Wetland Adaptation Area Update

May 11, 2023

Incentive for updating Wetland Adaptation Areas

- New SLAMM data
  - higher resolution for land-use and elevation, results at 10 year time steps yields better predictions of future wetlands at more frequent intervals
- Programmatic need to distinguish between uplands that convert to wetlands and wetlands that remain wetlands
- Multiple timesteps means we can display the "corridor" for wetland migration

Sea Level Affecting Marshes Model rerun using 6 sea level rise scenarios
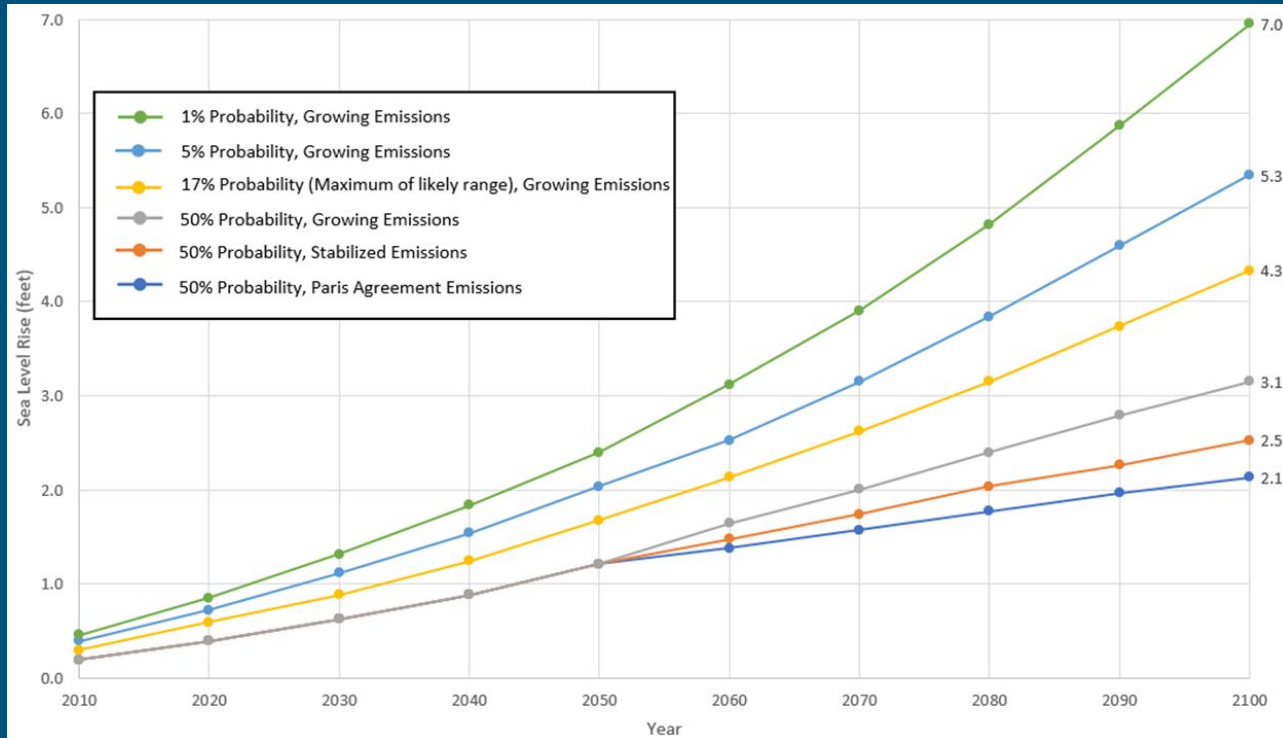
# Understanding our current land use patterns

2010

GIS Code	Color	Name
1		Developed Dry Land
2		Forested Dry Land
3		Forested Wetland
4		Tidal Cypress Swamp
5		Inland Fresh Marsh
6		Tidal Fresh Marsh
7		Transitional Salt Marsh
8		Regularly-flooded Marsh
9		NonForested Dry
10		Estuarine Beach
11		Tidal Flat
12		Ocean Beach
13		Ocean Flat
14		Rocky Intertidal
15		Inland Open Water
16		Riverine Tidal
17		Estuarine Open Water
18		Tidal Creek
19		Open Ocean
20		Irregularly-flooded Marsh
22		Inland Shore
23		Tidal Forested Wetland
24		Blank
25		Flooded Developed Dry Land
26		Flooded Cypress Swamp
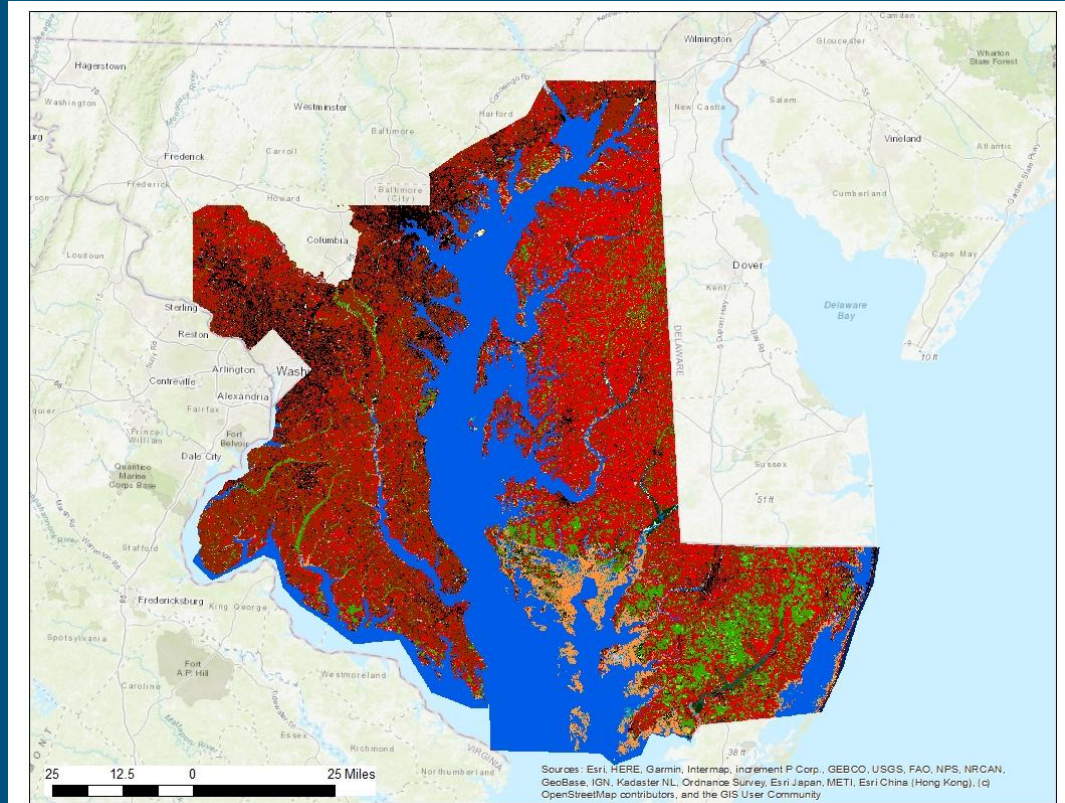
# SLAMM Results for 67% Growing 2050, 2070, & 2100

Developed Dry Land
Forested Dry Land
NonForested Dry
Forested Wetland
Tidal Cypress Swamp
Inland Fresh Marsh
Tidal Fresh Marsh
Transitional Salt Marsh
Irregularly-flooded Marsh
Regularly-flooded Marsh
Estuarine Beach
Tidal Flat
Ocean Beach
Ocean Flat
Inland Open Water
Riverine Tidal
Estuarine Open Water
Tidal Creek
Open Ocean
Inland Shore
Tidal Forested Wetland
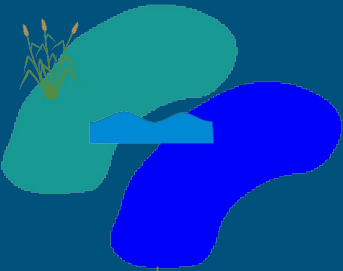Flooded Developed Dry Land
Flooded Cypress Swamp
Blank
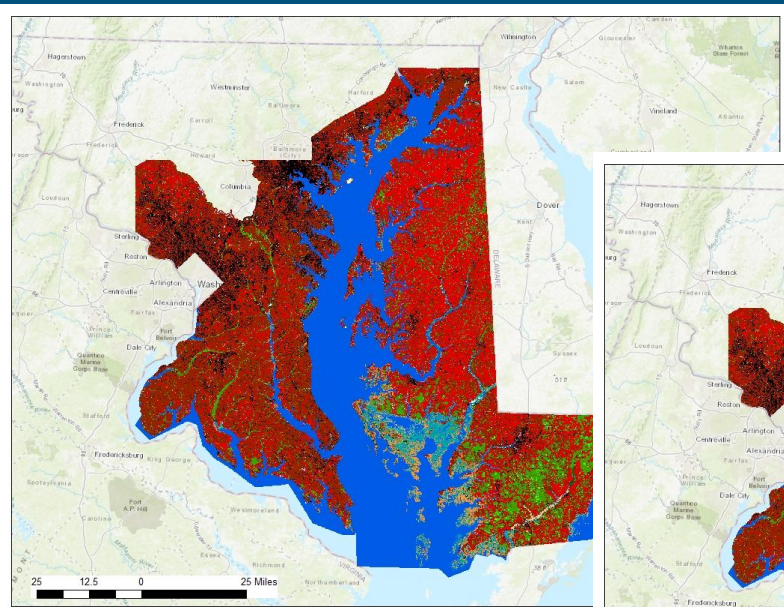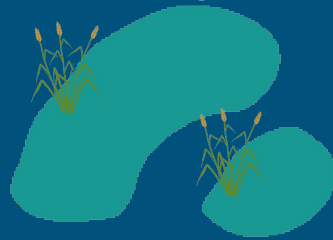
2050 (2.0 ft. SLR)
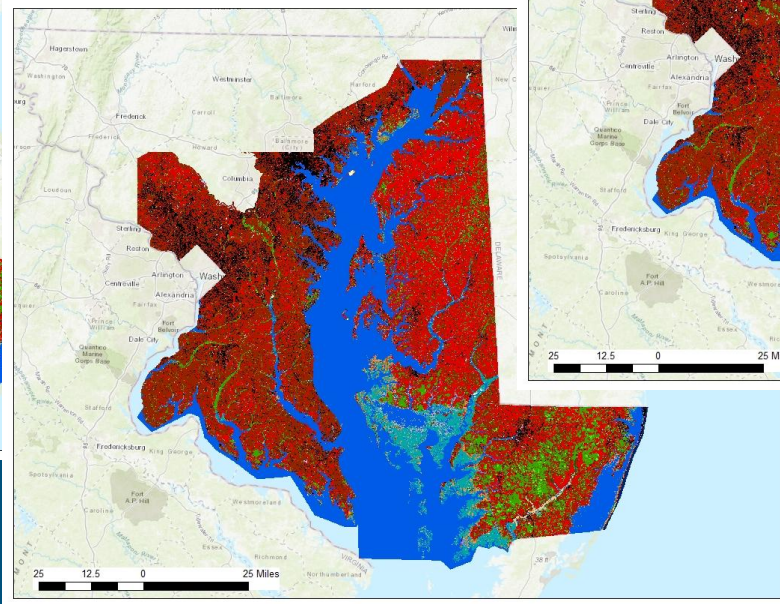
2070 (2.8 ft. SLR)
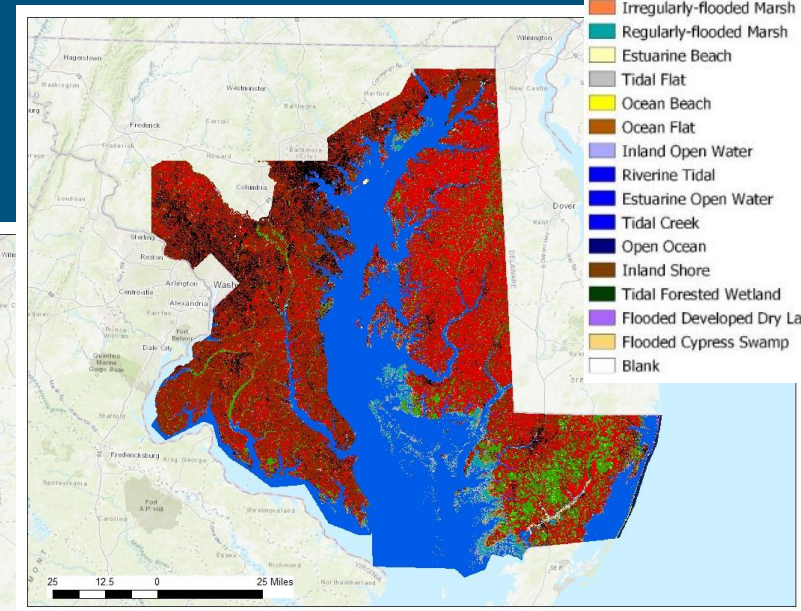
2100 (4.3 ft. SLR)

Wetland Adaptation Areas is an index

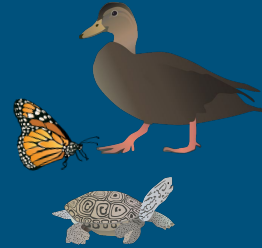Is it a wetland in 2100?

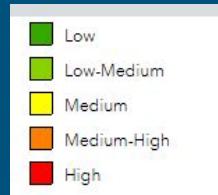2100 wetland size

Green infrastructure

Hydric soils

BioNet

10 + 15 + 10 + 15 + 10
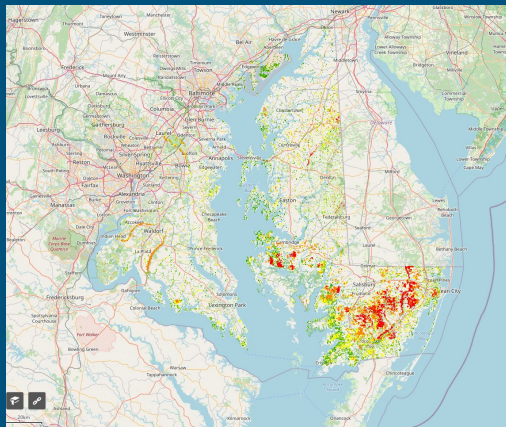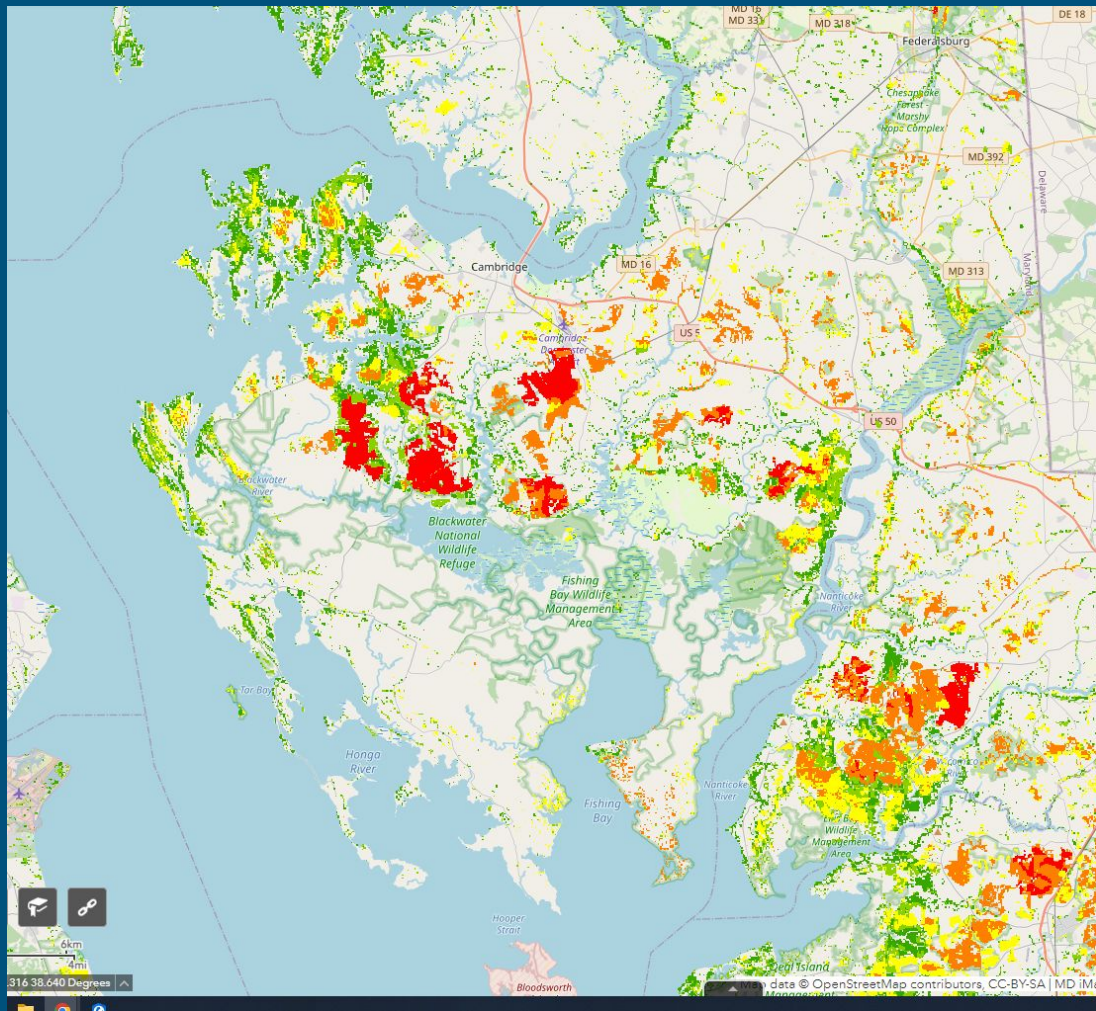
=60

Low
Low-Medium
Medium
Medium-High
High

Some symbols courtesy of UMCES IAN ian.umces.edu

2100
WAA Index

Low
Low-Medium
Medium
Medium-High
High
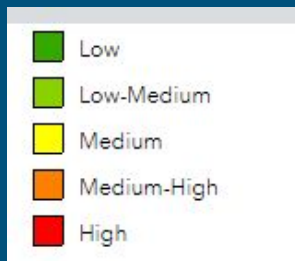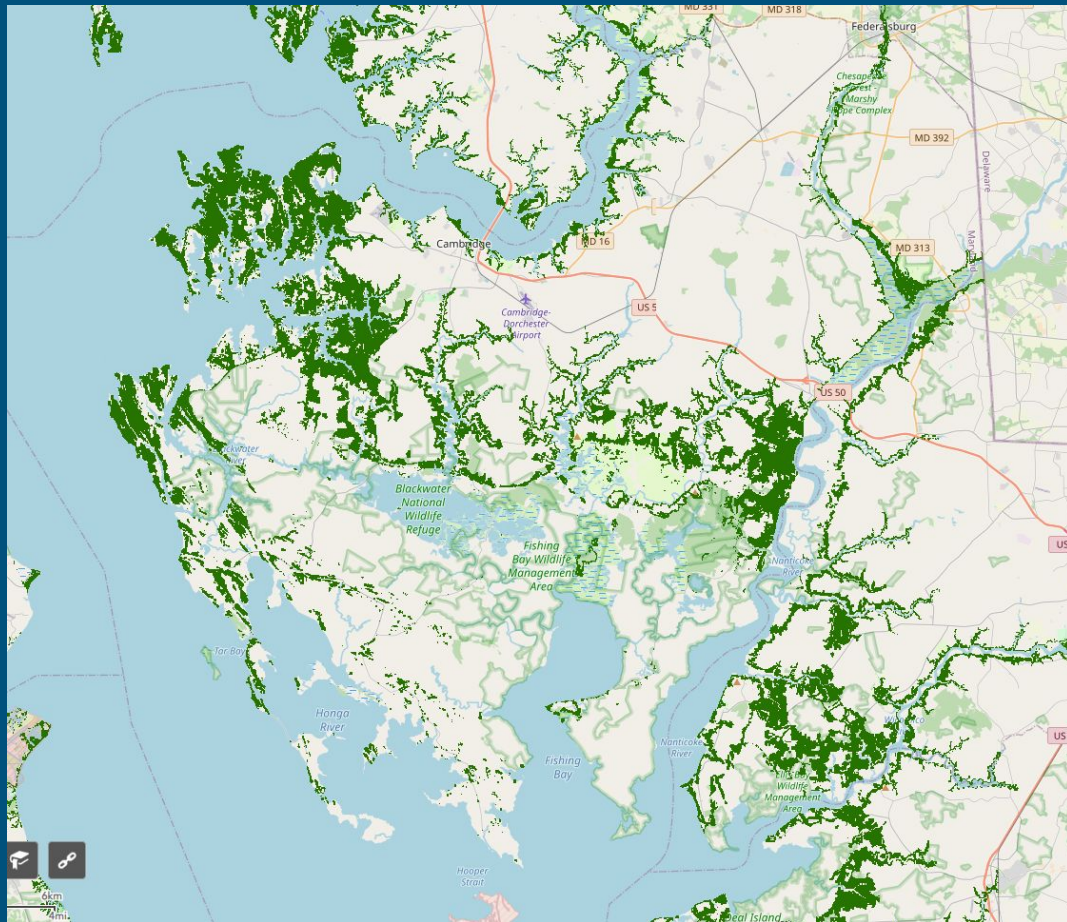
Uplands to Wetlands in 2100

Other Data
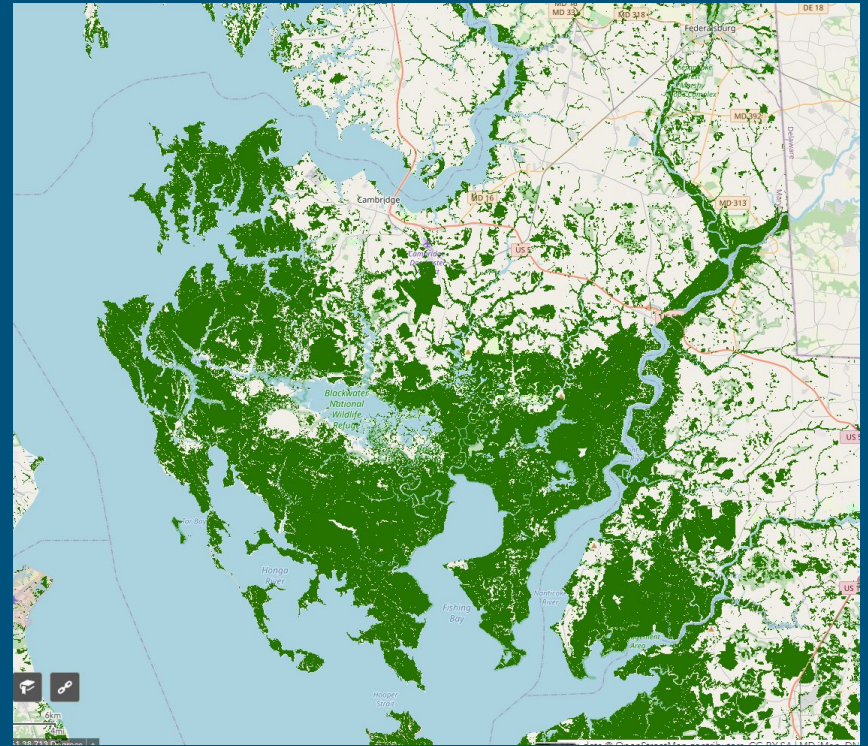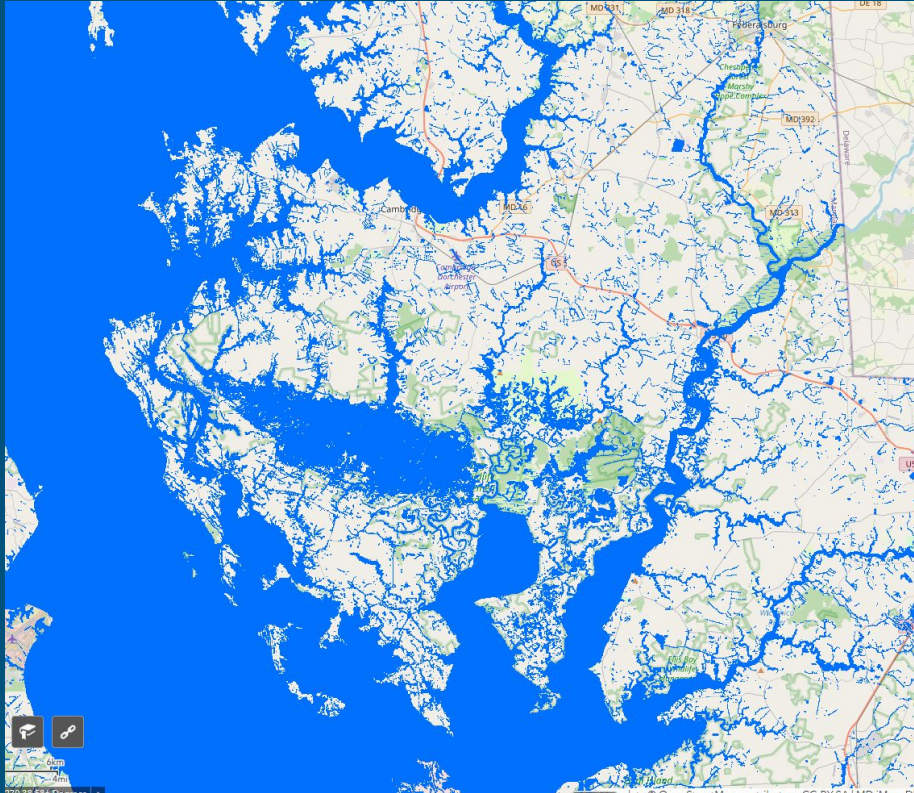
Drowned Lands in 2050 &
Wetland Migration Corridor
(WAA 2050 + 2070 + 2100)

CS-CRAB &
2050 WAA

Coast Smart Projects

- Should Wetland Adaptation Areas data be added to the Coast Smart screening form?
  - Is the project located in the Wetland Adaptation Areas for 2050/2070/2100?
  - Has the project considered adding design features to allow for wetland adaptation?