prevents shoreline protection from taking place on the land in perpetuity. The landowner retains ownership of their property, with the remainder of their private property rights intact. Because use is permanently restricted, a property subject to a conservation easement may be worth less on the open market than comparable unrestricted parcels. How likely are you to sign a conservation easement within the next ten years if a conservation organization offered to pay you a one-time sum of \$4,000 for each undeveloped acre? *(Check one)*

Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B. How likely are you **to sell your property (including your house)** to a conservation organization for fair market value within the next ten years, if the conservation organization made you an offer? *(Check one)*

Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. A restrictive covenant is a mutual agreement among neighbors that requires everyone in the neighborhood to allow water levels to rise naturally, creating salt marsh in new locations on your property. Such an agreement could prevent the unintended consequences of additional shoreline protection on nearby properties, such as increased erosion or unplanned flooding on your property. How likely are you to sign such an agreement within the next ten years, if your neighbors also participated? *(Check one)*

Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. You may have the option of signing an agreement that would transfer ownership of your property (including your house) to a conservation organization in the event of a flood that reduces the total property value by more than 50% of its current value. Under this agreement, the conservation organization would be required to pay you the pre-flood property value at the time of transfer. How **likely** are you to sign such an agreement within the next ten years? *(Check one)*

Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Which of the agreements shown in A-D above are you most likely to participate in? *(Check one)*

- A B C D I am not likely to participate in any agreements

17. Do you agree or disagree with the following statement? (Check one)

If I sold my property to a conservation organization for fair market value, I would be worried about receiving a fair price. (Check one)

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BELLWETHER BIRD

Saltmarsh Sparrows are the only bird species in the world found only in salt marshes.



1 in 3 Saltmarsh Sparrow nests in Long Island Sound are washed away during high tides.



If salt marshes can migrate into new areas, Saltmarsh Sparrows can survive in the face of sea level rise.

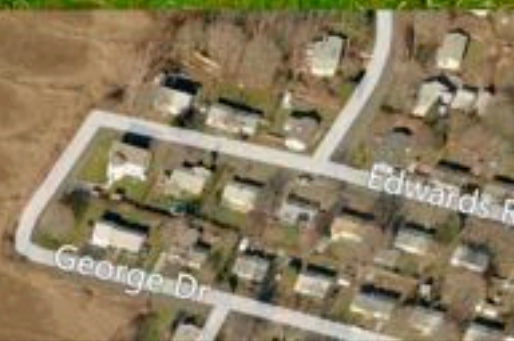
SALT MARSHES **UNSUNG HEROES OF OUR COASTS**

Salt marshes store more carbon per acre than tropical forests.

Long Island Sound's marshes can survive sea level rise if they can migrate into new areas.



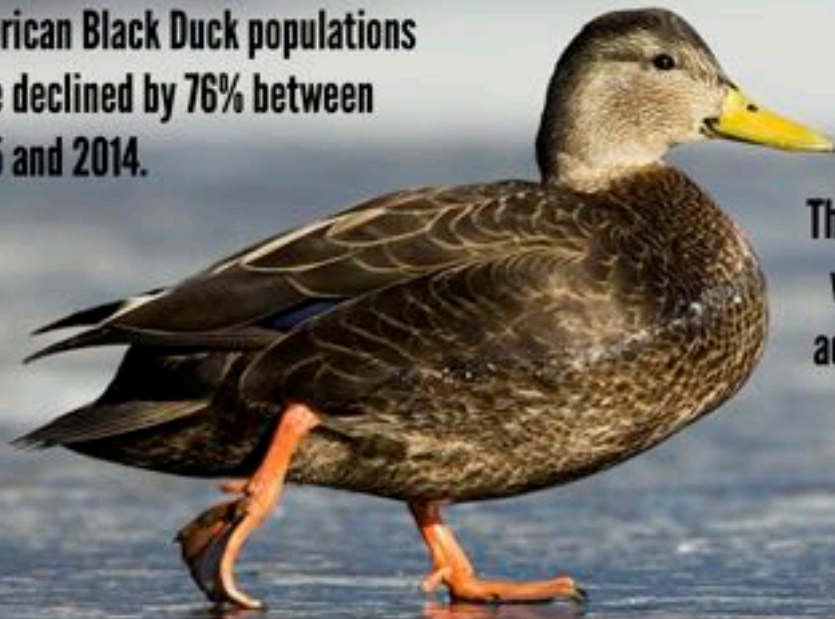
Salt marshes keep communities safe by reducing wave height and coastal erosion.



NEW ENGLAND'S DUCK

The American Black Duck is the iconic and native duck species of the Northeast.

American Black Duck populations have declined by 76% between 1955 and 2014.



The Atlantic Flyway, which includes CT, accounts for 91% of the wintering American Black Duck population.

American Black Ducks rely on healthy coastal salt marshes from Newfoundland to North Carolina to survive the winter.



18. How interesting did you find the information on the previous page? (Check one)

Very Uninteresting	Uninteresting	Neither	Interesting	Very Interesting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. After reading the information on the previous page, we would like to know your thoughts about increased coastal flooding, whether it will impact your coastal property, and what actions you will take on your property. (Check one box for each row)

Within the next twenty years, how likely is it that...	Strongly Unlikely	Unlikely	Neither	Likely	Strongly Likely
...you will use shoreline protection (such as bulkheads, revetments, and/or concrete sea walls) to prevent water levels from rising?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...you will allow water levels to rise naturally?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Allowing water levels to rise on my property would be bad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. How important to you are the following attributes of salt marshes? (Check one box for each row)

Outcomes	Not at all important	Slightly important	Moderately important	Very important	Extremely important
A. Flooding protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Erosion protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Wildlife viewing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Hunting opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Carbon storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Providing a home for wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which of the attributes shown in A-F above is most important to you? (Check one)

A B C D E F

Background Information

21. Are you male or female? (*Check one*) Male Female
22. In what year were you born? (*Fill in*) 19____
23. What is the highest level of formal education you have completed? (*Check one*)
- Less than high school
 - High school diploma/G.E.D.
 - Some college or technical school
 - Associate's degree
 - College undergraduate degree (e.g. B.A., B.S.)
 - Graduate or professional degree (e.g. M.S., Ph.D., M.D.)
24. Which conservation organizations, if any, are you a member of? (*Check all that apply*)
- National land conservation organization (e.g. Trust for Public Land, The Nature Conservancy)
 - National bird or wildlife conservation organization (e.g. Audubon, Ducks Unlimited)
 - Local land conservation organization or land trust
 - Local/state bird or wildlife organization society
 - Hunting or fishing organization
 - None
25. Do you consider yourself a Republican, a Democrat, an Independent, or a Libertarian? (*Check one*)
- Republican
 - Democrat
 - Independent
 - Libertarian

Thank you for your time and effort!

To return this questionnaire, place it in the envelope provided, and drop it in the mail.
(Return postage has been covered).