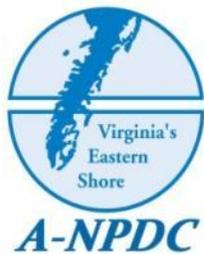


# Eastern Shore of Virginia

# Coastal Change Archive



**COVER PHOTO: HOUSES IN THE SURF ON CEDAR ISLAND. THE EASTERN SHORE OF VIRGINIA'S ATLANTIC COAST IS A CONSTANTLY CHANGING AND DYNAMIC ENVIRONMENT THAT IS EXPERIENCING SOME OF THE GREATEST RATES OF EROSION ALONG THE ATLANTIC SEABOARD. THE ISLAND WAS ONCE SLATED FOR DEVELOPMENT AND MANY OF THESE PARCELS ARE NOW OFFSHORE AS THE ISLAND HAS MIGRATED WESTWARD. THIS PHOTOGRAPH WAS TAKEN DURING 2008 AND THE HOUSES HAVE SINCE SUCCEMDED TO THE OCEAN.  
(PHOTO BY CURT SMITH)**



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## BACKGROUND & INTRODUCTION



Sea level has risen nearly 420 feet in the past 18,000 years and nearly 1.5 feet since the 1930s. The Eastern Shore's coastlines are constantly responding to these changing conditions. Additionally, water temperatures are on the rise and the Shore's climate has warmed bringing a variety of changes to the types and abundances of wildlife and aquatic life, the times that certain species migrate through the region, and the growing seasons of our vegetative species.

Eastern Shore residents share a unique connection to the natural environment and are well aware of the changes that occur to it. The Accomack-Northampton Planning District Commission (A-NPDC) is engaging residents to compile their stories, observations, and historical documents to create the Coastal Change Archive which will serve as a historical resource for current and future generations to better understand how seascapes, landscapes, and organisms are responding to changes in the natural environment. The Archive will also serve as a baseline for evaluating the impacts of future changes to our climate and water levels.

## INTERVIEW PROCESS

Participants will share stories which will be documented using a computer & "e-beam" technology to produce a map of the observed changes. But don't worry! No computer experience is necessary and A-NPDC staff will help you every step along the way. Participants will draw on digital maps projected onto a wall using a stylus that emits signals to an adjacent reader which immediately adds the shape they draw to the map. This innovative method quickly & efficiently allows users to share their thoughts, compare notes & learn from others in the group.



Participants are asked to share their story, the location where the observation was made, and the timeframe over which observation was made. Participants are encouraged to share photos or any other documentation they have to help with illustrating the story.



## WHAT IS BEING MAPPED?

### SEA-LEVEL RISE/RECURRENT FLOODING-RELATED CHANGES

#### AREAS THAT HAVE BECOME PERMANENTLY INUNDATED –

Places that used to be dry land and are now underwater the majority of the time throughout any given year.

Example: a field that once was farmed and has converted to marsh over the decades.



*“My family had been working this farm for generations until my grandparents moved away in 1926. The fields became too wet for the tractors. There weren’t any crops that could grow there with that much saltwater flooding. There are tidal marsh grasses in the fields now where my family once tilled that land.”*

#### AREAS THAT HAVE BECOME MORE CONSISTENTLY INUNDATED –



Places that at one time rarely or never flooded, but now are commonly underwater.

Example: “My yard was rarely underwater during storms but now it happens with almost every little storm or full moon tide.”

*“I’ve lived in this house my entire life and the flood waters never came in the yard when I was younger. It seems like every storm brings the water here now.”*

#### CHANGES TO TYPES OF VEGETATION -

Observed changes in the types of vegetation in an area including loss of upland forests (ghost forests), emergent wetland grasses/shrubs, loss of wetland grasses/shrubs, emergent tidal salt marsh grasses, or loss of tidal salt marsh grasses.



Example: “The woods along my creek were once full of healthy trees and now there are only a few unhealthy remaining trees and many new types of shrubs that didn’t used to be there.”

*“My friends and I used to camp and play games in that pine forest when I was a child. Only a few dead trunks remain today.”*

## WHAT IS BEING MAPPED?

### CLIMATE CHANGE-RELATED CHANGES

#### CHANGES IN TIMING OF ARRIVAL OF MIGRATORY WILDLIFE SPECIES –



Changing climates alter food availability and habitats for migratory wildlife such that these species will change their schedules to arrive when their food sources are available. These

are stories of observations of where this has been observed locally.

Example: “I’ve noticed that the butterflies arrive to my house a week or two earlier each year than they used to when I was a child.”

#### CHANGES IN TIMING OF ARRIVAL OF MIGRATORY AQUATIC SPECIES –

Much like migratory wildlife, aquatic species change their schedules to adapt to changing environments. These are stories of observations of where this phenomenon has been observed locally.



Example: “I can catch stripers off of my dock a lot earlier in the season than I used to.”

#### VEGETATIVE SPECIES GROWING SEASON CHANGES –



Observations of shortening or lengthening of growing seasons or changes in timing of flowering for vegetative species.

Example: “We never used to be able to plant our garden here as early as we are able to do it nowadays.”

*“My wife and I are avid birdwatchers and we’ve noticed that the hummingbirds arrive to our feeders almost 2 weeks earlier than they used to when we first moved here.”*

*“I’ve hunted here my entire life and I began seeing pelicans here in the mid 1980s. They were never here before.”*

*“We never used to be able to catch rockfish here this early in the year when I was young.”*

*“I’m finding that my garden is active later in the Fall by several weeks than back in the 1960s.”*

*“I’m planting earlier and harvesting later than back in the ‘80s.”*



## VIEWING THE ARCHIVE & SUBMITTING YOUR STORIES!!!

The Archive can be viewed online by visiting the Virginia Coastal Zone Management Program's Coastal Geospatial and Educational Mapping System (Coastal GEMS) at [www.coastalgems.org](http://www.coastalgems.org). Coastal GEMS is an online data viewer of coastal resource maps, planning tools, and planning examples.

Once on the website, the Archive can be accessed by expanding the "Coastal Land" group and checking the box for the "Eastern Shore Coastal Change Archive".

The stories can be accessed by selecting the desired Archive category and clicking on any polygon. There is a unique story for each polygon on the map.

The A-NPDC regularly hosts public events and will incorporate opportunities to share stories into these events. Any person interested in learning more about the archive can contact the A-NPDC at 757-787-2936 or [a-npdc@a-npdc.org](mailto:a-npdc@a-npdc.org).



[WWW.COASTALGEMS.ORG](http://www.coastalgems.org)

