

An Integrated Climate Vulnerability Assessment for the Town of Oxford, Maryland

Creating Priorities for Adaptation in a Coastal Community



Eric Messick and Maria Dillard
February 10, 2016



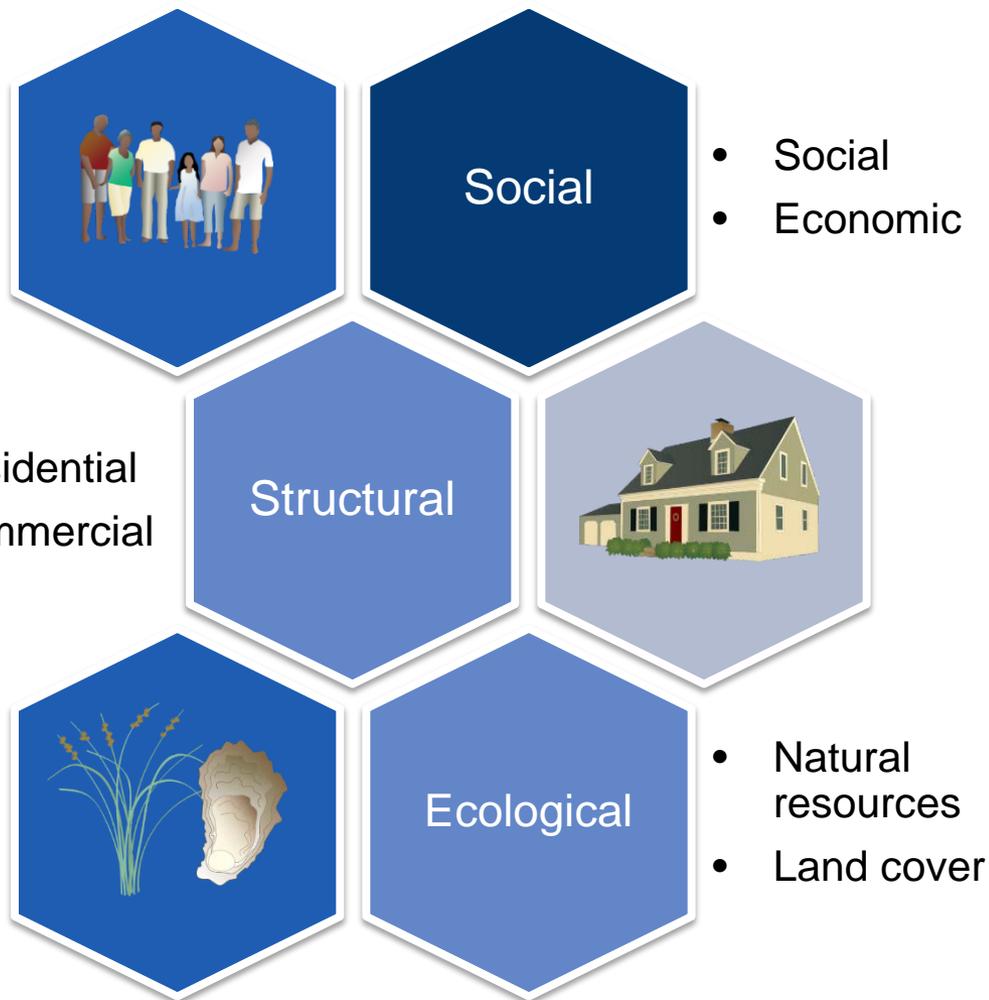
NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

coastalscience.noaa.gov

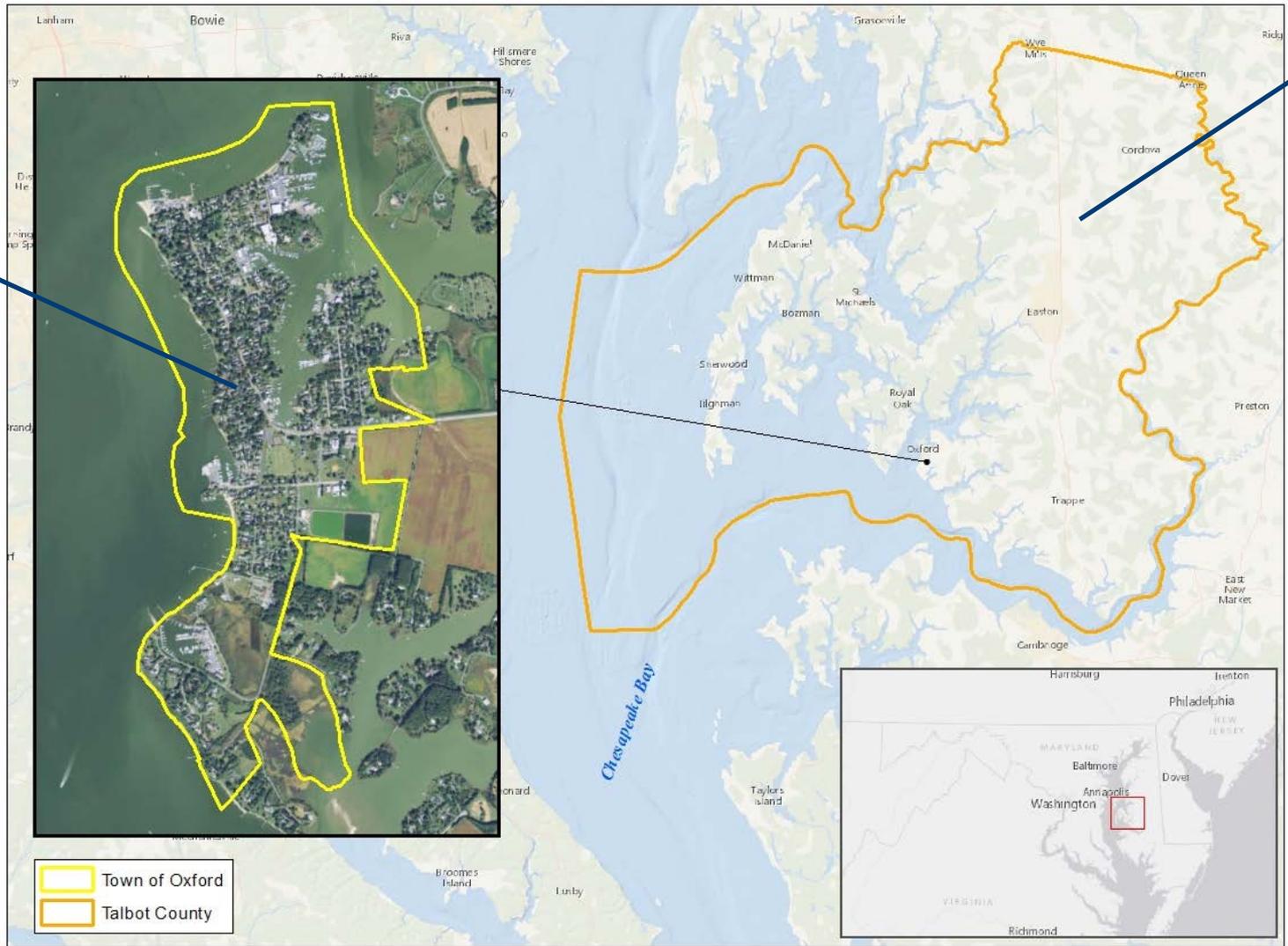
Introduction

Goal: assess the climate change vulnerabilities of the Town of Oxford's social, structural, and ecological systems

Purpose: science-based information to help improve Oxford's resiliency to climate and coastal hazard impacts



Study Area

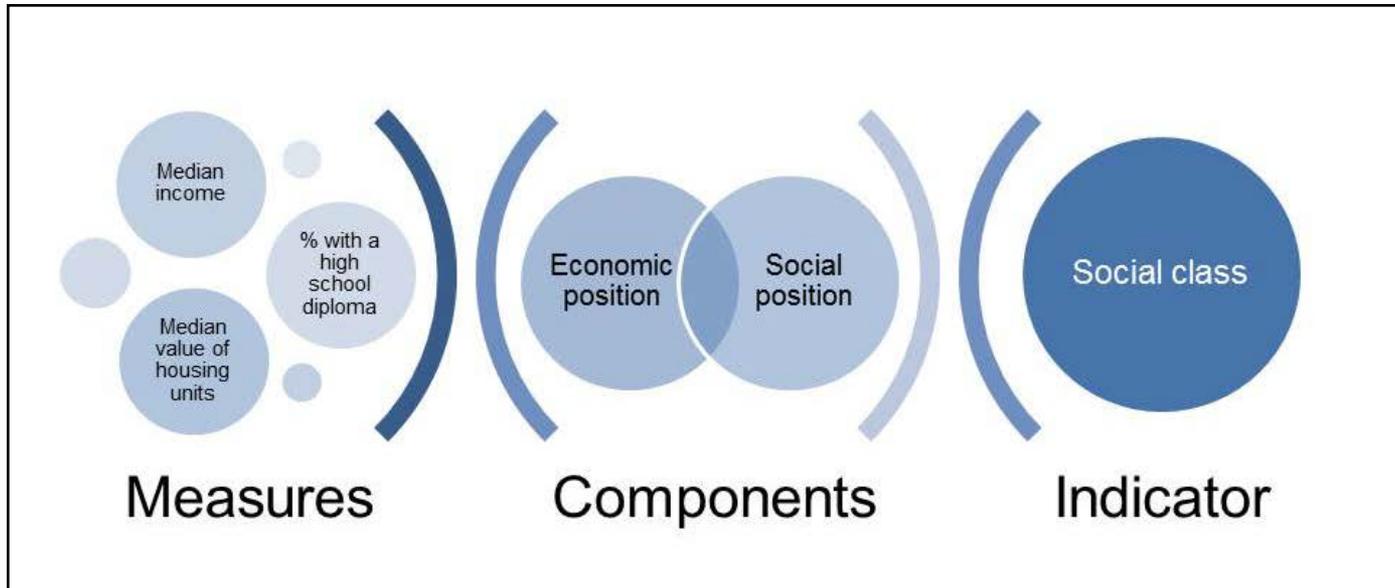


Town of Oxford

Talbot County



Examples of Indicators Utilized



Socioeconomic

Age
Social class
Labor force
Social isolation

Infrastructure

Property value
Property condition
Year built
Primary construction material

Natural Resources

Wetland locations
Forested areas
Marsh buffer
Beaches



Identifying Climate Impacts of Most Concern

Stormwater & Flooding



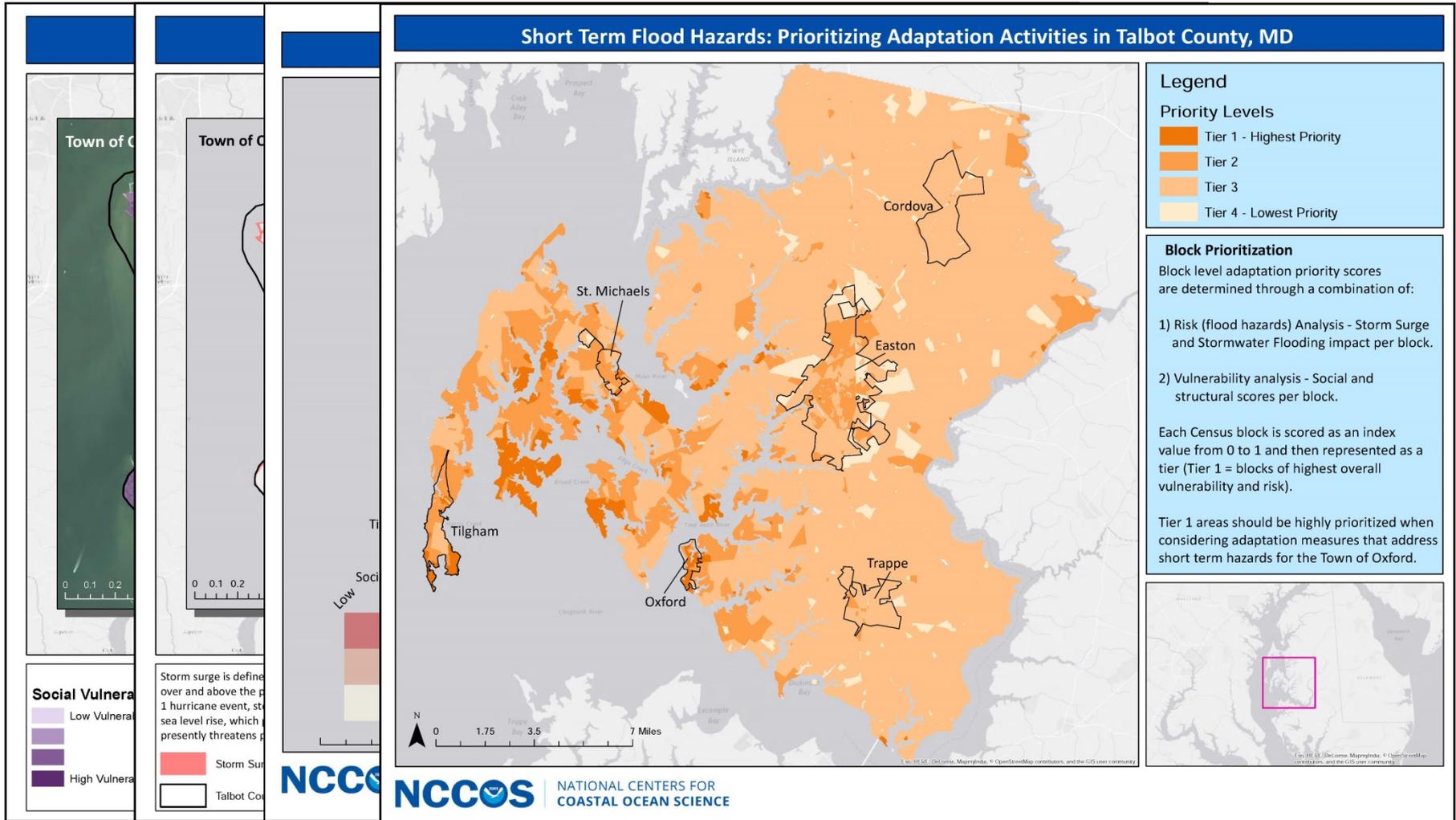
Severe Storm Events



Shoreline Erosion & Land Subsidence



From Assessment to Adaptation



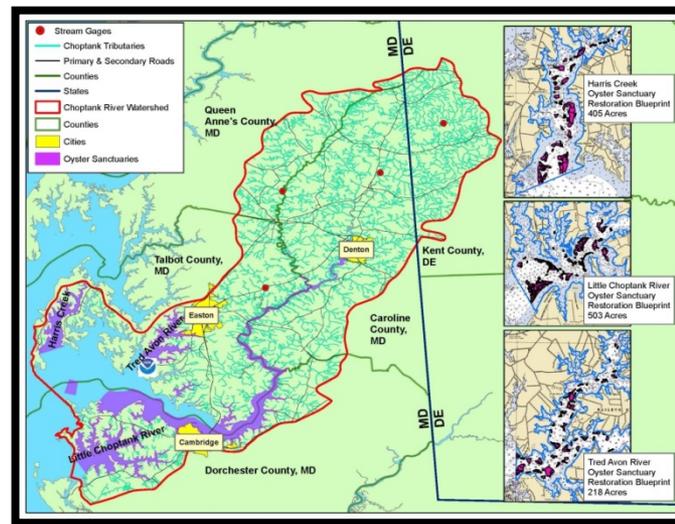
Discussion

- Benefit of local-state-federal partnership
- Risks identified by the community
- Quantification of vulnerabilities and risks creates foundation for decision making
- Provides guidance for current and future conditions



Next Steps

- NCCOS partners have delivered results to Oxford
- MD state partners are supporting local partners with application of results
- For example:
 - Prioritization of mitigation projects/best management practices
 - Support for grant applications to secure funds for adaptation, BMPs
 - Inclusion of social factors in update of county Hazard Mitigation Plan
- Next site: Choptank Habitat Focus Area
 - Scaling methods for a larger study area
 - Aim to prioritize/support restoration activities



Acknowledgements

Project Team

- Maria Dillard – Social Scientist
- Eric Messick – Planner/Geographer
- Kyle Buck – Geographer
- Jarrod Loerzel – Social Scientist
- Sarah Gonyo – Economist
- Matt Gorstein – Economist
- Angela Orthmeyer – Environmental Scientist
- Landon Knapp – Environmental Scientist
- Anne Blair – Ecologist
- A.K. Leight – Ecologist
- Lonnie Gonsalves – Ecologist
- Sasha Land – MD DNR, Chesapeake & Coastal Service
- Kate Skaggs – MD DNR, Chesapeake & Coastal Service
- Cheryl Lewis – Town of Oxford, MD



Sunset on the Tred Avon River at the
Cooperative Oxford Laboratory.
Photo Credit: Maria Dillard



Questions/Comments

Thank you!

For more information:

Eric Messick

Eric.Messick@noaa.gov

Or

Maria Dillard

Maria.Dillard@noaa.gov

