CoastSmart Communities Program

Adaptive * Ready * Resilient

Chesapeake and Coastal Service
Maryland Department of Natural Resources

RAE/TCS 2014
Maryland’s Coastal Zone

The Maryland coastal zone is comprised of the land, water and subaqueous land between the territorial limits of Maryland in the Chesapeake Bay, Atlantic Coastal Bays and the Atlantic Ocean, as well as the towns, cities and counties that contain and help govern the thousands of miles of Maryland shoreline. The Maryland coastal zone extends from three miles out in the Atlantic Ocean to the inland boundaries of the 16 counties and Baltimore City that border the Atlantic Ocean, Chesapeake Bay and the Potomac River up to the District of Columbia. This area encompasses two-thirds of the State’s land area and is home to almost 70% of Maryland’s residents.

Counties in Maryland’s coastal zone:

Anne Arundel  
Baltimore  
Calvert  
Caroline  
Charles  
Cecil  
Dorchester  
Harford  
Kent  
Prince George’s  
Queen Anne’s  
Somerset  
St. Mary’s  
Talbot  
Wicomico  
Worcester  
and Baltimore City
Maryland’s Coastal Zone

- Maryland’s CZMP is a networked program through partnered State agencies to address:
  - Blue Infrastructure
  - Coastal Hazards Resiliency
  - Public Access and Water Trails
  - Working Waterfronts
  - Ocean Planning and Renewable Offshore Energy
  - Climate Change and Coastal Conservation
  - Water Quality and Climate Change Impacts
CoastSmart Communities Program

• Help utilize existing mapping tools

• Connect to information, training and resources

• Grants to Local Governments
CoastSmart Program Resources

- Maryland’s Coastal Atlas
- Informational factsheets
- Online Resource Center
- Partnered Trainings
- CoastSmart Scorecard
- Community Grants
Identifying Coastal Hazards

Annapolis

Crisfield

Shady Side

Elevation above mean sea level

- Current water level
- 0–5 ft
- 5–10 ft
CoastSmart Communities

Request for Proposals CoastSmart Communities Initiative (CCI)

The CoastSmart Communities Initiative (CCI) competitive grant program will provide financial and technical assistance to local governments to promote the incorporation of natural resource and coastal management issues into local planning and permitting activities. CCI will target coastal communities that want to reduce their vulnerability to the effects of coastal hazards and sea level rise by becoming ready, adaptive and resilient. CCI seeks proposals for projects that are aligned with the strategic objectives of Maryland's Coastal Zone Management Program and foster innovative coastal management through local initiatives that:

- Ensure that coastal communities are protected from coastal hazards and the impacts of climate change (e.g., CoastSmart Communities);
- Work to ensure coastal and ocean waters meet living resource and human needs;
- Serve to enhance the protection and management of Maryland's coastal resources.

Welcome to the CoastSmart Communities Online Resource Center. This site has been developed to assist our businesses, communities and local governments access available products and services to address the current risks associated with coastal hazards and the potential increased impacts of those hazards in the future due to climate change. Here you will find web-based planning tools, storm surge inundation and sea level rise maps, training programs, staff resources, and access to local grants. The development of the products and services has been, and continues to be shaped.

In Focus
King Tides Photo Initiative

Calling for pictures of high tides! May 24th - 27th

Grab your cameras and head out to the Western, Eastern, or Atlantic shore to photograph the highest seasonal tides. We need your help in documenting how these tides look along Maryland's shores.

Download CoastSmart Fact Sheet
Coastal hazards in Maryland

Extending over 4,000 miles along the diverse landscapes of the Chesapeake Bay, the Coastal Bay, and the Atlantic Ocean, Maryland’s shoreline is highly susceptible to coastal hazards. In Maryland, these hazards are both episodic and chronic in nature, resulting from weather events (hurricanes, nor’easters, floods, and storm surge) and long-term processes (sea-level rise, land subsidence, and erosion). Almost 71% of Maryland’s shoreline experiences chronic erosion and up to 60% of some counties lie within the 100-year floodplain. The damages and impacts resulting from coastal hazards present a substantial threat to communities, infrastructure, and natural resources throughout Maryland and will only be exacerbated by climate change.

The effects of sea-level rise and the risks associated with coastal hazards are often observed at the local level, and therefore require local action. Through programs such as CoastSmart Communities, the State of Maryland is helping build the capacity to develop plans within communities that not only reduce future threats to our communities’ safety, health, and welfare, but are typically more effective and less costly than responding reactively to coastal hazard impacts as they happen.

How vulnerable is your community to coastal hazards?

Vulnerability refers to how susceptible a natural or human system is to coastal hazards, such as shoreline change, sea-level rise, flooding, and storm surge. Vulnerability is a function of a system’s sensitivity and its capacity to adapt to impacts and changes. Systems that are sensitive to coastal hazards are easily affected or have a disproportionately large area affected by a small change. Adaptation consists of actions taken to reduce the vulnerability of natural and human systems to the effects of climate change in the coastal zone.

Why a Scorecard?

With varying technical capacity and the demands placed on local planning staff, providing resources to identify and implement adaptation strategies is essential. Our goal is to help local governments determine how well they are currently positioned to plan for coastal hazard impacts through a simple, practical self-assessment. The Scorecard also provides a mechanism for planners, natural resource managers, emergency management professionals, and other local officials to identify specific, realistic ways that they can prepare for these impacts by integrating coastal hazards into existing planning, management, and regulatory programs. Because each Maryland community is unique, the Scorecard is intended to identify areas that need improvement, not serve as a basis for ranking or comparing among communities.

How to use the Scorecard

The scorecard is organized into five major sections: 1) Risk and Vulnerability Assessment, 2) People and Property, 3) Infrastructure and Critical Facilities, 4) Natural Resources, and 5) Societal and Economic Impacts. Go through each section and answer the questions to the best of your ability. After each section, total up your ‘yes’ responses and check the CoastSmart ratings to see how well existing planning efforts are addressing current and future weather and climate hazards. To help determine your responses, each section has a “Where to Start” box with a list of relevant planning documents, resources, and other tools to help assess your preparedness.

What your scores can tell you

When assessing your community, it is important to look at the individual section scores to see which areas need the most improvement and where you are doing the best things. As a general guide, we’ve included a three-tiered scoring system for each section:

- **CoastSmart**: Scores in this rating indicate that your community is positioned to be ready, adaptive, and resilient to coastal hazards and climate change. There is, however, always room for improvement. Examine the recommendations and helpful resources provided at the end of each section to see where you may be able to do more work to make your community even more resilient.

- **On The Right Track**: To continue moving in the CoastSmart direction, look at your lower section scores. Study your results to identify strategies that have been successful and determine how they can be adapted to generate more “yes” answers and make your community better prepared to face coastal hazards and climate change.

- **Getting Started**: While you may only be in the beginning steps of making your community CoastSmart, it is important to analyze your results carefully. Focus on identifying some key actions that you can feasibly take to protect your community in the short term, while continuing to work on long-term planning and positive changes that will reduce vulnerability, minimize the cost of implementation, and make your community CoastSmart.

After determining your individual section scores, try to identify any strategies that have allowed your community to be more prepared and apply to sections with lower scores to move your community closer to CoastSmart.

What next? Where to go for help

For any “no” answers you provided, explore the resources listed at the end of the section for additional information and ideas. The tools, publications, and trainings described here can help your community continue moving toward being CoastSmart. Also, look at the Other Resources section at the end of the Scorecard for a list of services that the Chesapeake & Coastal Service can provide.

If you had a lot of Getting Started or on the Right Track section scores, you may want to consult with the Chesapeake & Coastal Service (410-260-8701) to discuss financial and technical assistance that might be available from various state and federal agencies to help your community become CoastSmart.

Connection with FEMA’s Community Rating System (CRS)

The National Flood Insurance Program’s (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Participating communities receive points based on 19 credible activities, organized under four categories: Public Information, Flood Preparedness, Mapping and Regulations, and Flood Damage Reduction. Flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the goals of the CRS.

The Chesapeake & Coastal Service has developed the CoastSmart Communities Scorecard with CRS in mind - making connections between the elements of the Scorecard and the CRS. The “CRS Points” boxes in each section offer a few samples of the creditable activities and point values that correspond with our Scorecard elements. The activity number and title correspond directly to those found in the 2013 CRS Coordinator’s Manual. crsresources.org/manual
Assessing Risk and Vulnerability

A risk and vulnerability assessment helps to identify people, property, and resources at risk of injury, damage, or loss from coastal hazards. This information serves as a foundation to help communities develop strategic plans and determine and prioritize adaptation strategies that can make a community more resilient to coastal hazards. Therefore, assessing your risk and vulnerability is a crucial first step towards a CoastSmarter.

Where to start
Consult the following resources, if available, to help complete this section:
- Map of your community
- Hurricane evacuation studies
- Digital flood insurance rate maps
- SLESH model outputs (storm surge)
- FEMA HAZUS-MH tool
- Sea-level rise inundation maps
- Maryland Coastal Atlas Shorelines Tool
- Census data
- National Register of Historical Places
- Photos, news articles, or other data

Assessing Risk and Vulnerability

1. Has your community considered the following?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

2. Has the past extent of the following coastal hazards been identified and mapped based on historical information, existing plans, reports, or scientific and local knowledge?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

3. Do any plans describe the damage and cost of previous storms, floods, or erosion?

4. Does the community track repetitive loss properties within the National Flood Insurance Program (NFIP)?

5. Have historic rates of local sea-level rise been defined through tide-gauges or research?

6. Does the community have staff trained in mapping or monitoring the following?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

7. Are maps or spatial data used to define the future extent of the following coastal hazards?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

8. Do any plans estimate future financial losses that may result from sea-level rise?

9. Have the values of properties at risk from sea-level rise been evaluated?

10. Has the community assessed the vulnerability of the following to coastal hazards through mapping or GIS?
    - Critical facilities (hospitals, fire stations, etc.)
    - At-Risk Populations (elderly, low-income, disabled)
    - Buildings (number and type of structures)
    - Infrastructure (roads, schools, hospitals, public works, etc.)
    - Natural resources (Critical Areas, unique ecosystems and habitats, etc.)
    - Historical resources (historic districts, properties, landmarks)
    - Cultural resources (libraries, museums, archeological)
    - Economic resources (business districts, factories, tourism areas)

11. Does the community have staff trained in the use of FEMA’s HAZUS-MH?

12. Have risk and vulnerability assessments been shared with these people and agencies?
    - Planning staff
    - Public Works officials
    - Transportation planners
    - Emergency Management
    - Elected officials
    - General public

Community Rating System (CRS) points
- Activity 410 - Floodplain Mapping: The objective of this activity is to improve the quality of the mapping that is used to identify and regulate floodplain development (e.g., higher study standards ISS), using future-conditions hydrology, including sea-level rise.
  - 15 points
- Activity 310 - Floodplain Management Planning: The objective of this activity is to create the production of an overall strategy of programs, projects, and measures that will reduce the adverse impact of the hazard on the community and help meet other community needs (e.g., repetitive loss area analysis, RALAA), van related.
  - 15 points

Assessing Risk and Vulnerability

CoastSmarter rating: [ ]

Number of Yes answers: [ ]
- 25 On The Right Track...
- 12–25 Getting Started...
- <12

Total number of yes and no answers

An excerpt from an example Flood Insurance Rate Map for Anne Arundel County.
**Recommendations & resources**

As much as possible, communities should take advantage of available resources and data to assess their risk and vulnerability. Often, this includes compiling a catalog of spatial data, available either at the local level or from State agencies, which then gets overlaid with hazard layers to determine vulnerable areas. A thorough inventory could include:

- Emergency response facilities and shelters.
- The locations of repetitive loss structures.
- Mapped geographic areas at risk to coastal erosion, storm surge, coastal flooding, and sea-level rise.
- The age, condition, and base flood elevations of public facilities and infrastructure such as fire departments, police and sheriff departments, communication facilities, electric utilities, and sewage and water treatment plants.
- The age, condition, and base floor elevations of private structures.
- The location and condition of residential wells and septic tanks.
- Major transportation facilities including airports, marinas, ports, bridges, traffic control facilities, mass transit facilities, evacuation routes, and maintenance facilities.
- Locations of residents in hazard-prone areas who may be vulnerable because of age, income, or disability.
- Facilities such as schools, churches, nursing/congregate homes, correctional facilities, and mobile home parks.
- Facilities for hazardous materials storage and disposal, fuel storage, active and inactive landfills, and animal feeding and agricultural operations.
- Health-related facilities such as hospitals, clinics, emergency medical services, and Red Cross.
- The location and condition of historic districts and structures.
- Cultural and archaeological resources.

**Other helpful resources**

- **CoastSmart Communities Resource Center**
  The Maryland Chesapeake & Coastal Service has compiled various resources for communities. Here you will find examples of vulnerability assessments that have been completed in Maryland: the Coastal Atlas, and various other publications. [dnr.maryland.gov/coastsmart/](http://dnr.maryland.gov/coastsmart/)

- **Coastal Atlas**
  The Coastal Atlas is an interactive mapping application with data including shoreline change, erosion rates, erosion projections, sea-level rise vulnerability based on topographic elevation (LiDAR) and storm surge from the Corps of Engineers Hurricane Evacuation Studies. The Shorelines mapping application allows state and local decision-makers to visually analyze and explore data for coastal and ocean planning activities. [dnr.maryland.gov/ccs/coastalatlas/shorelines.asp](http://dnr.maryland.gov/ccs/coastalatlas/shorelines.asp)

**Federal Emergency Management Agency (FEMA) resources**

Among the various resources that are provided by FEMA, their second volume of How-to Guides, entitled Understanding Your Risks: Identifying Hazards and Estimating Losses, provides a series of worksheets to help communities identify what information is needed and how to use it in the analysis of natural hazards such as flooding and coastal storms. [fema.gov/media-library/assets/documents/4241](http://fema.gov/media-library/assets/documents/4241)

Also developed by FEMA, Digital Flood Insurance Rate Maps (DFIRMs) depict the likely extent of coastal flooding associated with storms that have a 1% and 0.2% chance of occurring within any given year. Maps are accessible from either the FEMA website at [fema.gov](http://fema.gov) or the Maryland DFIRM Outreach Program website at [midfoodmaps.com](http://midfoodmaps.com)

**National Oceanic Atmospheric Administration’s (NOAA) Roadmap for Adapting to Coastal Risk**

The Roadmap for Adapting to Coastal Risk provides a participatory approach for assessing a community’s vulnerability to hazards and for incorporating relevant data and information about hazards and climate into ongoing planning and decision-making. [csc.noaa.gov/digitalcoast/training/roadmap](http://csc.noaa.gov/digitalcoast/training/roadmap)

To learn how the Roadmap Approach may be applied to coastal inundation, visit the Inundation Toolkit for resources dedicated to coastal flooding and storm surge. [csc.noaa.gov/digitalcoast/inundation/understand/](http://csc.noaa.gov/digitalcoast/inundation/understand/)

**HAZUS-MH**

HAZUS-MH combines science, engineering, and mathematical modeling with GIS technology to estimate losses of life and property—and shows those losses on a map. This public domain software product, developed by the National Institute of Building Sciences for FEMA, estimates impacts to the physical, social, and economic vitality of a community from earthquakes, hurricane winds, and floods. [fema.gov/hazus/index.shtml](http://fema.gov/hazus/index.shtml)
People & Property: Land-Use Planning

Land-use planning is one of the most effective ways to reduce coastal hazard vulnerability and to build resilience within a community. How and where we decide to develop translates into who and what is, or will become, vulnerable to coastal hazards. Local decisions about allowable uses, and the support of public services and infrastructure for those uses, can have major impacts on a community's exposure. Where development has already occurred, local governments can take steps to reduce existing and future vulnerability by altering current land uses.

Where to start
Consult the following resources, if available, to help complete this section:
- Comprehensive Plan
- Water and Sewer Plan
- Floodplain Management Ordinance
- Subdivision regulations
- Records of high water marks for past floods

Community Rating System (CRS) points
Activity 430 - Higher Regulatory Standard
The objective of this activity is to credit regulations to protect existing and future development and, natural floodplain functions that exceed the minimum criteria of the National Flood Insurance Program (NFIP) development limitations (DL), 30% points. Coastal A Zones (CAZ), 30% points. protection of critical facilities (PCF), 20 points. Floodplain (TRB), 10 points. For an activity to be eligible for points, it must meet the following minimum requirements:
- DL development limitations (DL) 30%
- CAZ 30%
- PCF 20%
- TRB 10%

CoastSmart rating:

Number of Yes answers:
- CoastSmart = 28 = 20
- On The Right Track = 10–20
- Getting Started = < 10

Total number of yes and no answers

Land-Use Planning

1. Does your community participate in the FEMA Community Rating System?
2. Does your community's comprehensive plan have a coastal hazard planning element or does the land use plan make recommendations to reduce coastal hazard vulnerability through planning?
3. Are frequently flooded areas zoned or planned for open space or recreation and targeted for conservation easements and acquisitions?
4. Does the comprehensive plan recommend subdivision regulations that limit development within areas vulnerable to coastal hazards?
5. Does the comprehensive plan recommend subdivision regulations that limit development within the floodplain?
6. Is the comprehensive plan to protect vulnerable areas?
7. Is the Sensitive Areas Element of the comprehensive plan consider coastal hazards in its policy recommendations?
8. Does the Water Resources Element of the comprehensive plan consider the impacts of climate change on drinking water availability?
9. Does the community have an adopted floodplain management plan?
10. Are planning horizons extended to incorporate potential long-term coastal hazards such as:
    - Sea-level rise?
    - Coastal erosion?
    - Increased storm activity and severity?
11. Does the water and sewer plan include recommendations for relocation, abandonment or protection of infrastructure at risk to flooding or other coastal hazards?
12. Does the community have a certified floodplain manager (CFM) on staff?
13. Does your community have a floodplain manager or planner who participates in one of more of the following organizations?
    - Association of State Floodplain Managers (ASFPMM) or Maryland Association of Floodplain and Stormwater Managers (MAFSM)
    - American Planning Association [APA], or Maryland APA chapter?
    - American Society of Civil Engineers (ASCE) or state or local section of ASCE?
    - American Public Works Association?
14. Does the community have technical or computer mapping capabilities?
15. Has the community adopted the 2010 Maryland Building Performance Standards (MBPS)?
16. Has the community conducted a build-out analysis using existing zoning?
17. Has the community evaluated the build-out analysis for vulnerability to coastal hazards?
18. Does the community require disclosure statements for vulnerable coastal properties?
19. Does the community have a timeline or strategic plan for the relocation, abandonment or protection of buildings in areas at risk to coastal flooding or other coastal hazards?
20. Does the community require the elevation of residential, nonresidential, and public buildings or infrastructure to be above base flood elevations, also known as freeboard, within the 100-year floodplain?
21. Does your community require flood-proofing of residential, nonresidential, and public buildings or infrastructure within the 100-year floodplain?
22. Does the community use an early flood warning system?
   - Do local communities have citizen action groups that alert civic property owners during an event; educate residents about evacuation routes and help residents get out during an event?
Recommendations & resources

In Maryland, growth and development are outlined in the Local Government Comprehensive Plan, a document officially adopted by the local governing body and reviewed every six years for possible update. The comprehensive plan establishes goals and objectives that serve to tell the world how the community wants to function and look in the future. The plan has legal significance in that zoning the provision of water and sewer resources, and other local land actions must be consistent with the overall comprehensive plan. This reason, incorporating coastal hazards into local comprehensive plans is recommended and longer planning horizons that incorporate climate change should be considered.

Ways in which a community can incorporate coastal hazards in comprehensive planning include:
- Add resilience to coastal hazards in the goals and objectives section of the comprehensive plan.
- Incorporate coastal hazard data and analyses into the existing elements of a comprehensive plan, or incorporate them into new element such as a coastal management element or a sea level rise planning element.
- Educate and inform community leaders and the public of the community’s vulnerability to coastal hazards.
- Integrate hazard mitigation policies into the comprehensive plan.
- Include maps of coastal hazards in the land use plan element and plan for flood and zone vulnerable areas for open space conservation or limited development.
- Incorporate a post-disaster rebuilding policy into the comprehensive plan to limit rebuilding in high-hazard areas.

The comprehensive plan could also include policies and recommendations for regulatory or management tools to reduce a community’s vulnerability. Examples of specific land use tools to consider:
- Building code standards can be adopted that are more stringent than the minimum required.
- Zoning regulations can reduce or restrict development in vulnerable areas.
- Overall districts can establish hazardous area overlay zones within which land use types and/or densities can be regulated through zoning, purchase-and-setback or leaseback strategies, and managed through capital facilities expenditure policies to avoid subsidizing development in hazardous areas.
- Subdivision Regulations can require cluster development to avoid hazards through subdivision and planned unit development regulations and/or encouraged through incentive zoning.
- Setbacks and buffers can require development to be out of hazard zones to reduce vulnerability.
- Development can be reduced through purchase or transfer of development rights.
- Land acquisition and easements can reduce the amount of development in hazardous areas through fee-simple acquisition, purchase of development rights and easement, or transfer of development rights.
- Site design regulations and performance standards can be used to minimize a structure’s vulnerability as well as avoid off-site flooding and the generation of landscape debris.
- Capital expenditure policies that prioritize funding for projects that incorporate coastal hazards.

Other helpful resources

- Maryland Comprehensive Plans online
  The Maryland Department of Planning created a website to help the citizens of Maryland better understand the comprehensive planning process. Information on comprehensive plan requirements, procedural requirements for getting the plan adopted, and resources for citizen participation is available on the following website:
  www.mdp.state.md.us/OurWork/CmpPlns/Welcome.shtml.

- Adaptation Clearinghouse
  The Georgetown Climate Center has put together a website compiling resources to help communities adapt to a changing climate. One of these, the Adaptation Tool Kit, is a publication evaluating 18 different land-use tools and explains how local governments can utilize them to avoid or lessen the impacts of sea-level rise. Additionally, it provides a framework by which decision makers can begin to compare their options and decide which tools to consider given their particular local needs.
  georgetownclimate.org/adaptation/clearinghouse

- EPA Rolling Easements primer
  Recently published by the EPA, this primer examines rolling easements, a collection of approaches that allow beaches and wetlands to migrate inland as sea levels rise in cases where traditional protective measures, such as the construction of dikes, seawalls, and other structures, may prove economically or environmentally unsustainable.
  epa.gov/ce/download/rollingeasementsprimer.pdf

- Maryland State Model Floodplain Ordinance
  The State Model Floodplain Management Ordinance, developed through a coordinated effort with local communities, integrates NFIP and the State permit requirements. After the devastation of Hurricane Isabel in 2003, additional provisions to enhance floodplain management have been recommended such as coastal communities must implement a minimum two-foot freeboard (additional elevation requirements), all new and replaced waterfront units must be elevated, and all fuel storage tanks must be anchored or elevated.
  mdfloodmaps.com/pdfs/MO_FPM_Model_Ordinance.pdf
**People & Property: All-Hazard Mitigation Planning**

*All-hazard mitigation planning* is a process by which actions are taken to reduce or eliminate long-term risk to life and property from future hazard events. All-Hazard Mitigation Plans provide a platform for a comprehensive evaluation of the hazards a community faces, an integrated view of all the local government policies and programs that can be created to reduce those risks, and a planning process through which local officials can collaborate to identify and prioritize the most important initiatives that a community can take to reduce the risks they face.

**Where to start**
Consult the following resources, if available, to help complete this section:
- Local All-Hazard Mitigation Plan
- FEMA Community Rating System, in particular, Activity 510

**All-Hazard Mitigation Planning**

1. Does your community have a current FEMA-approved All-Hazard Mitigation Plan? Yes
2. Does the All-Hazard Mitigation Plan describe past mitigation efforts (i.e., shoreline stabilization, land acquisition, etc.), along with their costs and effectiveness? Yes
3. Does the hazard mitigation plan provide a general explanation of the environmental, social, and economic consequences of failing to address coastal hazards? Yes
4. Has the community ever acquired repetitive loss structures? Yes
   - Does the community currently work to acquire them? Yes
5. Does the plan include maps that indicate local coastal hazard risks? Yes
6. Does the plan identify strategies to manage the following coastal hazards as potential threats? Yes
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge
7. Does the plan identify opportunities to incorporate hazard mitigation into existing planning mechanisms (e.g., land use planning, capital investments, shoreline restoration projects)? Yes
8. Does the plan identify the federally required update frequency (five years)? Yes

**Total number of yes and no answers**

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**Community Rating System (CRS) points**

- **Activity 510 - Acquisition and Relocation** The objective of this activity is to encourage communities to acquire, relocate, or otherwise clear existing buildings out of the flood hazard area (e.g., acquisition and relocation of buildings: Buildings on the repetitive loss list [BRL], Severe Repetitive Loss properties [SSL]). For all elements = 0.50 points.

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**PEOPLE & PROPERTY: ALL-HAZARD MITIGATION PLANNING**

- **CoastSmart rating:** of 12
- **Number of Yes answers:**
  - CoastSmart.................8
  - On The Right Track........8
  - Getting Started...............4

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**Recommendations & resources**

Hazard mitigation planning generally involves going through a process to systematically identify policies, activities, and tools that can be used to implement actions that reduce a community’s vulnerability. This process has four major steps: organizing resources, assessing risks, developing a mitigation plan, and implementing the plan and monitoring progress. To better reduce a community’s vulnerability to hazards, including sea-level rise, consider the following suggestions in future All-Hazard Mitigation Plan updates:

- Incorporate the full suite of coastal hazards into All-Hazard Mitigation Plans and include the potential for those hazards to worsen over time due to climate change.
- Explore opportunities to incorporate the findings of the hazard mitigation planning process into local comprehensive plans.
- Prioritize projects that use hazard mitigation funding for the acquisition and demolition of structures instead of elevating structures, except in certain limited circumstances, such as when protecting cultural or historic resources. Acquisition and demolition has the greatest mitigation and environmental protection benefits if it removes citizens from the hazard area permanently and restores the floodplain to its natural state.
- Improve the information available to citizens and planners about the dangerous reaches of high hazard dams, including estimated flood depths, velocities, and times to peak flow, and investigate the potential intensification of these impacts that sea-level rise and climate change could cause.

**Other helpful resources**

- Maryland Emergency Management Agency (MEMA) Hazard Mitigation Program website
  
  Numerous resources are available from MEMA’s Hazard Mitigation Program website, including the State’s Hazard Mitigation Plan, Information on Maryland’s Flood Hazard Mitigation Program, local jurisdiction support such as guidance for Local Multi-Hazard Mitigation Planning and a sample of a Local Mitigation Plan scope of work, and information on applying for multi-hazard mitigation project assistance.
  
  mema.maryland.gov/mema/community/pages/mitigation.aspx

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Hazard mitigation planning can reduce the risk to life and property from future hazard events.
People & Property: Emergency Response & Disaster Preparedness

Emergency response and disaster preparedness can ensure that people are evacuated or adequately sheltered and out of harm's way during storm events. This section assesses if and how your community has considered the effects of coastal hazards on this type of planning.

Where to start

Consult the following resources, if available, to help complete this section:
- Emergency Operations Plan

Emergency Response & Disaster Preparedness

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>1. Does your community have first-hand experience with disaster recovery within the last 10 years?</td>
<td></td>
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<tr>
<td>2. Does your community have a communication system to use before, during, and after a disaster?</td>
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<tr>
<td>3. Has the community assessed the vulnerability of major evacuation routes to the following coastal hazards:</td>
<td></td>
</tr>
</tbody>
</table>
  - Coastal erosion and/or shoreline change?
  - Sea-level rise?
  - Coastal flooding?
  - Storm surge? |
| 4. Has the community assessed the location of shelters in relation to coastal hazards, including access considerations: | |
  - Coastal erosion and/or shoreline change?
  - Sea-level rise?
  - Coastal flooding?
  - Storm surge? |
| 5. Has the community evaluated their critical facilities, such as hospitals, fire stations, and police stations, for vulnerability to the following coastal hazards including access considerations: | |
  - Coastal erosion and/or shoreline change?
  - Sea-level rise?
  - Coastal flooding?
  - Storm surge? |
| 6. Does the community emergency management staff participate in the community's comprehensive planning process? | |

Total number of yes and no answers

Community Rating System (CRS) points

PEOPLE & PROPERTY: EMERGENCY RESPONSE & DISASTER PREPAREDNESS

CoastSmart rating: Of 15

Number of Yes answers:
- CoastsMART.................. 11
- On the Right Track......... 9
- Getting Started............. 5
Infrastructure & Critical Facilities

Emergency response and disaster preparedness can ensure that people are evacuated or adequately sheltered and out of harm’s way during storm events. This section assesses how your community has considered the effects of coastal hazards on this typhoon planning.

Where to start
Consult the following resources, if available, to help complete this section:
- Map of road network
- Comprehensive Plan (transportation & community facilities elements)
- List of critical or essential facilities

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Community Rating System (CRS) points

Activity 501 - Drainage System Maintenance
The objective of this activity is to ensure that the community keeps its channels and storage basins clear of debris so that their flood carrying and storage capacity are maintained (e.g., channel debris removal (CDR), 300 points; Problem site maintenance (PSM), 50 points; Capital improvements program (CIP), 75 points; Storm drainage regulations (SDR), 75 points; Storage basin maintenance (SBM), 100 points; Coastal erosion protection maintenance (CEM), 100 points).

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CoastSmart rating:

Number of Yes answers:
- CoastSmart: 8–21
- On The Right Track: 10–21
- Getting Started: < 10

Total number of yes and no answers

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INFRASTRUCTURE & CRITICAL FACILITIES

1. Does the community have a capital improvements plan or an equivalent, budgetary process?

2. Are professional planners, engineers, and/or certified floodplain managers involved in the capital improvements planning process?

3. Does the capital improvements plan identify the frequency necessary to update the plan?

4. Does your community have a detailed inventory, including elevations, of the structural components of emergency access routes (e.g., roads, bridges, and culverts)?

5. Does your community have procedures for regularly examining structural components of emergency access routes for damage?

6. Does your community have a plan for upgrading/repairing critical transportation infrastructure?

7. When critical transportation infrastructure is repaired, are the following considered to reduce future flood damages?
   - Elevating roads above predicted flood levels
   - Moving roads landward as erosion occurs
   - Incorporating future flooding and sea-level rise into culvert size and placement

8. When upgrading existing community infrastructure, does the capital improvements plan or the community consider the impact of the following coastal hazards?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

9. When planning new community infrastructure, does the capital improvements plan or the community consider the impact of the following coastal hazards?
   - Coastal erosion and/or shoreline change
   - Sea-level rise
   - Coastal flooding
   - Storm surge

10. Has the community discussed at what point it will stop upgrading existing community infrastructure to withstand increased coastal hazards and sea-level rise?

11. Are maps (or other spatial tools like GIS) used to spatially define the vulnerability of the following to coastal hazards?
   - 11.1 Roads
     - Coastal erosion and/or shoreline change
     - Sea-level rise
     - Coastal flooding
     - Storm surge
   - 11.2 Public buildings (schools, hospitals, fire stations, etc.)
     - Coastal erosion and/or shoreline change
     - Sea-level rise
     - Coastal flooding
     - Storm surge
   - 11.3 Public services (wastewater treatment, water distribution, power transmission, etc.)
     - Coastal erosion and/or shoreline change
     - Sea-level rise
     - Coastal flooding
     - Storm surge

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MARYLAND DEPARTMENT OF NATURAL RESOURCES
**Recommendations & resources**

In cases where a comprehensive plan contains a capital improvements element or a community facilities element, local governments can identify the elimination of public hazards as a criterion for evaluating capital improvement projects. Climate change and coastal hazards should be included in this evaluation to eliminate the risk of making large, risky investments in hazardous areas.

Opportunities to reduce future risk to infrastructure during capital improvements may include:
- Incorporate coastal hazards and climate change into capital improvements planning regulations.
- Evaluate current transportation networks for vulnerability to coastal hazards.
- Incorporate climate change and sea-level rise into design and engineering standards for all retrofit or new public infrastructure including roads, power transmission, and water and wastewater networks.
- Site future public infrastructure (such as water treatment facilities) outside of vulnerable areas.
- Identify critical structures that are currently in the 100-year floodplain such as:
  - Police stations
  - Fire stations
  - Hospitals
  - Schools
  - Water-treatment plants
  - Electric transfer stations
  - Bridges

**Other helpful resources**

- **Model bylaw for effectively managing coastal floodplain development**
  This document, written by Woods Hole Sea Grant, Cape Cod Commission, and University of Hawaii Sea Grant, contains examples of bylaw language that can be used to regulate development in coastal hazard areas and provides advice on the types of regulations that can reduce the vulnerability of a community's infrastructure.
  [hsgso.uri.edu/hawaii/hawaiiaasgco.pdf](http://hsgso.uri.edu/hawaii/hawaiiaasgco.pdf)

- **Sea-level Rise: Technical Guidance for Dorchester County**
  With funding awarded through the CoastSmart Communities Grant, Dorchester County created this document to guide the development of the county's sea-level rise response. The document addresses recommendations for the county when planning for the long-term implications of sea level rise in four areas: Vulnerability and Impact Assessment; Long-Range and Comprehensive Planning Codes, Regulations and Development Standards; and Public Education and Outreach. The guidance is presented in a manner intended to allow readers to understand how sea-level rise may affect the daily functioning of the county.
  [dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Dorchester.pdf](http://dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Dorchester.pdf)

- **Somerset County, Maryland: Rising Sea Level Guidance**
  Developed as part of a CoastSmart Communities grant, this document describes how Somerset County is anticipating integrating future coastal hazards into planning documents regulating development and public infrastructure. Section 3 addresses a number of specific recommendations for managing the future maintenance and development of infrastructure and provides the associated community documents where these topics are addressed. Section 4 details a vulnerability assessment that was conducted to identify areas and critical infrastructure that was particularly at risk to anticipated coastal hazards in the year 2050.
  [dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Somerset.pdf](http://dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Somerset.pdf)

- **Worcester County, Maryland: Sea Level Response Strategy**
  Also developed as part of a CoastSmart Communities grant, this document describes Worcester County’s response strategy to rising sea levels. Section 3.3—Adaptation Options for Infrastructure and Public Facilities—provides a detailed discussion on potential response options that the county is considering including the advantages and disadvantages associated with each option. Chapter 4—Priorities for Sea-Level Rise Response—provides a framework for determining which response options will be most appropriate for adoption and implementation in Worcester County.
  [dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Worcester.pdf](http://dnr.maryland.gov/CoastSmart/pdfs/SeaLevel_Worcester.pdf)
Natural Resources

Maryland’s natural resources provide protection and buffering from the impacts of coastal hazards in the form of natural drainage ways, floodplains, wetlands, beaches, and dunes. In the past, development has altered or destroyed many of these natural protective features and significantly reduced the ability of the land to absorb coastal hazard impacts. Furthermore, as sea level rises, critical ecosystems and habitats, such as wetlands, may migrate into upland areas and potentially affect current or proposed development.

Where to start
Consult the following resources, if available, to help complete this section:
- Comprehensive Plan (sensitive areas element)
- Local Critical Area program

<table>
<thead>
<tr>
<th>Natural Resources</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are potential conservation land acquisitions or easements assessed for their vulnerability to coastal hazards?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>2. Are potential conservation land acquisitions or easements assessed for their natural protective properties, such as storm surge buffer, flood water management, and erosion control?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>3. Are potential conservation land acquisitions or easements assessed for their ability to provide long-term sustainable habitat?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>4. Do conservation land acquisition or easement programs within your community direct funding to areas designated as the most ecologically valuable land, such as those identified in Maryland GreenPrint?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>4.1 Has any assessment been conducted to determine the future extent of these ecologically valuable areas within the community, such as the Sea Level Affecting Marshes Model (SLAMM)?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>5. Does the County Land Preservation, Parks, and Recreation Plan:</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>5.1 Address open space conservation as a way to minimize the effect of coastal hazards?</td>
<td>☐</td>
<td>☒</td>
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<tr>
<td>5.2 Get updated in coordination with the comprehensive plan or on a regular schedule?</td>
<td>☐</td>
<td>☒</td>
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<tr>
<td>6. Is public open space maintained in a manner that provides protection from coastal hazards?</td>
<td>☐</td>
<td>☒</td>
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<tr>
<td>7. Does the community comprehensive plan designate areas requiring special protection (such as wetlands, beaches, and floodplains)?</td>
<td>☐</td>
<td>☒</td>
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<tr>
<td>8. Does the sensitive areas element of the comprehensive plan include coastal hazards and climate change or does the comprehensive plan have a sea-level rise planning element that addresses potential changes in sensitive areas?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>9. Does the community consider the following threats in their Critical Area, Sensitive Area or open space planning processes?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Coastal storms on shorelines?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Erosion on shorelines?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Sea-level rise on shorelines and wetlands?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Coastal hazards on wildlife and habitats?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>10. Does the community have local ordinances to protect any of the following from development or disturbance?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Dunes?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Bluffs?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Eroding cliffs?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Wetlands?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>- Beaches?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>11. Does the Water Resources Element in the comprehensive plan consider the impacts of coastal hazards (e.g., salt water intrusion) on the availability of freshwater for drinking water and living resources?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>12. Does the community have protective measures in place for aquifer recharge areas, including wells, springs, seeps, lakes, and headwaters?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Total number of yes and no answers</td>
<td></td>
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</tbody>
</table>

Community Rating System (CRS) points
- Activity 3: Plan Open Space Preservation
  - The objectives of this activity are to: (1) Prevent flood damage by keeping flood-prone lands free of development, and (2) Protect and enhance the natural functions of floodplains (e.g., special flood-related hazards open space (SHOS), open space deed restrictions (OSDR), 10 points; natural functions open space (NFOS), 5 points; open space incentives (OSI), 3 points).

CoastSmart rating: 6 of 17
Number of Yes answers: 6
On The Right Track: 6-12
Getting Started: 0-5
Recommendations & resources

Natural buffers may provide the best and most resilient solutions to rising sea levels and coastal hazards. Leaving natural system place and allowing them the opportunity to shift, when possible, will often result in better outcomes than attempting to recreate or replace them after disturbance or in another location. To better plan how natural resources will transform and be allowed to adapt to climate change, consider the following actions:

- Adopt policies and land use development regulations designed to protect natural features such as dunes, bluffs, wetlands, beaches, etc.
- Identify opportunities to restore, enhance, or supply natural protective features.
- Adopt land use regulations that require expanded setbacks to protect buffer areas around the margins of natural protective features, such as extending the 100-foot minimum.
- Utilize acquisitions and easements to protect the integrity of natural protective features and support of space conservation to reduce the vulnerability of adjacent infrastructure.
- Identify areas with a high conservation potential and strategically and cost-effectively direct protection and restoration activities and funding towards them.
- Prioritize and target protection and restoration activities that enhance the ability of coastal ecosystems to provide natural buffers, flood control, storm surge protection, reduce the vulnerability of coastal communities.

Other helpful resources

- Climate Change Impact Area Mapper
  An online tool provided by the Maryland Department of Natural Resources for management decision-making, planning and education purposes. The Climate Change Impact Area Mapper brings together multiple data layers from different sources to illustrate land areas in Maryland that are projected to be the most sensitive to anticipated changes in climate. These layers include areas vulnerable to sea-level rise, storm surge, flood, drought, and rising temperatures. Climate Change Impact Areas are one of Plan Maryland’s five Preservation/Conservation overlays. Communities should include an analysis of the CCI mapping layers for plan design on the public website. [Link to mapping tool]

- Maryland GreenPrint
  Developed by the State of Maryland, GreenPrint is a web-based tool showing the relative ecological importance of every parcel of land in the State. This map, updated periodically with new information, shows areas already protected in the state and areas in which Maryland will focus future conservation efforts. These new areas, called Targeted Ecological Areas (TEAs), include large blocks of forests and wetlands, rare species habitats, aquatic biodiversity hotspots, and areas important for protecting water quality. They are identified by Maryland Department of Natural Resources as the most ecologically valuable areas in the state and are preferred for conservation funding through Program Open Space. Soon, GreenPrint will begin to include coastal blue infrastructure priorities and areas important for wetland sea level rise adaptation to help inform management decisions. To find out more about the GreenPrint Map and to view its data, visit [GreenPrint website].

- Synthesis of adaptation options for coastal areas
  The Climate Ready Estuaries Program within the EPA has developed this document to provide a brief introduction to key physical impacts of climate change on estuaries and a review of on-the-ground adaptation options available to coastal managers to reduce their systems’ vulnerability to climate change impacts. The majority of management goals discussed in this report pertain to the maintenance and restoration of natural systems and each section provides specific examples of measures undertaken by states or localities. [Link to report]
Economy & Society
Coastal hazards and climate change will affect local communities, businesses, and culturally important areas. This section will help identify social and economic resources in a community that may be vulnerable to coastal hazards and identify any social groups that may provide support in identifying at-risk populations or implementing solutions in areas that will need increased attention.

Where to start
Consult the following resources, if available, to help complete this section:
- Comprehensive Plan
- FEMA's HAZUS-MH Tool

<table>
<thead>
<tr>
<th>Economy &amp; Society</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has the community mapped the vulnerability to coastal hazards of the following?</td>
<td></td>
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<tr>
<td>- At-risk populations (elderly, low-income, disabilities, etc.)?</td>
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<tr>
<td>- Historical resources (historic districts, properties, landmarks)?</td>
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<td></td>
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<tr>
<td>- Cultural resources (libraries, museums, archaeological sites)?</td>
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<td></td>
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<tr>
<td>- Economic resources (business districts, factories, tourism, working waterfronts)?</td>
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<tr>
<td>2. Does the county or municipality have an economic development plan or strategy?</td>
<td></td>
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<tr>
<td>3. Is the community's economic base diversified?</td>
<td></td>
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<tr>
<td>4. Do any plans or studies describe the cost of damages from previous storms, floods, erosion, or the economic loss due to closures during events and the recovery process?</td>
<td></td>
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<tr>
<td>5. Do any plans or studies estimate future financial losses that may result from sea-level rise?</td>
<td></td>
<td></td>
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<tr>
<td>6. Do any of these social systems strongly define your community's identity?</td>
<td></td>
<td></td>
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<tr>
<td>- Church-based networks?</td>
<td></td>
<td></td>
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<tr>
<td>- Cultural heritage/historic districts?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Neighborhood associations?</td>
<td></td>
<td></td>
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<tr>
<td>- Business-related networks?</td>
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<tr>
<td>- Civic organizations (Kiwanis Club, Rotary Club, etc.)?</td>
<td></td>
<td></td>
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<tr>
<td>- Universities or colleges?</td>
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</tbody>
</table>

Total number of yes and no answers

Community Rating System (CRS) points

- Activity 5a - Map Information Service
  The objective of this activity is to provide information about the local flood hazard and about flood-prone areas that need special protection because of their natural functions (e.g., problems not shown on the FEMA flood maps, special flood-related hazards, no warning historical flood information, 20 points).

ECONOMY & SOCIETY

CoastSmart rating: 7 of 10

Number of Yes answers
- CoastSmart...7
- On the Right Track...4
- Getting Started...1

Recommendations & resources
In many cases the economic and societal consequences of coastal hazards will last long after the physical effects have subsided or been remedied. Decreased revenue and difficulties attracting visitors back to an area can last for years after an area is affected while cultural and historical resources may never be recovered. To reduce the long-term cost of climate change and coastal hazards, the following can be considered during the planning process:
- Identify areas that will be affected by sea-level rise and other coastal hazards that have a high socio-economic vulnerability including:
  - Low income populations,
  - Concentrations of the elderly or individuals who have disabilities, such as an assisted care facility,
  - Businesses that provide a majority of the jobs or disproportionately support a community's economy.
- Working waterfronts that support the local economy.
- Historic districts and other cultural resources that help to define a community.
- Tourist destinations that draw people to a community.
- Identify social groups that can help build support within the community and engage their leaders to identify and help address the concerns and needs of community members.

Other helpful resources

- A Social Vulnerability Index for Disaster Management
  This paper describes the development of a Social Vulnerability Index (SVI), from 15 census variables at the census tract level, for use in emergency management. It also examines the potential value of the SVI by exploring the impact of Hurricane Katrina on local populations. The methodology used in this study could be used at a finer scale with local data to help identify socially vulnerable populations. For information, visit: webgis.crc.sc.edu/Invirt/products/toolsvi.aspx.

- Sea Level Rise Strategic Plan Anne Arundel County, Phase I Report: Vulnerability Assessment and Final Plan
  This CoastSmart Communities Grant project identified areas of Anne Arundel County that are susceptible to sea-level rise and developed an inventory of community resources at risk. The county is using this inventory to help inform decisions on how to incorporate climate change into all aspects of the county's management. Visit: doea.maryland.gov/CoastSmart/pdfs/ASLRStrategicPlan.pdf. The county's Sea Level Rise Strategic Plan discusses the key findings from the vulnerability assessment and other planning analysis, identifies the major planning issues for Anne Arundel County as related to sea level rise; and recommends future actions to protect resources and minimize impacts. Visit: doea.maryland.gov/CoastSmart/pdfs/ASLRStrategicPlan_final.pdf.

- Integrating Historic Property & Cultural Resource Considerations Into Hazard Mitigation Planning
  This publication developed by FEMA shows communities, step by step, how to develop and then implement a pre-disaster planning strategy for their historic properties and cultural resources. Too often communities recognize the importance of their historic properties and cultural resources only after disaster strikes and these assets have been damaged or even destroyed. This guide should provide community planners with the tools and resources they need to consider historic properties in mitigation planning activities. Visit: fema.gov/environmental-planning-and-historic-preservation-program/integrating-historic-property-cultural.

- Coastal County Snapshots
  Developed by the NOAA Coastal Services Center, Coastal County Snapshots turn complex data into easy-to-understand stories, complete with charts and graphs. Local officials can use snapshot information to learn about their communities and handouts generated by the website can be a helpful educational tool when working with governing bodies and citizen groups. cscr.noaa.gov/snapshots

Flooding during storms can have a disproportionate effect on some populations, economic centers, and cultural resources. Many business districts and historic areas around the Chesapeake Bay are only a few feet above sea level, making them particularly susceptible to coastal flooding. Proactively adapting these vulnerable areas to higher water levels can avoid lengthy and costly recovery efforts, reducing the long-term impact to a community's economy and cultural identity.
**ASSESSING RISK AND VULNERABILITY**

**CoastSmart rating:** ______ of 36

Number of Yes answers:
- CoastSmart: ______>25
- On The Right Track: 12-25
- Getting Started: <12

**INFRASTRUCTURE & CRITICAL FACILITIES**

**CoastSmart rating:** ______ of 30

Number of Yes answers:
- CoastSmart: ______>21
- On The Right Track: 10-21
- Getting Started: <10

**PEOPLE & PROPERTY: LAND USE PLANNING**

**CoastSmart rating:** ______ of 28

Number of Yes answers:
- CoastSmart: ______>20
- On The Right Track: 10-20
- Getting Started: <10

**NATURAL RESOURCES**

**CoastSmart rating:** ______ of 17

Number of Yes answers:
- CoastSmart: ______>12
- On The Right Track: 6-12
- Getting Started: <6

**PEOPLE & PROPERTY: ALL-HAZARD MITIGATION PLANNING**

**CoastSmart rating:** ______ of 12

Number of Yes answers:
- CoastSmart: ______>8
- On The Right Track: 4-8
- Getting Started: <4

**ECONOMY & SOCIETY**

**CoastSmart rating:** ______ of 10

Number of Yes answers:
- CoastSmart: ______>7
- On The Right Track: 4-7
- Getting Started: <4

**PEOPLE & PROPERTY: EMERGENCY RESPONSE AND DISASTER PREPAREDNESS**

**CoastSmart rating:** ______ of 15

Number of Yes answers:
- CoastSmart: ______>11
- On The Right Track: 5-11
- Getting Started: <5

**Count the number of sections with each rating to determine your overall preparedness:**

CoastSmart: ______
On The Right Track: ______
Getting Started: ______
So now what?
CoastSmart Communities Grant

**Financial support to local government:**

- Encourages communities to incorporate climate change and coastal hazard impacts within required planning activities
- Awarded over $600,000 by the MD Coastal Zone Management Program to support projects in over 20 of its 114 coastal communities since CoastSmart’s launch in 2008
- Helps increase the resilience of a community and reduce the long-term vulnerability to coastal hazards
- Next RFP December 2014

**REQUEST FOR PROPOSALS**

CoastSmart Communities Grant

**GRANT SUMMARY**

The CoastSmart Communities Grant (CCG) provides financial assistance to local governments to encourage the incorporation of coastal hazards, sea level rise, and/or related coastal management issues into local long-term strategic planning, new or modified codes and ordinances, permitting processes, education and outreach campaigns, and other relevant programs. Made possible by a partnership between the Maryland Department of Natural Resources and NOAA, the Chesapeake and Coastal Service is soliciting project proposals from coastal communities in Maryland that want to reduce their vulnerability to the effects of coastal hazards and sea level rise by becoming ready, adaptive and resilient – CoastSmart.

The Chesapeake and Coastal Service recognizes that the impacts of storm events are most dramatically experienced at the local level; therefore local action is required to prepare for coastal hazards and plan for increases in intensity and frequency due to sea level rise and a changing climate.

**WHO:** Municipalities and counties in the coastal zone are eligible to apply for and receive funds. Maryland’s coastal zone includes the following counties and the municipalities located within: Worcester, Somerset, Wicomico, Dorchester, Talbot, Caroline, Queen Anne’s, Kent, Cecil, Harford, Baltimore, Baltimore City, Anne Arundel, Prince Georges, Calvert, Charles and St. Mary’s.

**WHAT:** Funding will be provided on an annual basis, however successful partnerships may receive continued support for up to three years in order to achieve the project’s outcomes and result in a program change. Ideal project proposals will target:
- Development of new, or modifying existing codes, ordinances, plans, and programs to reduce the vulnerability of the built environment to the effects of storm surge, sea level rise, and other coastal hazards;
- Addressing point source pollution impacts; and/or preserve and restore natural or cultural resources.

**WHEN:**
- **Expected grant awards of up to $75,000 annually per year.**
- **Application Deadline:** Friday, February 28, 2014

**WHERE:** Proposals should be submitted online through the Chesapeake and Coastal Service’s web-based grants management system, at http://dnr.maryland.gov/cco/grantonline.asp

**CONTACT:**
- Kato Skaggs
  Maryland Department of Natural Resources, Chesapeake and Coastal Service
  (410) 269.8743 (F) 410.269.9739
  (e) kskaggs@dnr.state.md.us
CoastSmart Communities Grant

• Potential projects:
  – Update flood ordinances, building codes
  – Update hazard mitigation, comprehensive & Critical Areas
  – Update Capital Improvement Project plans
  – Apply to Community Rating System
  – Adopt a Sea Level Rise Overlay District
Current Grant Projects

• City of Annapolis – Designing a Historic Cultural Resiliency Plan (Started 10/1/14)

• Baltimore City – Creating a Ready and Resilient City (Started 11/15/13)

• Baltimore County – Floodplain Area Resiliency Initiative through CRS (Started 5/4/14)

• Calvert County – Coastal Hazard & Natural Resources Planning (Started 1/1/14)

• Prince George’s County – Creating a Coastal Flood Risk Reduction Program (Started 10/1/14)

• Town of Snow Hill – Updating Zoning Ordinance and Coastal Floodplain Maps (Started 10/1/14)

• Talbot County – Developing a Hazard Risk Reduction Public Outreach Campaign (Started 10/1/14)
So...

Adaptive * Ready * Resilient – You tell us
Kate Skaggs
Kate.Skaggs@maryland.gov
(410) 260-8743

http://dnr.maryland.gov/CoastSmart/