Testimony for the Senate Standing Committee on Environmental Conservation

November 9, 2017, Auditorium, Wayne Central Performing Arts Center, 6200 Ontario Center Road, New York

My name is Mary Austerman and I am the Coastal Community Development Specialist for New York Sea Grant (NYSG). I would like to thank the Senate Standing Committee on Environmental Conservation, particularly Senators Helming and O'Mara and Assemblyman Oaks, for the invitation to testify on the impacts of the 2017 Lake Ontario high water level event.

NYSG is one of 33 state Sea Grant Programs in the United States, and is a cooperative program of the State University of New York, Cornell University and NOAA. As an extension professional with NYSG, it is my job to provide science to my stakeholders that will allow them to make better-informed decisions.

My comments today are intended to provide preliminary results from the 2017 Lake Ontario High Water Level Impact Survey coordinated by Cornell University and NYSG.

This survey was developed in response to stakeholders' requests for standardized impact reporting. NYSG awarded funding to Drs. Scott Steinschneider and Richard Stedman at Cornell University to develop and implement a high water level impact survey. The survey was live from May 26, until August 31, 2017. Various outreach methods were used to advertise the survey. These included newspaper, social media, TV, radio, fliers, municipal e-lists, and agenda time at related meetings.

Survey goals included:

- documenting the parcel-level impacts of the event on waterfront properties;
- providing municipalities with information that can assist them in community-based planning to reduce flood risks; and
- verifying existing flood-risk modeling.

This survey targeted New York waterfront properties. We collected qualitative data about parcel location, severity of inundation, severity of erosion, damage to shoreline protection, flood insurance, business impacts, and severity of overall impacts. In addition, pictures of the waterline and of property damage were provided.

This survey did not collect economic data because:

- many impacts may not be known until water levels recede; and
- inundation reports during peak, or near peak, water levels are necessary to verify existing flood-risk modeling.

When reviewing these results, please keep in mind:

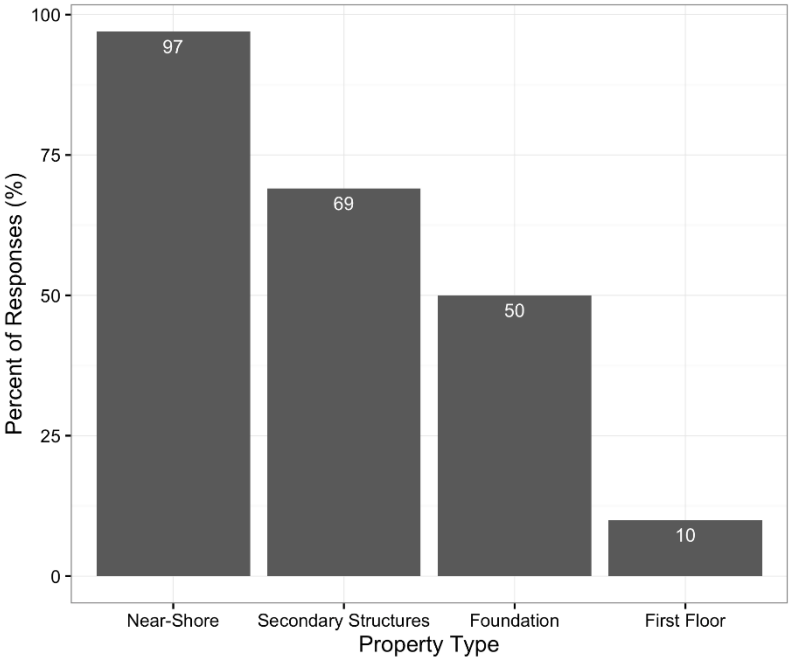
- We conducted a separate St. Lawrence River survey, which has not yet been analyzed.
- Although the survey was available for all waterfront properties, it is possible that those who experienced impacts were more likely to respond than those who did not.
- This report out is in percentages and removed all instances of "does not apply" or "I don't know".
- These results have not been published, and this report out is on preliminary analyses.

<u>Preliminary Results (slides)</u>

Figure 1: Distribution of survey responses

- 896 surveys were recorded in the Qualtrics Database. Of those:
  - 148 properties were screened out because they were not on the New York side of Lake Ontario or were duplicates
  - This leaves 748 survey responses that were on the water and in our study region. Of those:
    - 241 were incomplete and/or click throughs (most stopped at the picture section)
- **We were left with 507 complete (or near complete) surveys**

Figure 2: Inundation of Property



The percentage of responses that indicated the follow property types were inundated:

- Near-Shore: occurs if lawn OR dock OR landscaping is inundated
- Secondary Structures: occurs if outbuildings OR utility infrastructure is inundated
- Foundation
- First Floor

Figure 3: Inundation of Property in Sodus Point, NY (Wayne County)

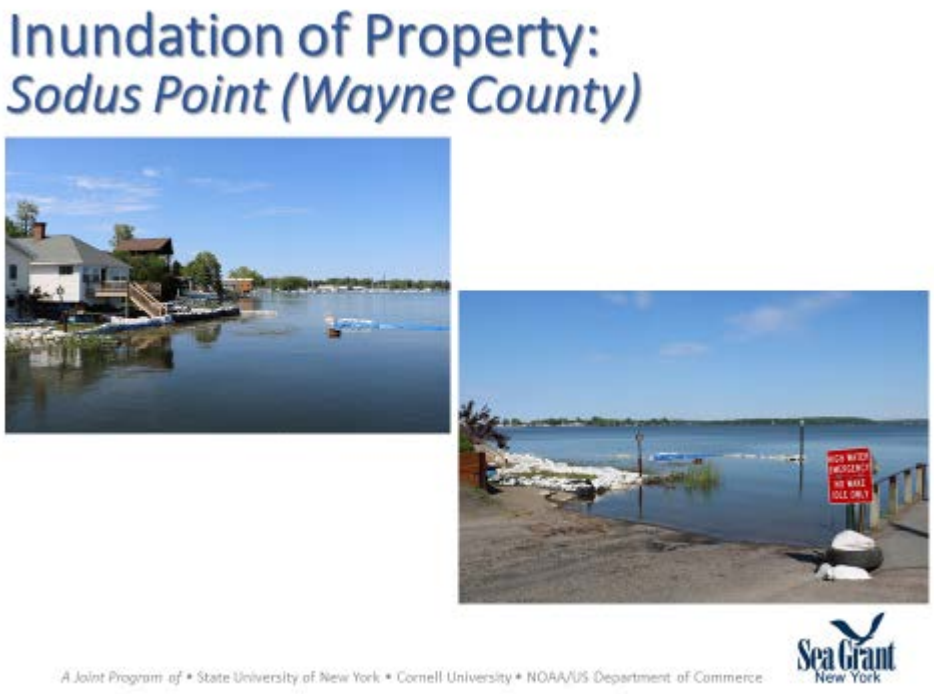
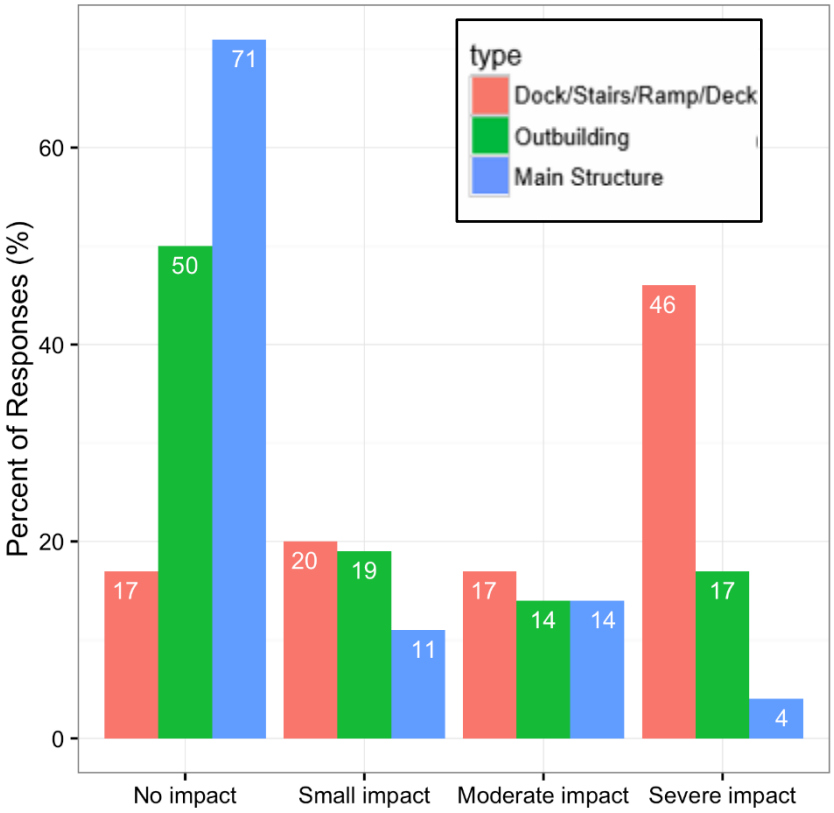


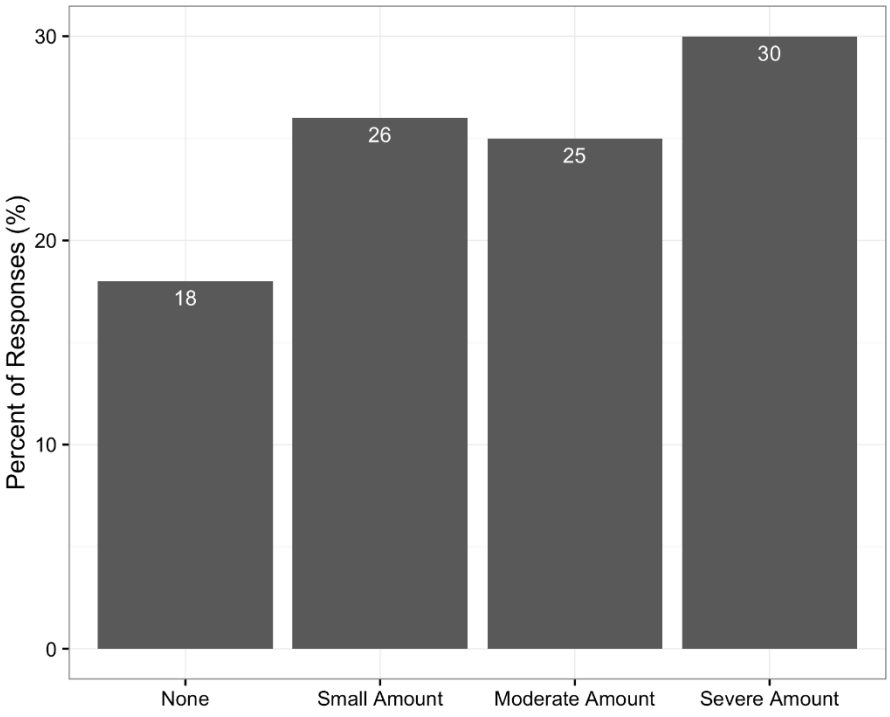
Figure 4: Erosion Damage to Property



The percentage of responses that indicated no impact, small impact, moderate impact, and severe impact from erosion on the following property types:

- Shore area (dock/stairs/ramp/deck)
- Outbuilding
- Main structure

Figure 5: Land Lost from Erosion



The percentage of responses that indicated that no land, a small amount, moderate amount, or severe amount of land was lost to erosion

Figure 6: Land Lost to Erosion in Hamlin, NY (Monroe County)

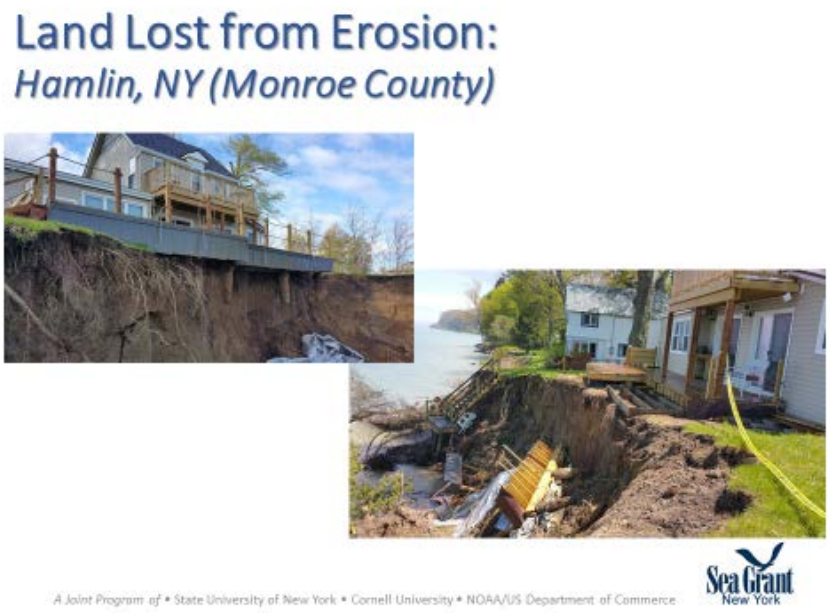
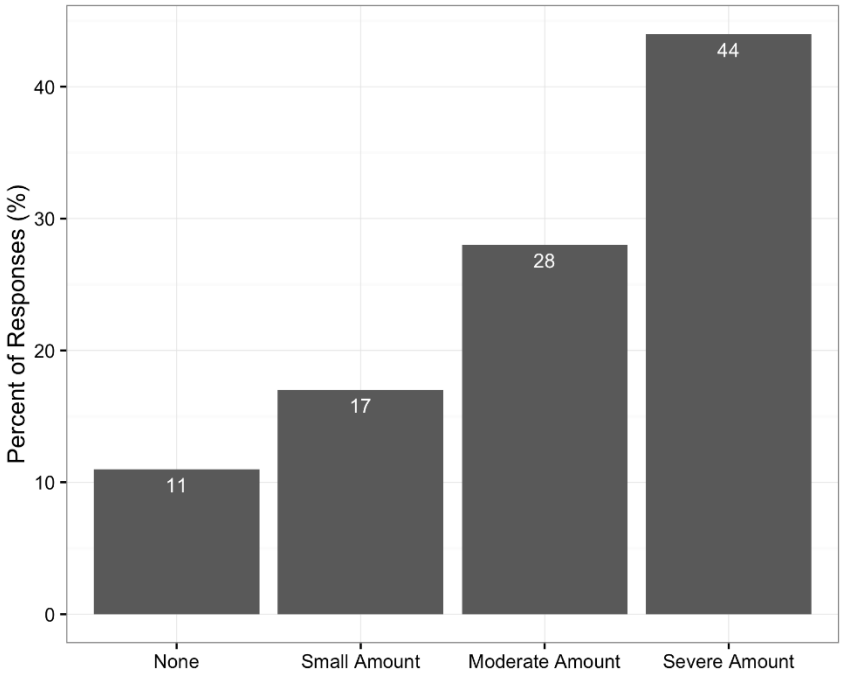


Figure 7: Damage to Shoreline Protection



The percentage of responses that indicated that no damage, a small amount, moderate amount, or severe amount of damage occurred to EITHER vertical OR sloped shoreline protection.

Figure 8: Retaining wall collapses at Olcott Yacht Club (.wgrz.com)

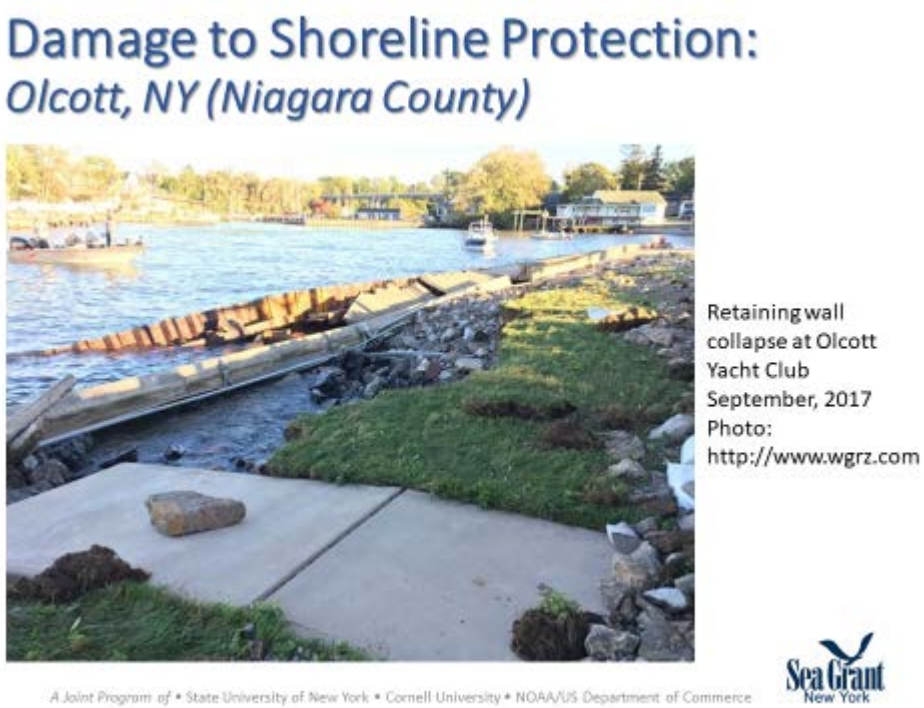
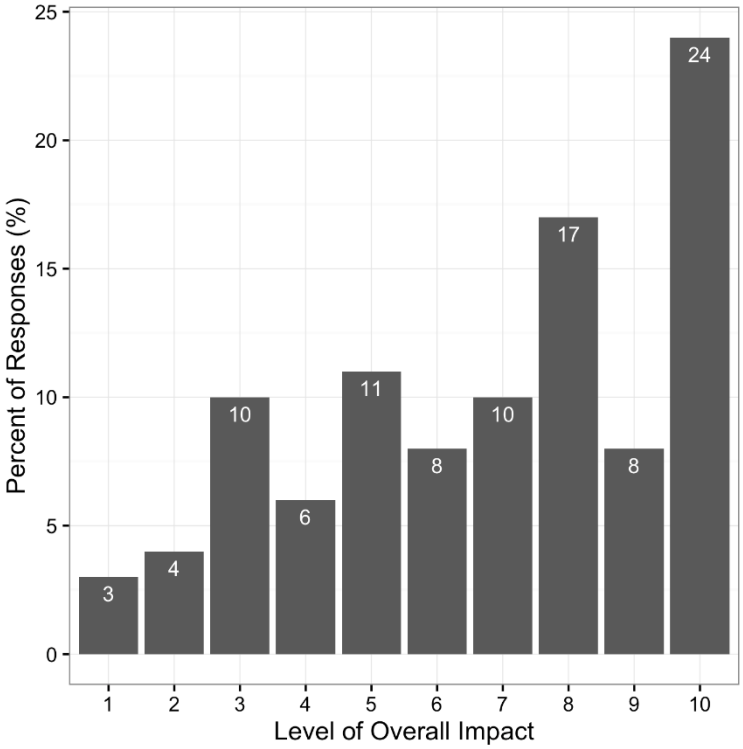


Figure 9: Overall Impact

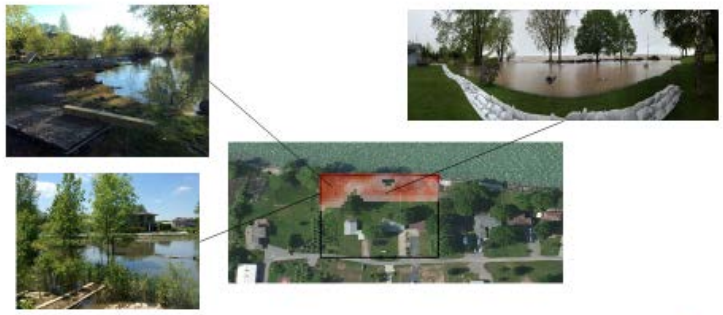


Percentage of respondents indicating their overall impact on a scale of 1-10 (1=little impact; 10=severe impact)

Pictures

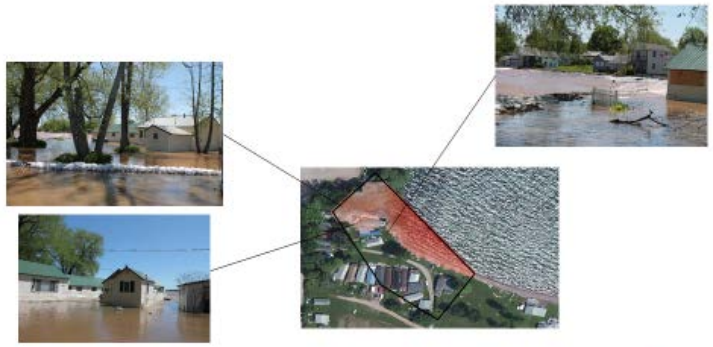
- Waterline on property
- Overall impact of water on property
- Existing flood-risk modeling work (2018 NYSG funded)
  - *Steinschneider & Steadman*
- Archiving
  - *Steinschneider & Austerman*
- This is only 4 of 500+ responses

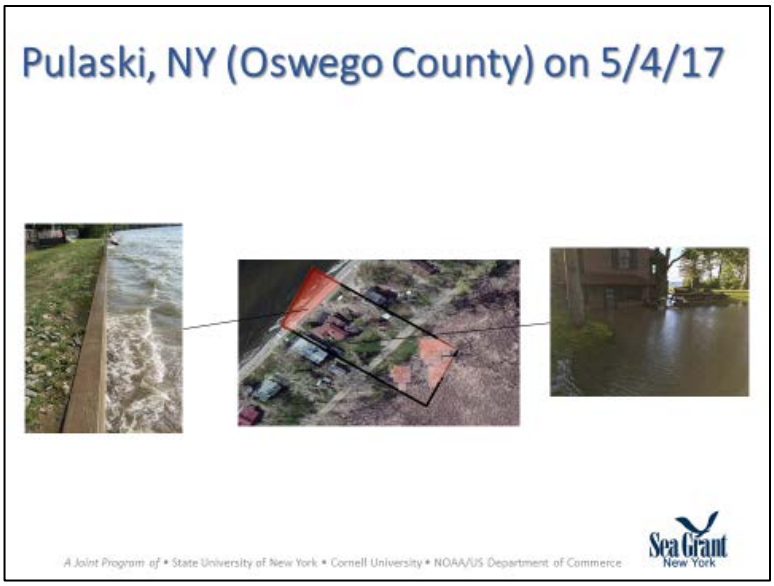
Kendall, NY (Orleans County) on 5/27/17



Hilton, NY (Monroe County) on 5/20/17

Williamson, NY (Wayne County) on 5/20/17





Immediate uses of the survey results include:

- Documenting this record high water event
- Providing standardized results that will allow for lake-wide reporting
- Identifying areas that are most vulnerable to high water levels for future community-based planning
- Validating an existing flood risk model that could inform community-level flood resiliency planning; initial steps for this work are underway
- Assisting in the leveraging of competitive funds for making communities, businesses and private landowners more adaptable to high water levels

As an Extension Associate representing NYSG, and Cornell University, it is my job to provide science-based information so stakeholders can make better-informed decisions, in this case about reducing risks to future coastal flood events. I am grateful for the opportunity to share these results with you today, and am hopeful that they will empower communities to be begin improving their coastal flood resiliency.

Respectfully,

Mary E. Austerman

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