

SEA LEVEL RISE INUNDATION AND COASTAL FLOODING

Mapping Support for
HB1350/SB1006
2018

Coast Smart Siting Criteria



A REQUIREMENT THAT A STRUCTURE BE DESIGNED AND CONSTRUCTED OR RECONSTRUCTED IN A MANNER TO WITHSTAND **THE STORM SURGE FROM A STORM THAT REGISTERS AS A CATEGORY 2 ON THE SAFFIR-SIMPSON HURRICANE WIND SCALE**, INCLUDING A REQUIREMENT FOR STRUCTURES TO BE CONSTRUCTED OR RECONSTRUCTED AT A MINIMUM ELEVATION ABOVE THE PROJECTED STORM SURGE;

Current Siting Criteria (2015) = 100 Year Flood Plain/Special Flood Hazard Area

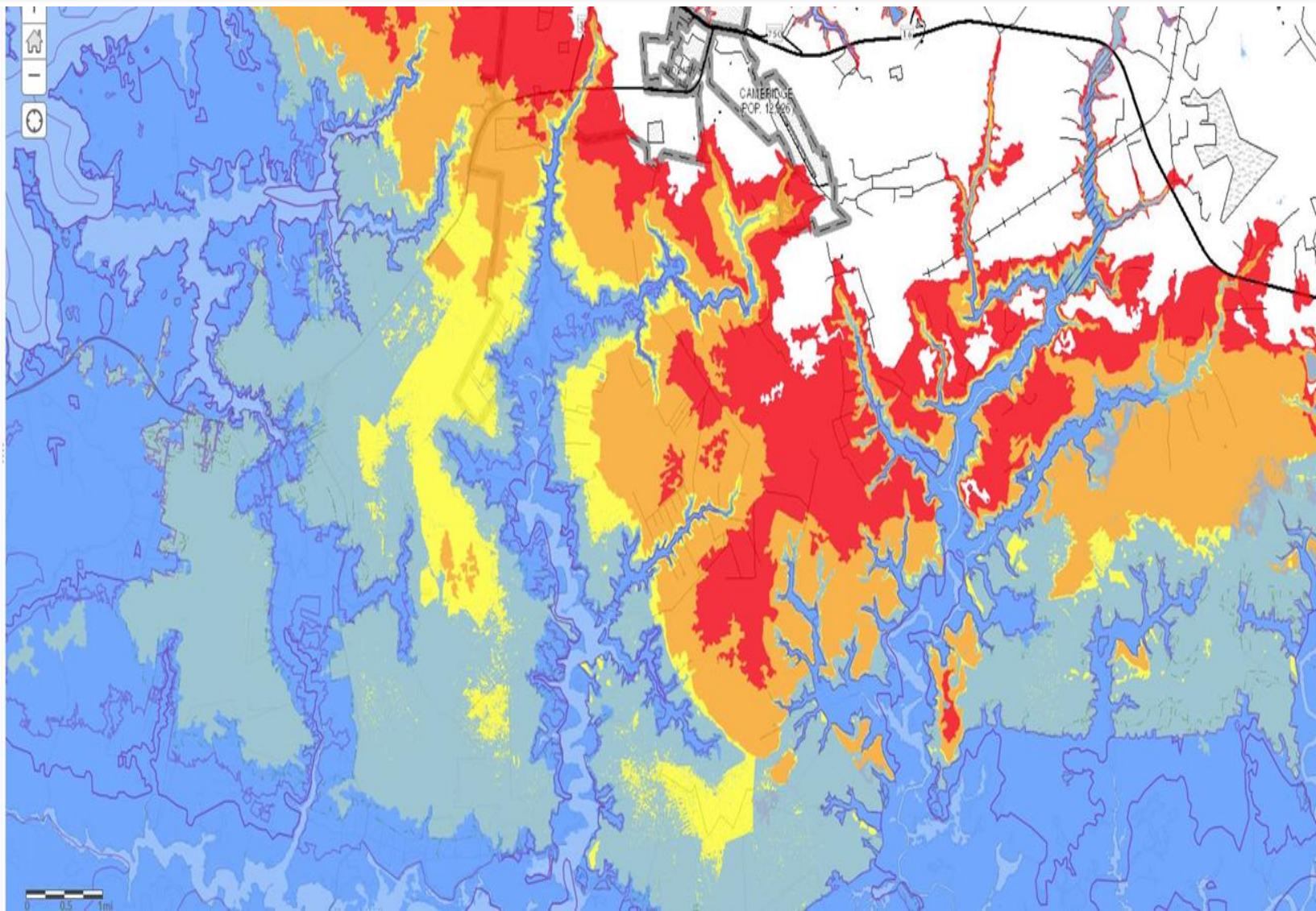
Category 2 Storm Surge does not adequately characterize flood risk

- Cat 2 storms defined by wind speed
 - 96-100 mph with 6-8 feet storm surge
 - Surge areas does not always accurately follow where the water may go based on how the data is visualized
- Based off a non regulatory boundary
- Can not determine elevations off the NOAA storm surge map layer

Hurricane Category Map layer; 100 year Floodplain, & 100 + 3



- Legend
- Effective FEMA Floodplain
- 100 Year Floodplain (1% Chance)
 - Floodway (1% Chance)
 - Upland (Zone X)
- 1% Annual Chance (100 year flood + 3)
- Storm Surge
- Hurricane Storm Surge
- Category 1
 - Category 2
 - Category 3
 - Category 4



Proposed Alternative



100 year floodplain + 3 foot rise

- Tied to an official regulatory zone
- Uses existing MDE mapping products
- Consistent with Coast Smart Design Criteria for critical structures (3 foot free board)
- Reduces risk
- Goes beyond the regulatory floodplain and defines a “higher regulatory standard” for design and siting

Proposed Mapping Approach



- Screening process using a map service that will be incorporated into CoastSmart Construction Guidance
- Identifies state and local project that must adhere to Coast Smart Construction Program
- **Recommendation:** If proposed project is sited within the 100 + 3 then it must follow the Coast Smart Construction Program
 - If a portion of the parcel is within the boundary then the structure should not be sited at that location
 - When considering a parcel, access to the parcel should be evaluated.

Map example to support workgroup recommendation



- Legend
- Dorchester Essential Facilities
 - Building Footprints
 - Parcel Boundaries
 - Parcel Boundaries



CoastSmart Construction Boundary (Recommended)



Recap of Council Decision Points



- Need the Council to approve the mapping approach
- Council will need to update Construction Guidelines to include new boundary for new or existing structures that are within the 100 +3
- Maps will be complete by December 31, 2019 to give the Council 6 months to amend guidelines to meet July 1, 2020 legislative deadline
- Final product will look like Cambridge example