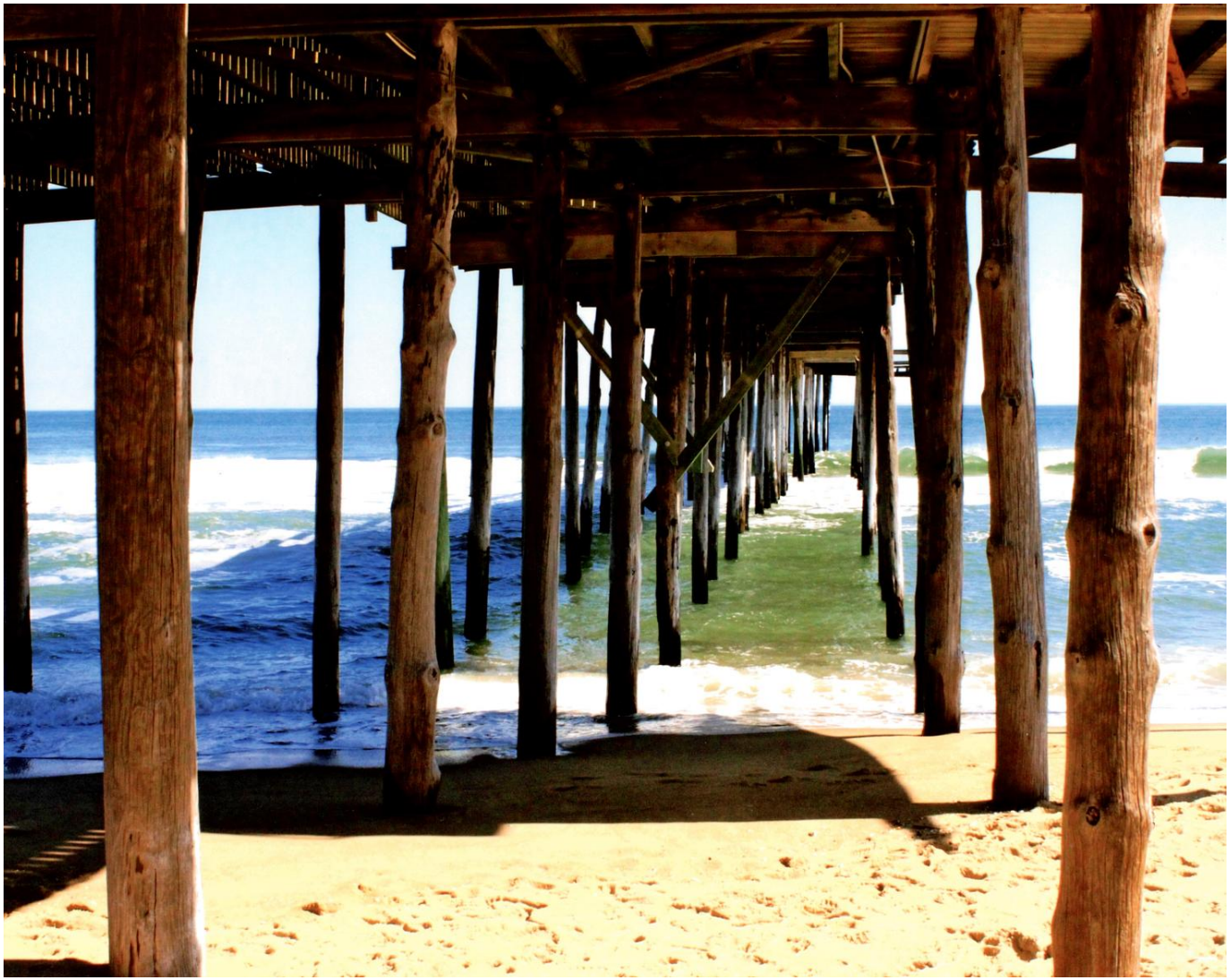
Coast Smart Council



July 22, 2014

House Bill 615: Coast Smart Council

HOUSE BILL 615

M3 4lr0128

By: Chair, Environmental Matters Committee (By Request – Departmental – Natural Resources)
Introduced and read first time: January 30, 2014
Assigned to: Environmental Matters

Committee Report: Favorable with amendments
House action: Adopted
Read second time: March 8, 2014

CHAPTER _____

AN ACT concerning

~~Climate Risk Reduction Act~~

Coast Smart Council

FOR the purpose of establishing a Coast Smart Council in the Department of Natural Resources; providing for the membership, chair, and staffing of the Council; establishing the membership term for certain members of the Council; prohibiting certain members of the Council from receiving certain compensation, but authorizing the reimbursement of certain expenses; providing for the duties of the Council; authorizing the chair of the Council to establish subcommittees under certain circumstances; requiring certain structures to be constructed in accordance with certain siting and design criteria established by the Council; requiring the Council, in consultation with the Department, to develop certain criteria in accordance with certain requirements on or before a certain date; declaring the intent of the General Assembly; requiring the Departments of Budget and Management, General Services, and Natural Resources to review and incorporate certain criteria established by the Council into certain instructions and policies; providing for the application of certain provisions of this Act; defining certain terms; and generally relating to the application of certain siting and design criteria related to sea level rise and coastal flood impacts to the construction or reconstruction of certain capital projects and the Coast Smart Council.

BY adding to

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.
[Brackets] indicate matter deleted from existing law.
Underlining indicates amendments to bill.
~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.

Council Charge

3–1004.

(A) THE COUNCIL SHALL:

(1) STUDY AND PROVIDE ANALYSIS REGARDING STANDARDS AND FACTORS RELEVANT TO THE ESTABLISHMENT OF COAST SMART SITING CRITERIA AND DESIGN CRITERIA;

(2) DEVELOP SITING AND DESIGN CRITERIA TO ESTABLISH AND IMPLEMENT COAST SMART PRACTICES AND REQUIREMENTS;

(3) DEVELOP ELIGIBILITY CRITERIA, STANDARDS, AND PROCEDURES FOR APPLYING FOR AND OBTAINING A WAIVER FROM COMPLIANCE WITH THE COAST SMART REQUIREMENTS; AND

(4) ESTABLISH PROCEDURES FOR EVALUATING COAST SMART WAIVER APPLICATIONS THAT INCLUDE THE CONSIDERATION OF PROPOSED CAPITAL PROJECTS WITH REGARD TO:

(I) THE ANTICIPATED NEED TO PREPARE FOR, RESPOND TO, AND RECOVER FROM EXTREME WEATHER EVENTS, SEA LEVEL RISE INUNDATION, COASTAL FLOODING, STORM SURGES, AND SHORELINE EROSION; AND

(II) THE NEED TO PREVENT DANGER TO LIFE AND PROPERTY AND TO AVOID ENVIRONMENTAL, SOCIO–ECONOMIC, AND ECONOMIC HARM.

(B) THE CHAIR OF THE COUNCIL MAY ESTABLISH SUBCOMMITTEES CONSISTING OF MEMBERS OF THE COUNCIL, EXPERTS IN FIELDS RELATED TO CLIMATE CHANGE AND SEA LEVEL RISE, AND INTERESTED PARTIES TO ADDRESS OR STUDY SPECIFIC ISSUES.

Project applicability

3–602.3.

(B) (1) THIS SUBSECTION APPLIES TO STATE CAPITAL PROJECTS PLANNED AND BUILT BY UNITS OF STATE GOVERNMENT THAT ARE PARTIALLY OR FULLY FUNDED WITH STATE FUNDS.

(2) BEGINNING JULY 1, 2015, IF A STATE CAPITAL PROJECT INCLUDES THE CONSTRUCTION OF A STRUCTURE OR THE RECONSTRUCTION OF A STRUCTURE WITH SUBSTANTIAL DAMAGE, THE STRUCTURE SHALL BE CONSTRUCTED OR RECONSTRUCTED IN COMPLIANCE WITH SITING AND DESIGN CRITERIA ESTABLISHED UNDER SUBSECTION (C) OF THIS SECTION

(C) (1) IN CONSULTATION WITH THE DEPARTMENT OF NATURAL RESOURCES, THE COAST SMART COUNCIL ESTABLISHED UNDER § 3–1002 OF THE NATURAL RESOURCES ARTICLE SHALL ESTABLISH COAST SMART SITING AND DESIGN CRITERIA TO ADDRESS SEA LEVEL RISE AND COASTAL FLOOD IMPACTS ON CAPITAL PROJECTS.

Specific Criteria

3–602.3.

(2) THE CRITERIA ADOPTED UNDER THIS SUBSECTION SHALL INCLUDE:

(I) GUIDELINES, AND ANY OTHER DIRECTIVES APPLICABLE TO THE PRELIMINARY PLANNING AND CONSTRUCTION OF A PROPOSED CAPITAL PROJECT;

(II) A REQUIREMENT THAT THE LOWEST FLOOR ELEVATION OF EACH STRUCTURE LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA IS BUILT AT AN ELEVATION OF AT LEAST 2 FEET ABOVE THE BASE FLOOD ELEVATION; AND

(III) PROVISIONS ESTABLISHING A PROCESS TO ALLOW A UNIT OF STATE GOVERNMENT TO OBTAIN A WAIVER FROM COMPLYING WITH THE REQUIREMENTS OF SUBSECTION (B) OF THIS SECTION.

Criteria Development Schedule

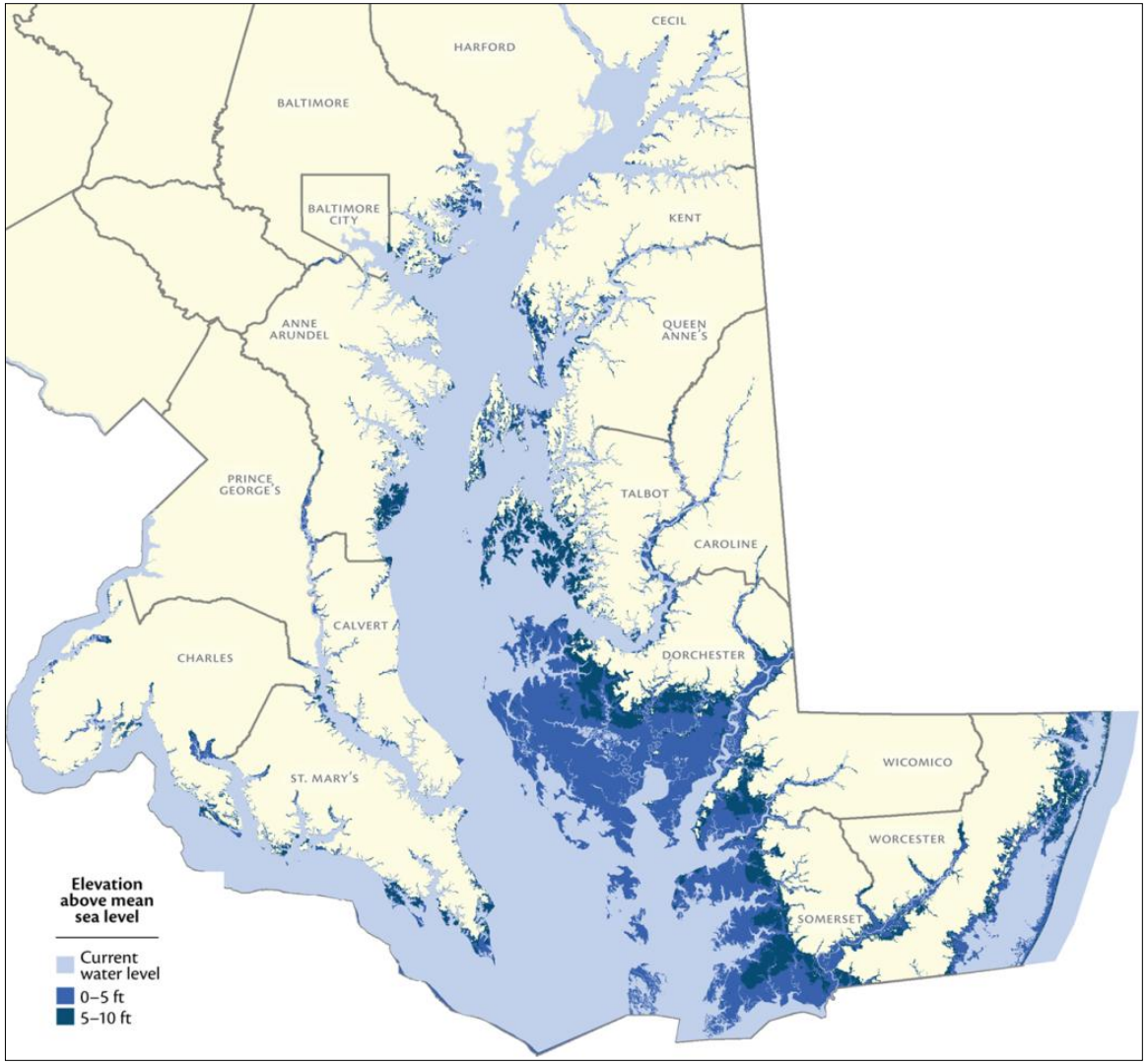
SECTION 2. AND BE IT FURTHER ENACTED, That the Coast Smart Council shall adopt initial criteria in accordance with the provisions of § 3–602.3(c) of the State Finance and Procurement Article, as enacted by this Act, on or before June 30, 2015.

SECTION 3. AND BE IT FURTHER ENACTED, That it is the intent of the General Assembly that, until the Coast Smart Council has adopted criteria in accordance with the provisions of Section 2 of this Act, units of State government that propose capital projects for a new State structure or the reconstruction or rehabilitation of a substantially damaged State structure shall comply with the guidelines and requirements of Executive Order 01.01.2012.29.

SECTION 4. AND BE IT FURTHER ENACTED, That the Departments of Budget and Management, General Services, and Natural Resources shall review and incorporate criteria developed by the Coast Smart Council under the provisions of this Act in the appropriate instructions and policies.

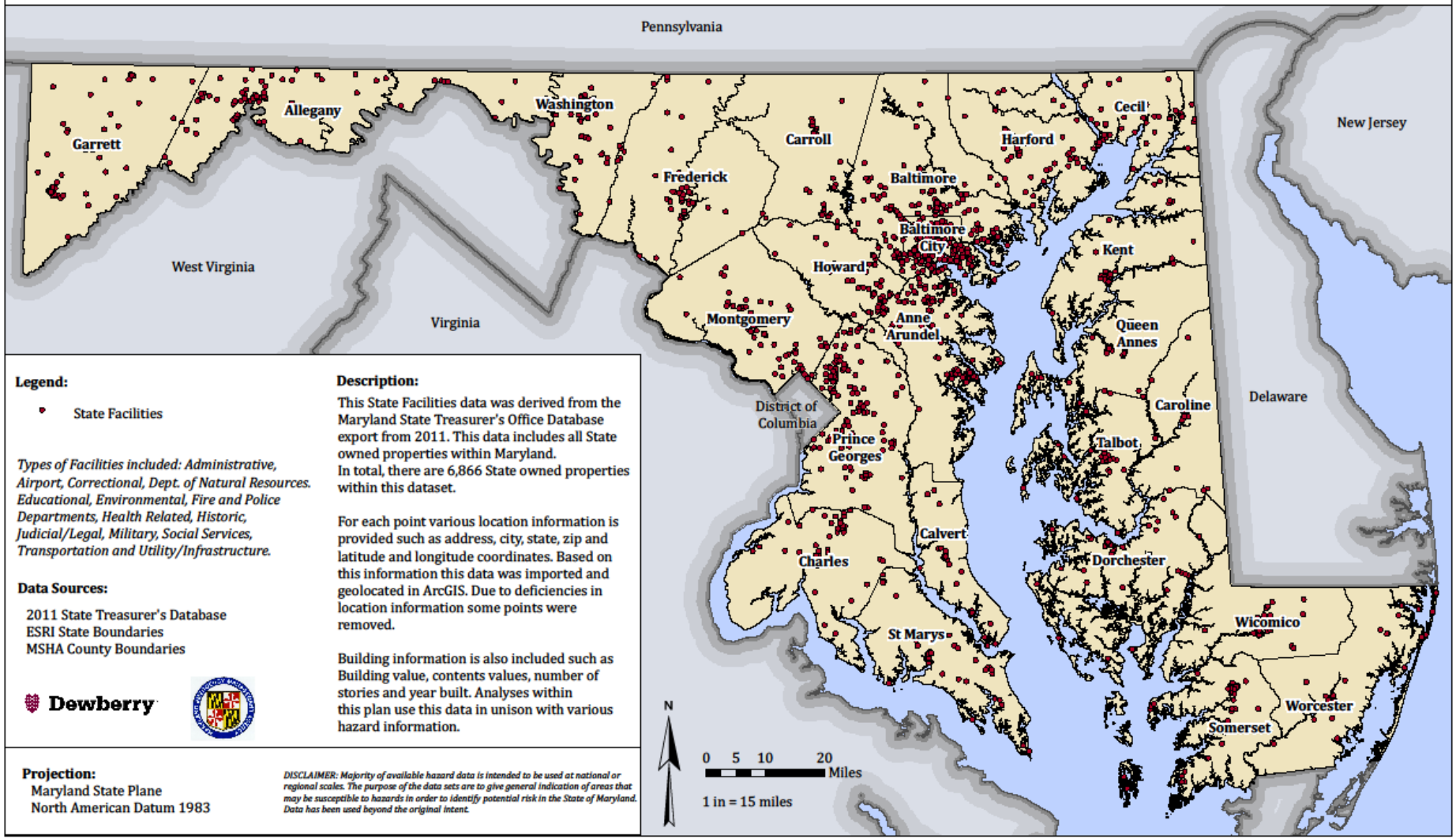
SECTION 5. AND BE IT FURTHER ENACTED, That § 3–602.3(b) of the State Finance and Procurement Article, as enacted under Section 1 of this Act, shall be construed to apply only prospectively and may not be applied or interpreted to have any effect on or application to any capital project approved by the General Assembly before July 1, 2015.

Vulnerability to Sea Level Rise



State Facilities

Maryland 2011 Hazard Mitigation Plan



Legend:

- State Facilities

Types of Facilities included: Administrative, Airport, Correctional, Dept. of Natural Resources. Educational, Environmental, Fire and Police Departments, Health Related, Historic, Judicial/Legal, Military, Social Services, Transportation and Utility/Infrastructure.

Data Sources:

2011 State Treasurer's Database
ESRI State Boundaries
MSHA County Boundaries

Dewberry

Description:

This State Facilities data was derived from the Maryland State Treasurer's Office Database export from 2011. This data includes all State owned properties within Maryland.
In total, there are 6,866 State owned properties within this dataset.

For each point various location information is provided such as address, city, state, zip and latitude and longitude coordinates. Based on this information this data was imported and geolocated in ArcGIS. Due to deficiencies in location information some points were removed.

Building information is also included such as Building value, contents values, number of stories and year built. Analyses within this plan use this data in unison with various hazard information.

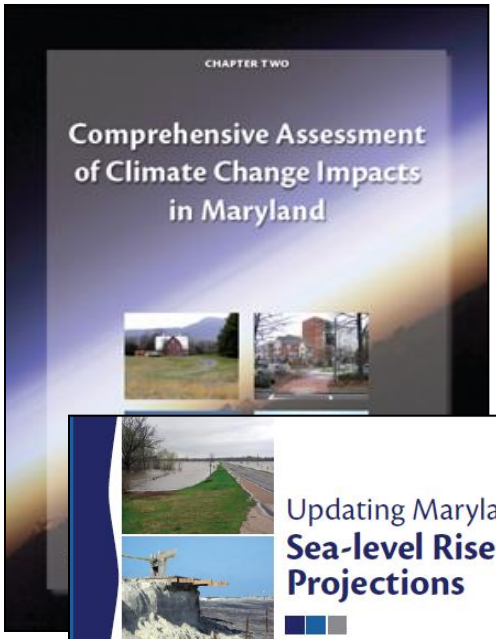
Projection:
Maryland State Plane
North American Datum 1983

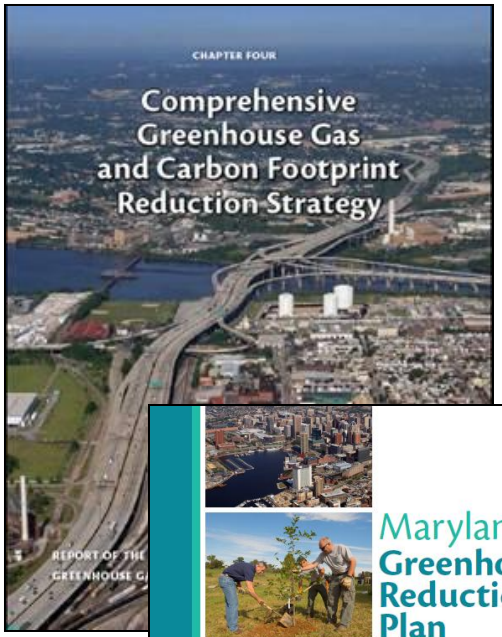
DISCLAIMER: Majority of available hazard data is intended to be used at national or regional scales. The purpose of the data sets are to give general indication of areas that may be susceptible to hazards in order to identify potential risk in the State of Maryland. Data has been used beyond the original intent.

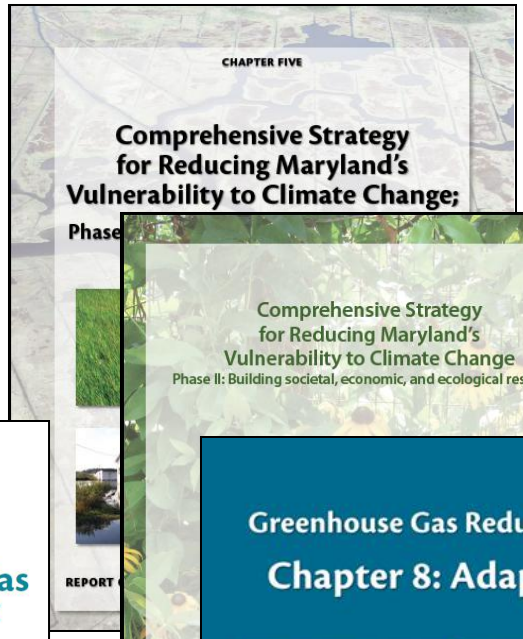
Impacts of Concern

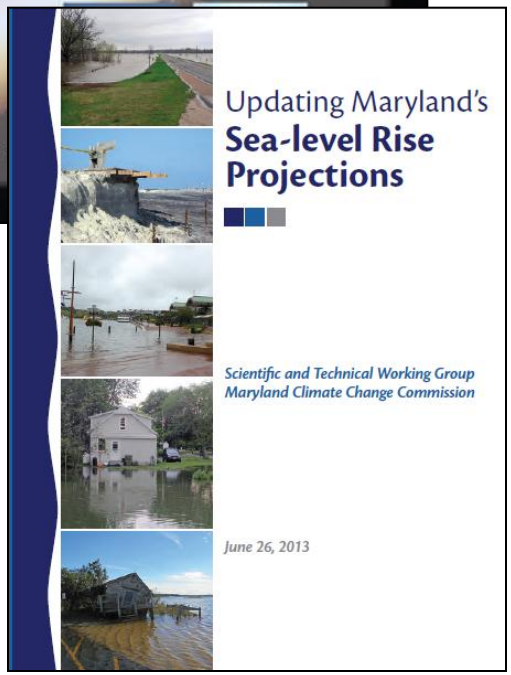
- Inundation of low-lying lands
- Increased flooding/storm surge
- Increase in tidal range
- Shore erosion
- Saltwater intrusion
- Higher water tables

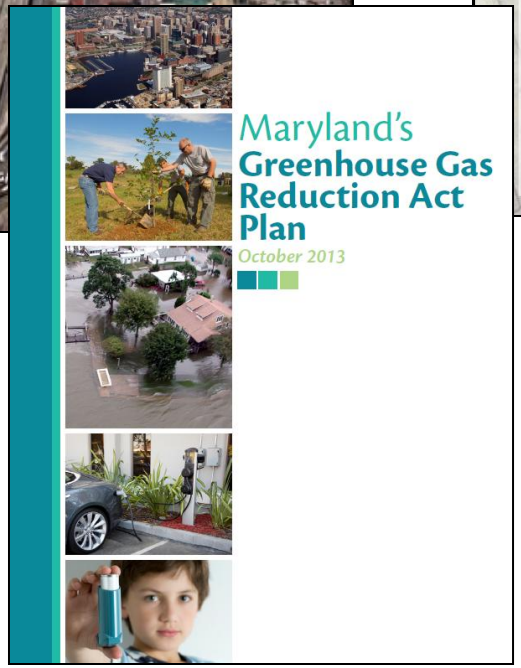
Maryland's Climate Action Plan

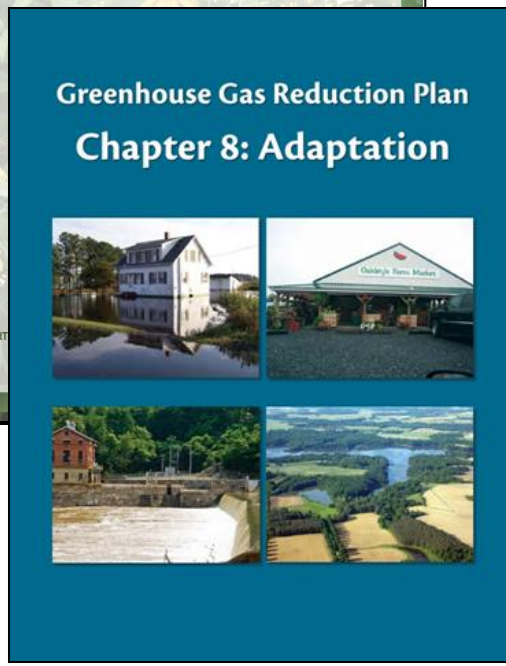






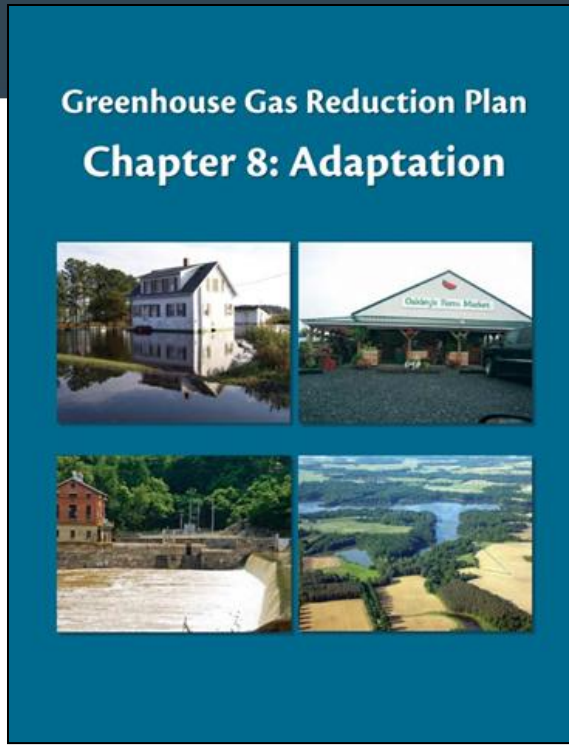




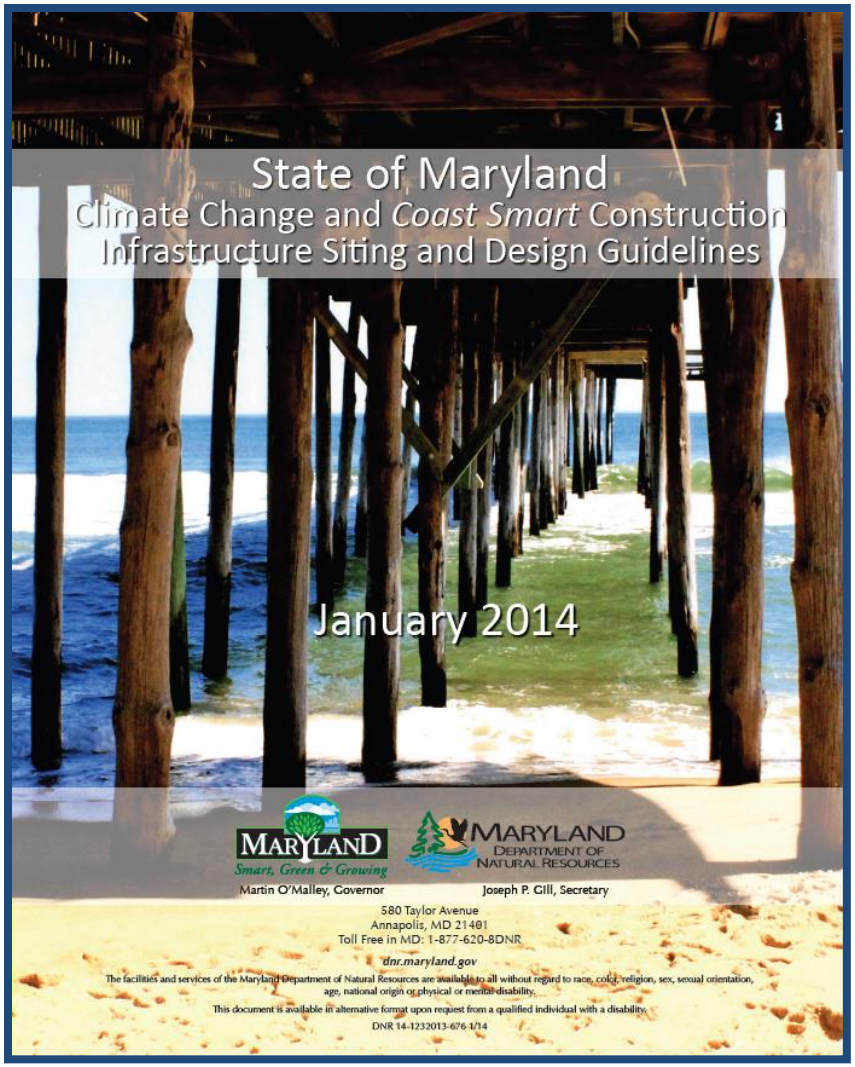


Ongoing State-Agency Planning

- SHA: Transportation Vulnerability Assessment
- MPA : Climate Change Vulnerability Assessment and Recommendations
- MHT: Historical, Archaeological, and Cultural Resources Vulnerability Study
- DNR: Local Government Technical and Financial Assistance: *CoastSmart Communities*
- DNR: Adaptation Toolbox: The Coastal Atlas
- MDE: Higher Regulatory Standards for Floodplain Management
- DHCD: Review of Current Statewide Building Codes and Recommendations for Enhancement in Coastal Regions of Maryland & Sustainable Communities Designation Reviews
- MEMA: State Hazard Mitigation Plan & State Recovery Plan
- DHMH: State Climate Change Environmental Health Capacity Building
- DNR: Critical Area Program Jurisdictional Mapping Update and Proposed State Development Regulations
- MDP: Plan Maryland – Climate Change Impact Areas
- Inter-Agency: Hurricane Sandy State Recovery Team



Strategy: Enhance Siting & Design for Coastal Infrastructure



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MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Climate Change & "Coast Smart" Construction

Executive Order 01.01.2012.29

- State agencies proposing capital projects for new or reconstructed state structures shall consider the risk of coastal flooding and sea level rise to the project and should site and design structures to avoid or minimize damage.

- DGS shall update its Policies and Procedures Manual for Architecture and Engineers to include guidelines providing that State agencies plan construction and reconstruction of state structures located in Special Flood Hazard Areas with a minimum of two (2) feet above the 100-year base flood elevation.

- The Critical Area Commission should evaluate existing regulations and policies for State Agency actions resulting in development on state-owned lands and consider the adoption of new or revised provisions that address climate change the risk of sea level rise and other extreme weather related impacts.

- The Scientific and Technical Working Group of the Maryland Commission on Climate Change shall provide updated sea level rise projections based on an assessment of the latest climate change science and federal guidance.

Working Group Tasks

The EO also charges the Maryland Department of Natural Resources to work with the Maryland Commission on Climate Change, local governments and other parties as appropriate, to develop:

- Recommendations for additional "*Coast Smart*" criteria for the siting and design of new, reconstructed, or rehabilitated State structures, as well as other infrastructure improvements such as roads, bridges, sewer and water systems, drainage systems, and essential public utilities;

- Recommendations concerning the potential application of "*Coast Smart*" guidelines to non-state infrastructure projects that are partially or fully funded by State agencies; and,

- Other recommendations for executive and/or legislative action.

Policy Framework

The State shall employ *Coast Smart* practices when constructing all new State structures, reconstructing or rehabilitating substantially damaged State structures, or making other major infrastructure improvements in Maryland's coastal zone, such as roads, bridges, sewer and water systems, drainage systems and essential public utilities.

Coast Smart means a construction practice in which preliminary planning, siting, design, construction, operation, maintenance, and repair of a structure avoids or, in the alternative, minimizes future impacts associated with coastal flooding and sea level rise. "*Coast Smart*" includes both siting and design guidelines that are applicable throughout the entire life cycle of a project.

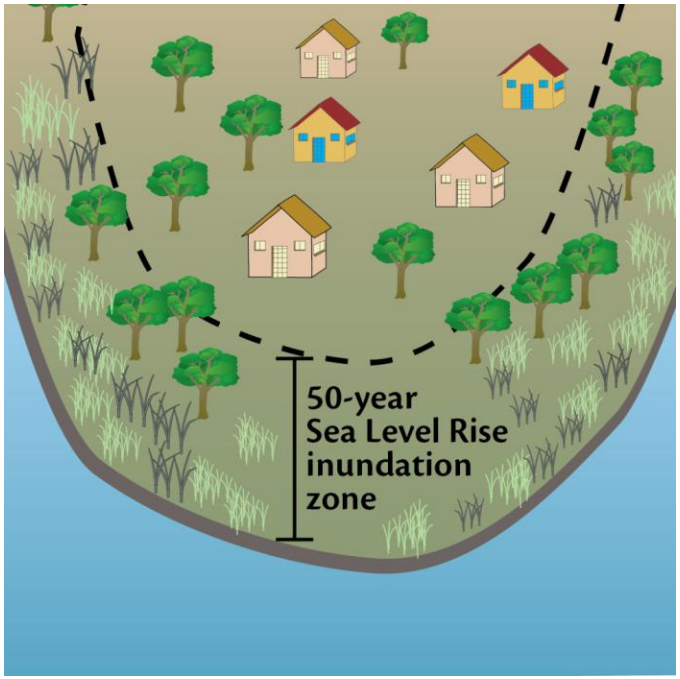
Similar measures should be used for non-State structure or infrastructure projects if partially or fully funded by State agencies and for non-state projects located on state-owned lands.

Siting Guidelines: Where to Build?

- Construction of new state structures, the reconstruction of substantially damaged state structures, and/or other new major infrastructure projects should be avoided, to the fullest extent practicable, within areas likely to be inundated by sea level rise within the next 50-years.

- New state "critical or essential facilities" shall be located outside the 100-year floodplain as designated under the National Flood Insurance Program and be protected from damage and loss of access as a result of the 500-year flood.

- Ecological features on site that may serve to buffer the project from the impacts of future sea level rise, coastal flooding or storm surge (e.g., vegetated or forested buffers, dunes, wetland adaptation areas), shall be protected and maintained.

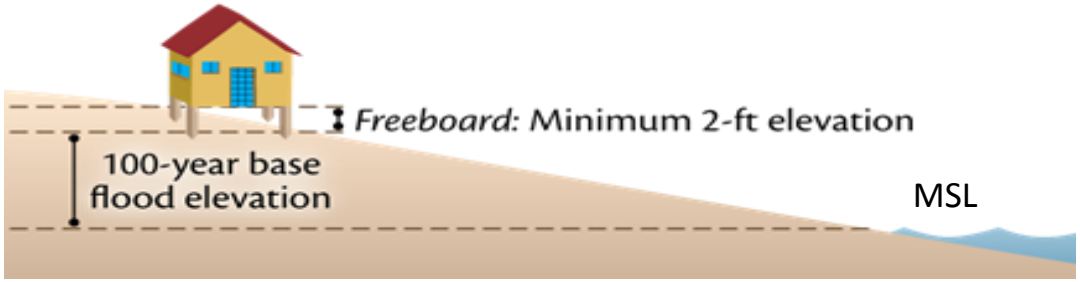


Siting Guidelines Exception Criteria

- Exceptions may be considered for the following project types, provided that it can be demonstrated that projects have been designed to increase resiliency to future impacts:
  - *Water-dependent uses*. Projects that require continued direct access to the water as an integral part of the use, or facilities that directly support water dependent uses.
  - *Existing transportation system assets*. Projects that support the continued function of the existing transportation system assets.
  - *Passive public access*. Projects that provide either recreational or scenic access to water bodies or shoreline areas which need to be within a flood zone for their purpose.
  - *Temporary structures*. Structures or uses intended to be in place for less than 180 consecutive days in any given calendar year.
  - *Stabilization projects*. Actions to secure and maintain assets, structures, infrastructure, and natural and cultural resources to prevent additional damage and to prevent future resource/facility damage or efforts to mitigate a safety or environmental hazard.

Design Guidelines: How to Build?

- All new state structures, the reconstruction of substantially damaged state structures, and/or other new major infrastructure projects shall be designed to avoid or minimize future impacts associated with future sea level rise, coastal flooding and storm surge.
- All new permanent State structures and the reconstruction or rehabilitation of substantially damaged State structures located in Special Flood Hazard Areas shall be constructed with a minimum of two (2) feet of freeboard above the 100-year base flood elevation, as defined by the National Flood Insurance Program.
- Transportation structures that are not water dependent or dependent on integral infrastructure shall be constructed with a minimum of two (2) feet of freeboard above the 100-year base flood elevation, as defined by the National Flood Insurance Program.
- Utilize FEMA standards (44CFR60.3(c)(3)(ii)) for dry-proofing or wet-proofing parts of a structure or portion of infrastructure located below base flood elevation to prevent or minimize the effect of coastal flooding.
- Structures proposed within a Limit of Moderate Wave Action (LiMWA) boundary, also known as the "Coastal A Zone," when mapped under the National Flood Insurance Program, shall be designed in compliance with construction standards applicable for V Zones.



Design Guideline Exception Criteria

- Exceptions to the Design Guidelines may be warranted based on consideration of the following factors:
  - The danger that materials may be swept onto other lands to the injury of others;
  - The danger to life and property due to flooding or erosion damage;
  - The susceptibility of the proposed structure and its contents to flood damage and the effect of such damage to the State of Maryland;
  - The importance of the services to the State of Maryland provided by the proposed structure;
  - The availability of suitable alternative locations that are subject to a lower risk of flooding or erosion damage;
  - The necessity or benefits of a waterfront location;
  - The compatibility of the proposed use of the structure with existing and anticipated development;
  - The need to maintain eligibility or designation as a historic structure as defined by the U.S. Department of the Interior and/or the Maryland Historical Trust;
  - The safety of access to site, facility or the structure by passenger and emergency vehicles during a flood;
  - The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of any wave action expected at the site;
  - The costs of providing government services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges; and
  - The comments provided by the Secretary of Transportation regarding the application of freeboard requirements on the transportation function of a given structure.
  - The comments provided by the Maryland Department of Environment and the National Flood Insurance Program State Coordinator.

Institutionalization: How to Formalize?

- State Policy and Programs
  - DGS Policies and Procedural Manual for A&E
  - MDOT Construction Manual
  - UMD Construction Manual
  - Plan Maryland
- Application to non-state infrastructure projects, partially or fully funded by State agencies
- State Grant Programs
  - Capital Grant Program
  - Community Development Block Grants
  - Bay Restoration Trust Fund
  - Transportation Trust Fund
  - Sustainable Communities Grant
- Timing/Phasing
  - Recommendations for how to implement new review criteria for projects already in the state planning pipeline
- New administrative, executive and/or legislative actions

For State of Maryland Capital Grant Recipients

This booklet is for you if your organization has been named as a capital grant recipient either in Maryland's annual consolidated bond bill or in an individual bond bill. This booklet serves as a guide to obtaining your funds.

While you may have worked with other people to become an official grant recipient, going forward you will work with the Department of General Services to obtain your grant funds. Although the Board of Public Works ultimately determines whether you have met the requirements to receive your grant, the Department of General Services is your point of contact because DGS administers the Capital Grants Program on behalf of the Board of Public Works.

Board of Public Works

Governor Martin O'Malley • Treasurer Nancy K. Kopp • Comptroller Peter L. Franchot

Sheila McDonald, Esq.
Executive Secretary
80 Calvert Street
Annapolis, Maryland 21401
410.260.7335

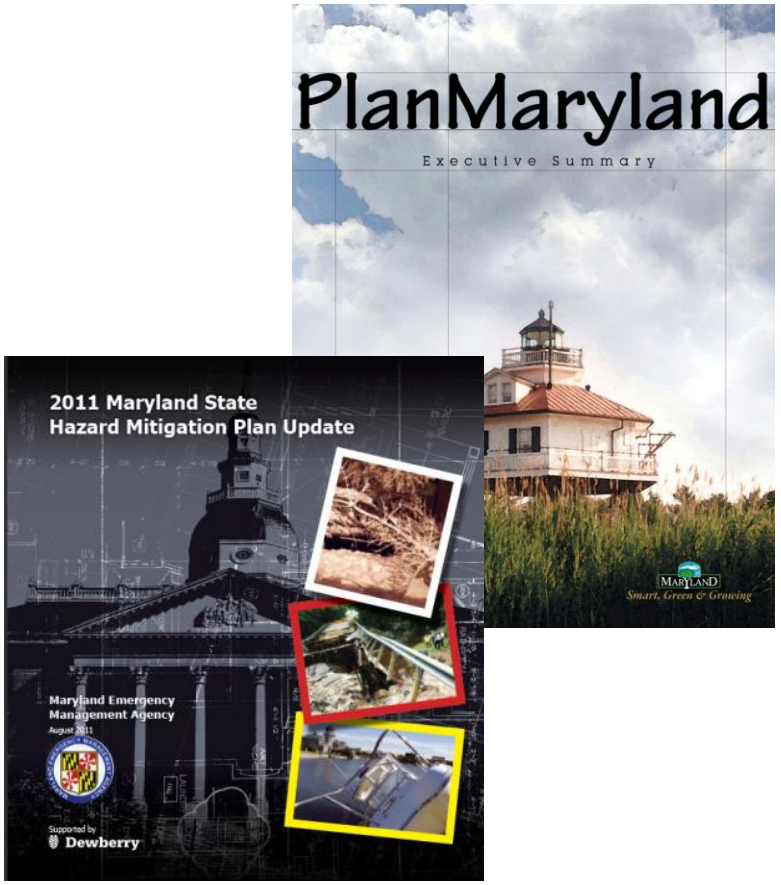
Department of General Services

Al Collins, Secretary
Cathy Ensor, Capital Grants Program Manager
301 W. Preston Street, Room 1405
Baltimore, Maryland 21201
410.767.4107

1

Institutionalization into State Policy & Programs

- Architecture, Engineering, Construction and Design Manuals
- Regulatory Programs
- State Planning, Permitting and Review Processes
- Disaster Planning and Response
- Capital Budgeting
- State Grant and Loan Programs



Recommendations & Next Steps

- ***State Policy Integration***. State agencies should take the necessary steps to incorporate the recommended *Coast Smart* Guidelines into all appropriate architecture, engineering, construction and design manuals, state planning programs, regulatory programs, permitting and review processes, disaster planning and response, capital budgeting, and state grant and loan programs.

- ***State-Agency Oversight***. Maryland's Smart Growth Sub-Cabinet should provide oversight to individual state agencies as they undertake the process to institutionalize the *Coast Smart* Siting and Design Guidelines.

- ***Implementation Plans.*** In recognition of the unique nature of infrastructure investment decisions among State agencies, State agencies review internal processes and develop or amend agency specific implementation plans. These plans should include the status and next steps toward incorporation of the *Coast Smart* Siting and Design Guidelines into applicable state policy and programs; the identification of appropriate categorical exceptions; and cost, size and use application thresholds.

- ***Review Authority & Exception Process***. The State should appoint a formal body with authority to develop a process to allow a unit of State government or a capital grant or loan recipient to obtain an "exception" from strict application of the recommended *Coast Smart* Siting and Design Guidelines. At a minimum, the exception process should provide for consideration of the siting and design guideline exception criteria; proposed structural and ecosystem-based resiliency measures; cost-benefit analysis; socio-economic considerations; statutory or regulatory conflicts; external grant funding criteria; and mapping error.

Project Screening Checklist

Appendix D — Project Screening Checklist

Application of the *Coast Smart* Construction Siting and Design Guidelines as detailed above should be administered through the following project screening process:

1. *Project Scope.* Timescale for which project planning, design, construction, maintenance and operational decisions are being made:
   a. Short-term projects (design life < 25 years).
   b. Medium-term projects (design life between 25-50 years).
   c. Long-term projects (design life between 50 – 100 years).
   d. Very long-term projects (design life > 100 years).

2. *Project location.* Proposed project's vulnerability to sea level rise impacts (i.e., future inundation, flooding and storm surge) over the course of the project's design life.
   a. Is the project within a 50- or 100- year sea level rise inundation zone?
      i. For planning of new State structures or other infrastructure for which the design life is not expected to extend beyond 2100 (short- to medium-term projects) or with a relatively high risk tolerance limit (e.g., rare flooding is tolerable), it is recommended that the sea level rise projection of 2.1 feet by 2050 and 3.7 feet by 2100 be used to assess vulnerability.
      ii. For structures or public infrastructure projects for which the design life is expected to extend beyond 2100 (long- to very long-term projects) or where there is a very low acceptance of any flooding risk, the relative sea-level rise estimate of 5.7 feet should be utilized.
   b. Is the project within a mapped Special Flood Hazard Area? What is the 100-year flood elevation for the project's location?
      i. Is the proposed first floor elevation above the 100-year Base Flood Elevation? Is the project within a Limit of Moderate Wave Action (LiMWA) on the FEMA Coastal studies?
   c. Is the project within a storm surge inundation zone (Category 1-4)?
      i. Assess additional risk of heightened storm surge due to future sea level rise.

3. *Ecosystem Resiliency.* Identify ecological features on site that may serve to buffer the project from the impacts of future sea level rise, coastal flooding or storm surge (e.g., vegetated or forested buffer, dunes, wetland or marsh system). These may include:
   a. Potential wetland migration or habitat adaptation areas on site; or
   b. Natural features that could be enhanced, restored or created to provide additional protection against future sea level rise and coastal storm impacts.

4. *Resiliency Measures.* Identify *Coast Smart* Siting and Design Guidelines incorporated into project siting, design, construction, maintenance and operational planning, or other measures included in State or local climate adaptation plans (e.g., flood gates) that are scientifically workable and with a likelihood of construction within the needed timeframe. These may include:
   a. Siting considerations (e.g., project has been sited outside areas vulnerable to sea level rise within the project's anticipated design life, incorporation of ecosystem resiliency measures);
   b. Design considerations (e.g., height of "freeboard" building materials);
   c. Type of construction (e.g., relocatable, portable, expendable in the event of storm damage); or
   d. Functional use restrictions (e.g., temporary).

5. *Cost/Benefit Analysis.* Assess anticipated benefits and costs of the proposed project, taking into account the following factors:

a. Risk v. Time. Potential risk associated with sea level rise, coastal flooding and storm surge over the project's anticipated design life.

b. Risk Tolerance. Determination of risk tolerance (low, medium, high) for the proposed project.

c. Socio-economic Considerations. Full extent of costs over both short and long terms, including costs associated with the need for additional shore protection, emergency response during extreme events, and the possible need for the repair or rebuilding of damaged structures.

d. Environmental Impacts. Increased impact of the project to the environment due to the incorporation of resiliency measures (e.g., increasing the height of a bridge may necessitate need for larger bridge abutments with greater impact to waterway and nearby wetland areas).

Coast Smart Council
Tentative Timeline and Work Plan

Meeting Date	Meeting	Task
July 22, 2014	Meeting #1	Council kick-off meeting
Mid-Sept., 2014	Meeting #2	Review & discuss design considerations
Mid-November, 2014	Meeting #3	Review & discuss siting considerations
Mid-January, 2015	Meeting #4	Explore standards for natural and nature-based resiliency measures
Mid-March, 2015	Meeting #5	Review & discuss waiver provisions and process
Mid-May, 2015	Meeting #6	Draft initial criteria
May – June, 2015		Public review and comment period
Mid-June, 2015	Meeting #7	Refine criteria
Early-July, 2015	Meeting #8	Approve Final Criteria

Wrap Up

Council Member Polling

- Meeting day preference
- Time of day preference
- Subgroup Interest