



Maryland
Department of
the Environment

Introduction of the Wastewater Workgroup

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Clarification of Siting and Design Standards

- Goal:

Clarify existing guidance for application to wastewater construction and reconstruction projects

- Members:

Eileen Gladd, P.E. - MDE Flood Management Division - Chair

Dave Guignet - State NFIP Coordinator

Walid Saffouri, P.E. - MDE ECPP Program Manager

Maia Tainclaux, P.E. - RK&K Wastewater Engineer

Ezgi Kurdoglu - MES Wastewater Engineer

Maryland Association of Municipal Wastewater Agencies (MAMWA)



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FFRMS Update

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FFRMS

Federal
Flood
Risk
Management
Standard



2014 - Coast Smart created

2015 - Executive Order 13690 establishes FFRMS

2015 - Coast Smart Construction program siting and Design criteria

2017 - Executive Order 13807 revokes FFRMS

2020 - Coast Smart Construction Program siting and Design criteria update

2021 - Executive Order 14030 reinstates FFRMS

2021 - Coastal CRAB mapped

2023 - Riverine CRAB mapped

April 2024 - HUD publishes final FFRMS rule

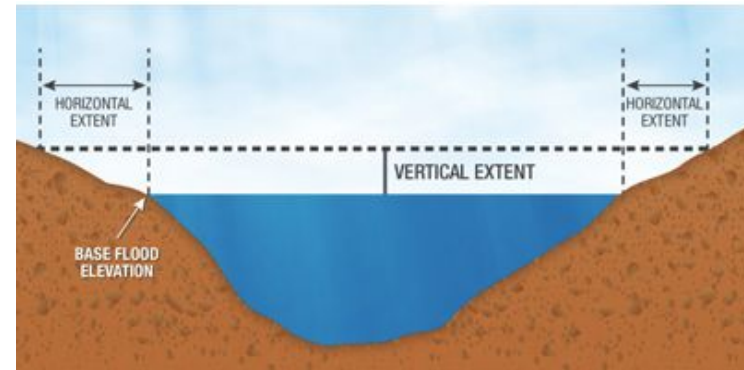
May 2024 - Public comment period for **FFRMS mapping**

July 2024 - FEMA publishes final **FFRMS rule**



FFRMS Executive Orders Summary

- Applies to all Federal actions
- Applies to all new, substantial improvement, and substantial damage projects
- 8 step decision making process
- Each Federal agency directed to make their own adoption rule
- Mapping approaches:
 - Climate Informed Science Approach (CISA)
 - Freeboard Value Approach (FVA)
 - 500-yr floodplain





Comparison - Mapping

Coast Smart CRAB

- New floodplain
- 3-feet above BFE
- Freeboard Value Approach
- **Easy to use** viewer
- GIS layers are rasters

FFRMS Floodplain

- New floodplain
- 3-feet above BFE
- 2-feet also mapped
- Freeboard Value approach
- **Clunky** viewer
- GIS layers are rasters
- **Coastal also mapped using modified CISA**

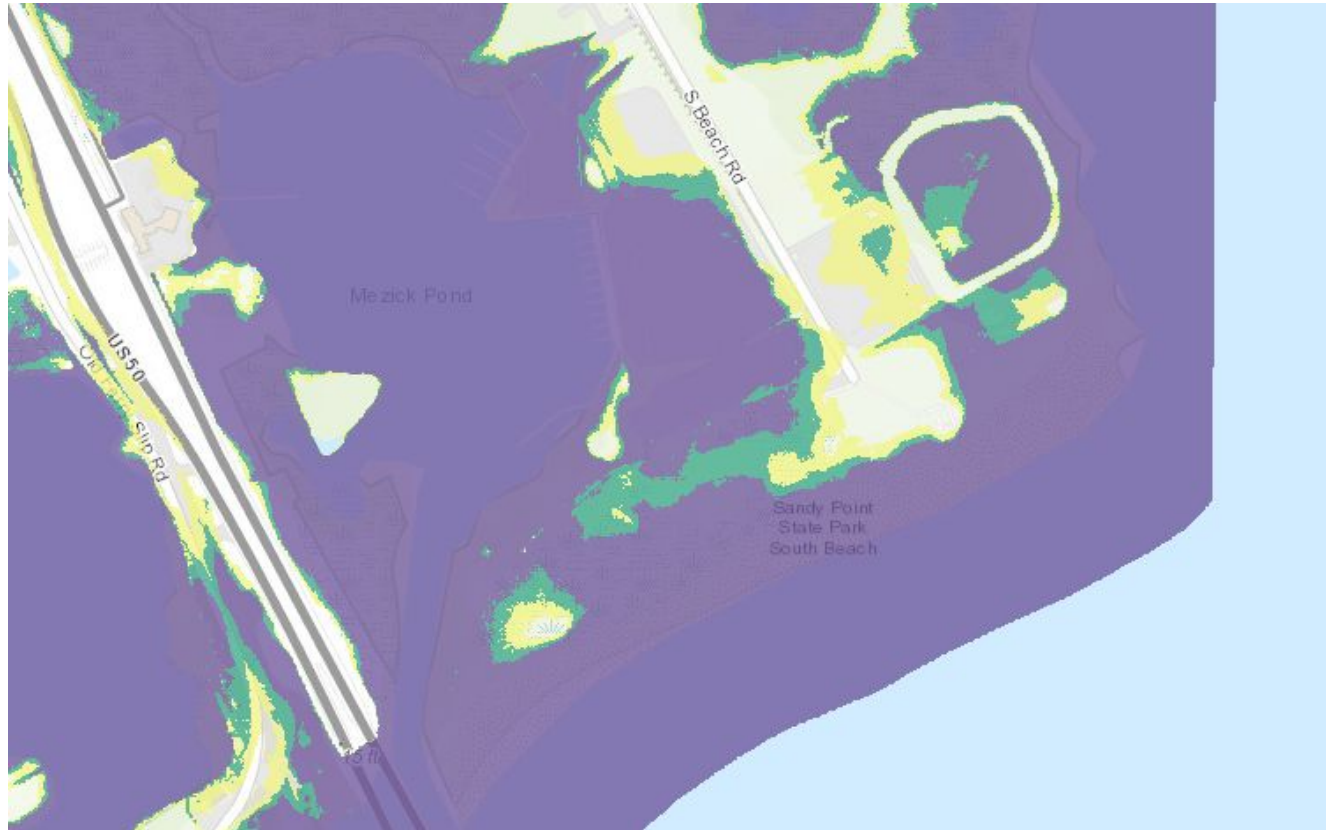


FEMA SFHA (100-year floodplain)





Coast Smart CRAB



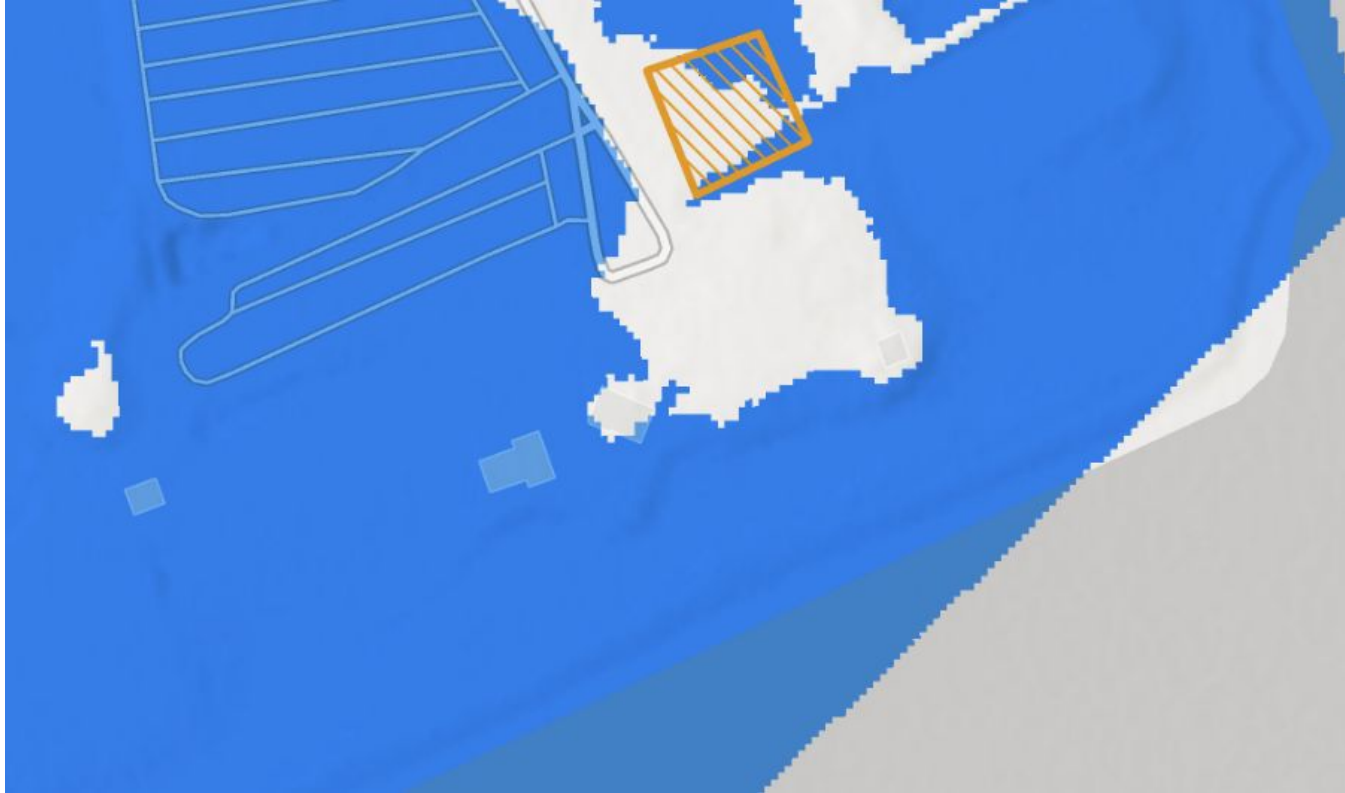


FFRMS - CISA





FFRMS - FVA





Comparison - Applicability

Coast Smart

- State funded projects
- Coastal only
- Structures = walled **or** roofed

FFRMS

- Federally funded projects
- Riverine **and Coastal**
- Structures = walled **and** roofed
And facilities



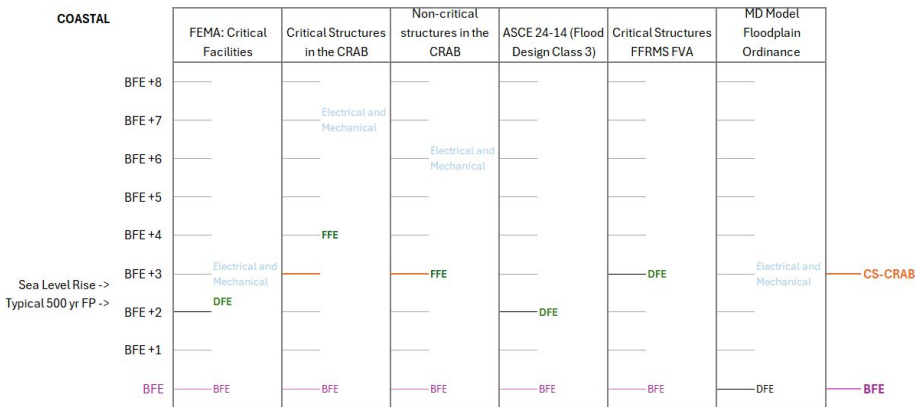
Comparison - Design

Coast Smart

- BFE + 3 feet
- Additional 1-foot of freeboard for critical projects

FFRMS

- BFE + 2-feet (non-critical)
- BFE + 3-feet (critical)
- Consistency with ASCE 24-14 under review





FFRMS Implementation

- HUD: FHA requires 2-feet of freeboard in SFHA, revises minimum property standards
- FEMA: new Hazard Mitigation grants starting with this year's applications; Public Assistance
- EPA: FFY22+ SRF
- USACOE: CISA methods in agency guidelines
- Other agencies