RESILIENT RING'S ISLAND

CLIMATE CHANGE IMPACTS

FALL 2019

What is Climate Change?

Definitions

Climate is the pattern of weather events observed over time.

Climate change is a phenomenon caused by the increase of greenhouse gases in the Earth's atmosphere, which results in a warmer global temperature. Global temperatures impact air currents and patterns of weather.

What Does Climate Change Look Like in Salisbury?

The region is planning for 40” of seal level rise by 2070

Increased flooding will lead to increased erosion

Precipitation may increase in the winter and spring

Winter ice and snowstorms are expected to increase

The risk of drought will increase in the summer and fall

The average temperature could increase by 10˚F by 2100

Inundation & Coastal Storm Surge in Salisbury

Definition

Coastal storm surge is the abnormal rise of water generated by a storm's winds

National Oceanic and Atmospheric Administration (NOAA), 2019

43%

43% of the Town is within the 100-year floodplain, which includes 1,710 buildings

3.8mi

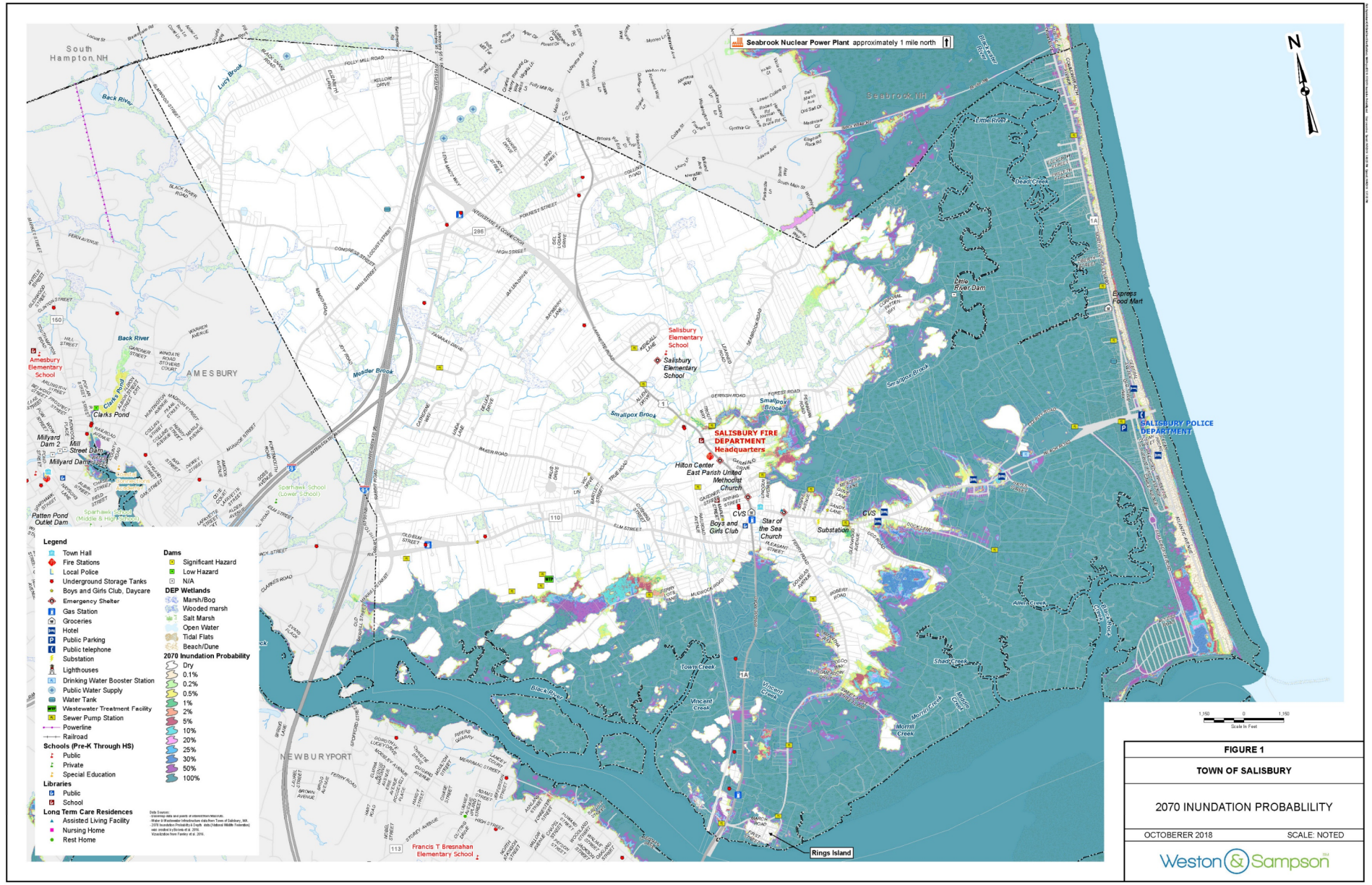
The Town has 3.8 miles of beaches and is experiencing erosion

$418M

Buildings in the 100-year floodplain have a combined property value of $418 million

37

37 sites in Salisbury have had 114 payouts from the NFIP totaling $2.9 million



A map of inundation probability in Salisbury by 2070

Municipal Vulnerability Preparedness (MVP) Program

- Program under the MA Executive Office of Energy & Environmental Affairs
- Implementing the MVP Summary of Findings Report
- $157,500 grant funding to improve the resilience of the Ring's Island neighborhood

RESILIENT RING'S ISLAND

DESIGN STRATEGY

FALL 2019

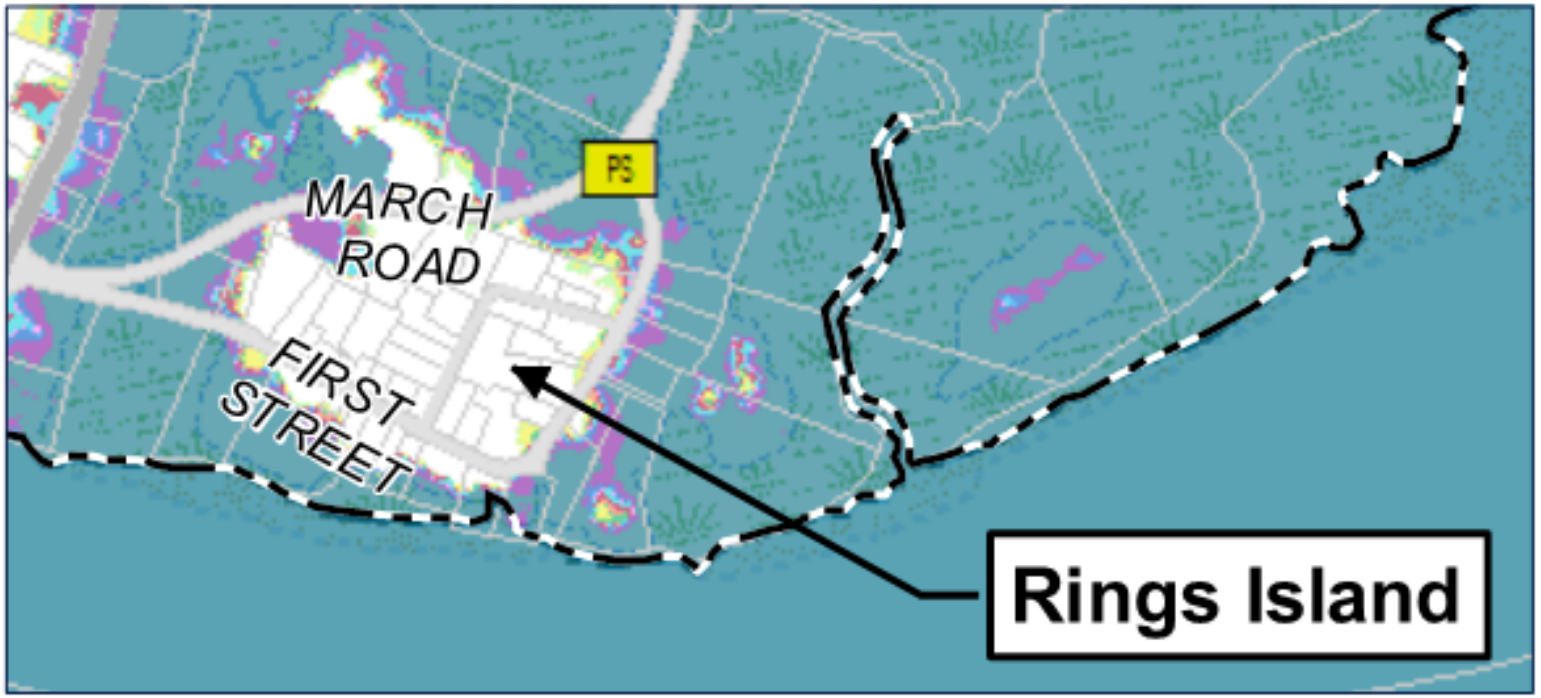
Project Proposal

Flooding occurs along the southwest evacuation route about 8-10 times per year

Northern evacuation route also floods during King Tides and significant storms

Flood conditions are expected to worsen under climate change

4-10 feet of sea level rise is expected by 2100



A map of inundation probability in Ring's Island by 2070

Project Proposal

Definitions

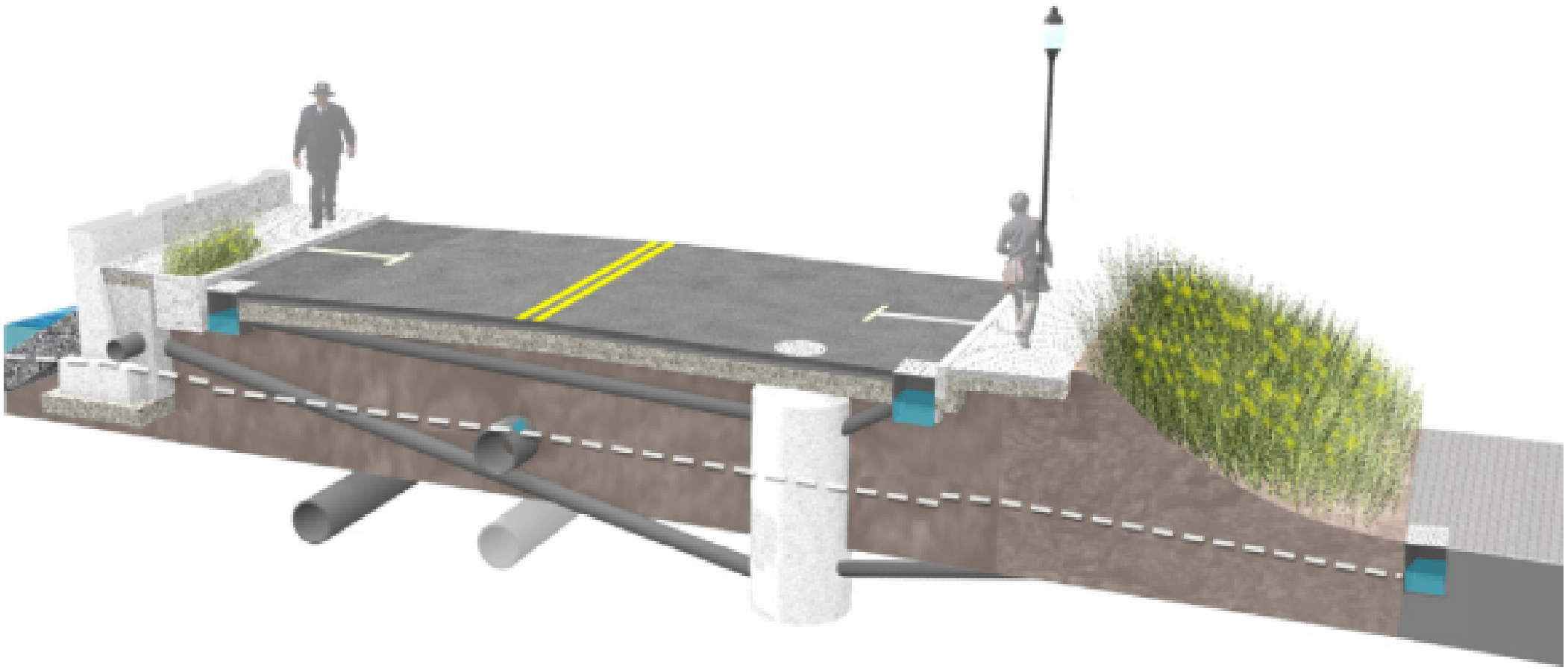
Tidal flushing is the variable flow of water during rising and falling tides

A Culvert is an underground conduit that allows water to flow beneath a road or similar built infrastructure

A King Tide is the highest high tide, which coincide with the full moon

Project Components

Elevated Roadway



The Resilient Ring's Island project proposes elevating Ferry Road, March Road, and 1st Street.

The project will also add a sidewalk along one travel lane of Ferry Road.

Project Components

Culvert Improvement

Existing Ferry Road Culvert.

Project Components

Culvert Improvement

Culvert replacement by Weston & Sampson Forest Road in Salisbury, Massachusetts. The Resilient Ring's Island project proposes replacing up to three stormwater culverts and adding tide gates.

RESILIENT RING'S ISLAND

Overall Project Goal

The Resilient Ring's Island Project aims to decrease the impact of floods in the area and improve the the coastal neighborhood's public safety by raising the access roads and increasing the tidal flushing through culvert replacements at 1st Street, March Road and Ferry Road.

Questions

Brief Survey: https://www.surveymonkey.com/r/PYNTRCP