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Maryland

**Comprehensive Strategy
for Reducing Maryland's
Vulnerability to Climate Change**
Phase I: Sea-level rise and coastal

**REPORT OF THE MARYLAND COMMISSION
ON CLIMATE CHANGE
ADAPTATION AND RESPONSE WORKING GROUPS**

**Maryland Commission
on Climate Change**

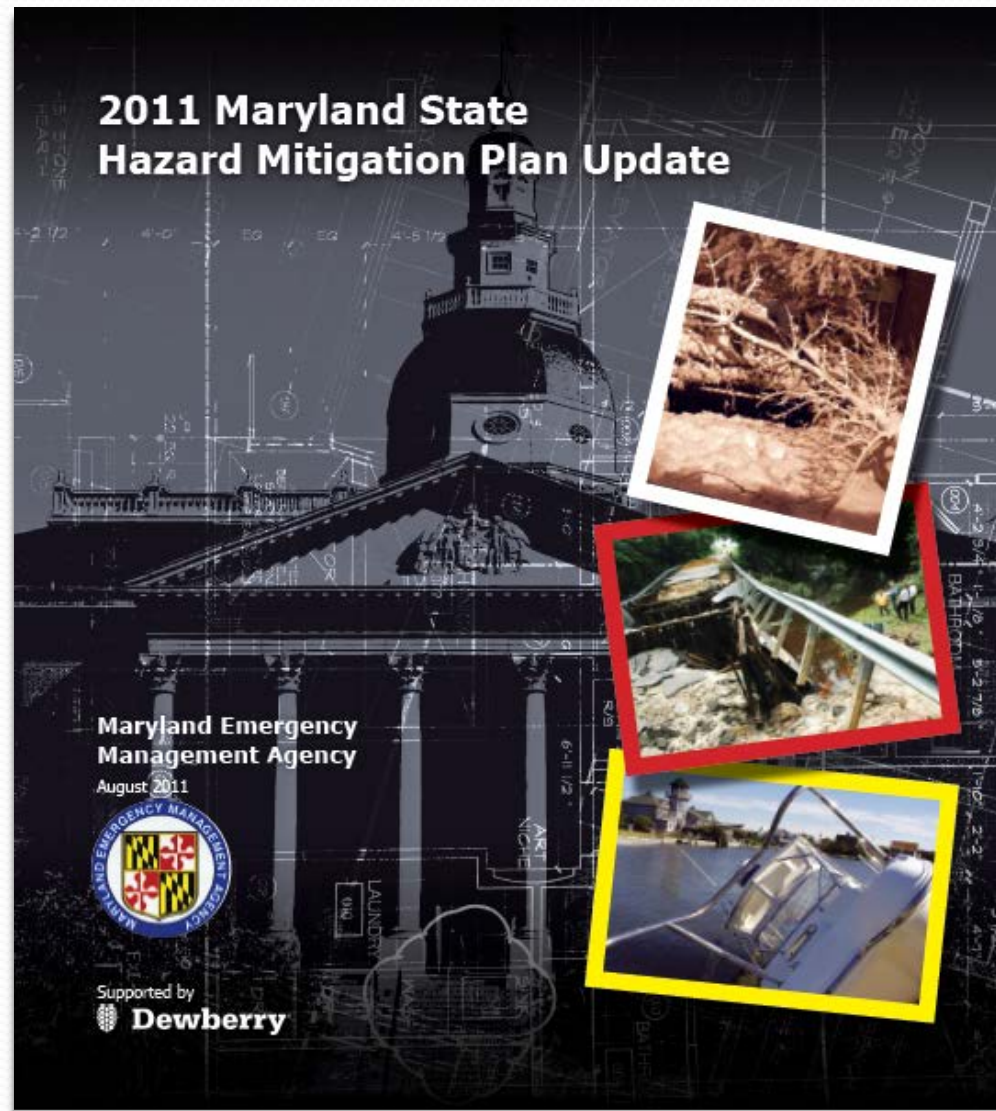
Climate Action Plan

**Comprehensive Strategy
for Reducing Maryland's
Vulnerability to Climate Change**
Building societal, economic, and ecological resilience

**MARYLAND COMMISSION ON CLIMATE CHANGE
ADAPTATION AND RESPONSE AND SCIENTIFIC AND TECHNICAL WORKING GROUPS**

Maryland

- Previous Hazard Mitigation Plan (HMP) update had limited mention of climate change
- Integrated other State climate change efforts
- Performed sea level rise State and critical facility risk assessment



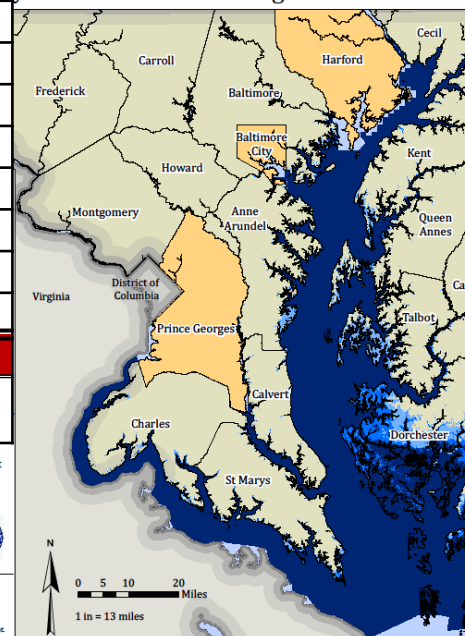
Maryland

- HMP 2011 update considered climate change as a potential *amplifier* of existing natural hazards (i.e. flooding, heat, drought, etc.)
- Discussion of projections as related to specific hazards
- Potential future impact on hazard:
 - Frequency
 - Intensity
 - Distribution

Maryland

State-Owned Facility Type	High Risk (0-2 ft RSLR)	Moderate Risk (2-5 ft RSLR)	Low Risk (5-10 ft RSLR)
Administrative Facility	--	\$87,658,295	\$34,440,604
Correctional Facility	--	\$535,008	\$267,504
Department of Natural Resources Facility	\$2,989,496	\$26,384,445	\$13,329,838
Educational Facility	\$507,142,828	\$44,835,576	\$203,175,694
Environmental Related Facility	--	\$80,000	--
Fire Department Facility	--	\$126,000	\$126,000
Health Related Facility	--	--	\$30,132
Judicial/Legal Facility	\$2,505,472	\$2,155,780	\$16,136
Military Facility	--	\$5,164,080	\$6,730,080
Police Department Facility	--	--	\$10,500,000
Social Services	--	\$304,052	\$9,778,700
Transportation Facility	\$28,535,636	\$1,533,513	\$66,459,226
Utility/Infrastructure Facility	--	\$3,033,765	\$1,733,580
Historic Facility	\$19,366,408	--	--
Grand Total by Risk Class	\$560,539,840	\$171,810,515	\$346,587,495
Cumulative Risk		\$732,350,355	\$1,078,937,850

Maryland Sea Level Rise
Maryland 2011 Hazard Mitigation Plan



DATA SOURCES:

MD Department of Natural Resources
ESRI State Boundaries
MSHA County Boundaries

Dewberry



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.

themselves, but provides a minimal accounting of exposure and is difficult to digest by individuals.

Lewes, DE

- Collaboration of the City, Delaware Sea Grant, and ICLEI – Local Governments for Sustainability
- Integrated climate change into existing hazard mitigation planning

The City of Lewes Hazard Mitigation and Climate Adaptation Action Plan



June 2011

Lewes, DE

- **Project steps**

- Identify existing hazard and associated vulnerabilities
- Identify climate change impacts on existing hazards and associated vulnerabilities
- Identify two key vulnerabilities for which to plan
- Select hazard mitigation/climate adaptation actions
- Create implementation plans

Lewes, DE

- ***Biggest project challenge:*** hazard mitigation vs. climate change adaptation nomenclature
 - **Hazard mitigation:** action taken to reduce/eliminate long-term risk from natural and technological hazards
 - **Climate change mitigation:** action to reduce greenhouse gases (GHGs)
 - **Climate change adaptation (IPCC definition):**
 - In human systems: process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities
 - In natural systems: process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate

Santa Cruz, CA

- Collaboration of the City and University of California at Santa Cruz
- Convert existing hazard mitigation plan into a climate change adaptation plan
- Incorporates elements of Climate Action Plan, General Plan, and Emergency Operations Plan



City of Santa Cruz CLIMATE ADAPTATION PLAN

An update to the 2007 Local Hazard Mitigation Plan
2012 - 2017

Santa Cruz, CA

- Primary funding source:
FEMA grant



City of Santa Cruz CLIMATE ADAPTATION PLAN

An update to the 2007 Local Hazard Mitigation Plan
2012 - 2017

Santa Cruz, CA

- University of California at Santa Cruz performed climate change vulnerability assessment
- Summary presented in Climate Adaptation Plan

CITY OF SANTA CRUZ CITY CLIMATE CHANGE VULNERABILITY ASSESSMENT

Gary Griggs
Brent Haddad

January 11, 2011



Example Takeaways

- Consider political environment in which you operate
- Leverage existing climate change efforts/data
- Integrate/coordinate with existing planning processes
- Be creative when finding funding sources
 - Federal, State, local government sources
 - Private sector
- Collaborate
 - Gather all stakeholders: public and private sectors, citizens
- No regrets adaptation strategies/actions