M4, M1, M3

By: Senators Pinsky, Benson, Conway, Ferguson, Gladden, Guzzone, Kagan, King, Lee, Madaleno, Manno, Middleton, Montgomery, Raskin, Rosapepe, Waugh, and Young

Introduced and read first time: February 4, 2015 Assigned to: Education, Health, and Environmental Affairs

A BILL ENTITLED

1 AN ACT concerning

2 Maryland Shoreline Risk Assessment, Preparation, and Adaptation Act

3 FOR the purpose of requiring the Department of Agriculture, on or before a certain date, 4 to conduct a comprehensive assessment of the impacts of climate change on $\mathbf{5}$ agriculture in the State; requiring the assessment to identify, evaluate, and quantify 6 the economic impact of certain risks of climate change on agriculture in the State; 7 requiring the assessment to examine the latest climate science, recommend certain 8 preparation and adaptation strategies, and identify ways in which the Department 9 of Agriculture may provide technical assistance to farmers; requiring the 10 Department of Agriculture to update its assessment every certain number of years 11 and to make it publicly available on its Web site; requiring the Department of 12Agriculture to consult with the Maryland Commission on Climate Change and the 13Coast Smart Council to complete the assessment; requiring the University of Maryland Center for Environmental Science to establish certain sea level rise 1415projections and update them every 5 years; requiring the sea level rise projections to 16include certain maps and to be made publicly available on the Internet; requiring 17the Department of the Environment, on or before a certain date and in consultation 18 with the Commission on Climate Change and the Coast Smart Council, to conduct a 19certain assessment, update the assessment every 5 years, and make the assessment 20publicly available on the Internet; requiring the Secretary of Natural Resources to 21 update the Maryland Environmental Policy Act guidelines to require the 22consideration of certain climate change risks; requiring a State capital project that 23involves the construction of a highway, beginning on a certain date, to be constructed 24in compliance with certain siting and design criteria established by the Coast Smart 25Council; requiring the Department of Planning, in consultation with the Coast Smart 26Council, to develop certain model local laws and ordinances; altering the State's 27Economic Growth, Resource Protection, and Planning Policy to include the 28consideration of climate change risks; and generally relating to preparing for and 29adapting to climate change impacts in the State.

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW. [Brackets] indicate matter deleted from existing law.



1	BY adding to
2	Article – Agriculture
3	Section 2–108
4	Annotated Code of Maryland
5	(2007 Replacement Volume and 2014 Supplement)
6	BY adding to
$\overline{7}$	Article – Environment
8	Section $2-1212$
9	Annotated Code of Maryland
10	(2013 Replacement Volume and 2014 Supplement)
11	BY repealing and reenacting, with amendments,
12	Article – Natural Resources
13	Section 1–304
14	Annotated Code of Maryland
15	(2012 Replacement Volume and 2014 Supplement)
16	BY repealing and reenacting, with amendments,
17	Article – State Finance and Procurement
18	Section 3–602.3 and 5–7A–01
19	Annotated Code of Maryland
20	(2009 Replacement Volume and 2014 Supplement)
21	SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
22	That the Laws of Maryland read as follows:
23	Article – Agriculture
24	2–108.
05	(A) ON OD DEFODE IN X 1 901C THE DEDADTMENT CHAIL CONDUCT A
25 96	(A) ON OR BEFORE JULY 1, 2016, THE DEPARTMENT SHALL CONDUCT A
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27	AGRICULTURE IN THE STATE.
28	(B) (1) THE ASSESSMENT SHALL IDENTIFY AND EVALUATE ALL
29	POTENTIAL RISKS OF CLIMATE CHANGE ON AGRICULTURE, INCLUDING:
30	(I) DROUGHT;
31	(II) THE EFFECT OF RISING TEMPERATURES ON CROP AND
32	LIVESTOCK SPECIES SPECIFIC TO THE STATE;
33	(III) INCREASED PREVALENCE OF INSECTS, PESTS, AND
34	DISEASES, INCLUDING SOYBEAN RUST;

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1 (IV) FLOODING, INCLUDING SHORELINE FLOODING, A RISING $\mathbf{2}$ WATER TABLE, AND SALTWATER INTRUSION; AND 3 (V) SOIL EROSION. (2) THE ASSESSMENT SHALL QUANTIFY THE ECONOMIC IMPACT OF 4 EACH POTENTIAL CLIMATE CHANGE RISK ON AGRICULTURE IN THE STATE. $\mathbf{5}$ (3) 6 THE ASSESSMENT SHALL: 7 **(I) EXAMINE THE LATEST CLIMATE SCIENCE;** 8 **(II) RECOMMEND PREPARATION AND ADAPTATION STRATEGIES** 9 TO LESSEN THE IMPACT OF CLIMATE CHANGE ON AGRICULTURE IN THE STATE; AND 10 (III) IDENTIFY WAYS IN WHICH THE DEPARTMENT MAY PROVIDE TECHNICAL ASSISTANCE TO FARMERS TO PREPARE FOR AND ADAPT TO THE 11 12 CONSEQUENCES OF CLIMATE CHANGE. 13**(C)** (1) THE DEPARTMENT SHALL UPDATE ITS ASSESSMENT EVERY 5 14 YEARS. (2) THE DEPARTMENT SHALL MAKE ITS ASSESSMENT AVAILABLE TO 15THE PUBLIC ON ITS WEB SITE. 16 17**(D)** THE DEPARTMENT SHALL CONSULT WITH THE MARYLAND 18 COMMISSION ON CLIMATE CHANGE AND THE COAST SMART COUNCIL TO 19 COMPLETE AND UPDATE THE ASSESSMENT. 20**Article – Environment** 2 - 1212. 2122(1) THE UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL (A) 23SCIENCE SHALL ESTABLISH SCIENCE-BASED SEA LEVEL RISE PROJECTIONS FOR 24THE STATE'S SHORELINES AND UPDATE THEM AT LEAST EVERY 5 YEARS. 25(2) THE SCIENCE-BASED SEA LEVEL RISE PROJECTIONS SHALL INCLUDE MAPS THAT INDICATE THE AREAS IN THE STATE THAT MAY BE MOST 2627AFFECTED BY STORM SURGES, FLOODING, AND EXTREME WEATHER EVENTS. THE SCIENCE-BASED SEA LEVEL RISE PROJECTIONS REQUIRED 28(3) 29UNDER THIS SUBSECTION SHALL BE MADE PUBLICLY AVAILABLE ON THE INTERNET.

(B) (1) 1 ON OR BEFORE JULY 1, 2016, THE DEPARTMENT, IN $\mathbf{2}$ CONSULTATION WITH THE MARYLAND COMMISSION ON CLIMATE CHANGE AND THE COAST SMART COUNCIL, SHALL CONDUCT A COMPREHENSIVE ASSESSMENT OF THE 3 ENVIRONMENTAL AND ECONOMIC IMPACTS OF SEA LEVEL RISE, INCREASED 4 PRECIPITATION AND TEMPERATURE, STORM SURGES, FLOODING, AND EXTREME $\mathbf{5}$ 6 WEATHER EVENTS ON THE STATE'S MAJOR CITIES AND TOWNS, INCLUDING THE 7 CITY OF ANNAPOLIS, BALTIMORE CITY, AND OCEAN CITY.

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(2) THE DEPARTMENT SHALL:

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(I) UPDATE THE ASSESSMENT EVERY 5 YEARS; AND

MAKE THE ASSESSMENT PUBLICLY AVAILABLE ON THE 10 **(II)** 11 INTERNET.

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Article – Natural Resources

1 - 304.13

14As of July 1, 1974, all State agencies shall prepare, in conjunction with each (a) proposed State action significantly affecting the quality of the environment, an 1516environmental effects report including, but not limited to, a discussion of:

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The effects of the proposed action on the environment, including (1)18 adverse and beneficial environmental effects that are reasonably likely if the proposal is 19 implemented or if it is not implemented;

20 Measures that might be taken to minimize potential adverse (2)21environmental effects and maximize potential beneficial environmental effects, including 22monitoring, maintenance, replacement, operation, and other follow-up activities; and

23Reasonable alternatives to the proposed action that might have less (3)adverse environmental effects or greater beneficial environmental effects, including, the 2425alternative of no action.

26The Secretary of Natural Resources prior to December 31, 1973, shall issue (b)guidelines to assist State agencies in the preparation of environmental effects reports in 2728accordance with this subtitle and pursuant to the public notice provisions of 10–112 of 29the State Government Article, including, but not limited to, provision for:

30 Comment upon the proposed State action by public and private (1)31 organizations and individuals with jurisdiction by law, special expertise, or recognized 32interest prior to the request for legislation;

1 (2) The possibility of the preparation of single program environmental 2 effects reports if a series of actions taken individually are of minimal significance but if the 3 cumulative effect of the actions on the environment is significant or if a series of actions 4 are related either geographically or as logical parts in a chain of contemplated actions;

5 (3) The possibility of the preparation of modified environmental effects 6 reports on remaining decisions significantly affecting the quality of the environment that 7 are parts of actions begun before but not completed by July 1, 1974; and

8 (4) The issuance of guidelines, in accordance with this subtitle and 9 pursuant to the guidelines issued by the Secretary of Natural Resources, for the 10 preparation of environmental effects reports by each State agency that takes actions that 11 significantly affect the quality of the environment.

12 (C) THE SECRETARY OF NATURAL RESOURCES SHALL UPDATE THE 13 GUIDELINES REQUIRED IN SUBSECTION (B) OF THIS SECTION TO REQUIRE THE 14 CONSIDERATION OF CLIMATE CHANGE RISKS, INCLUDING SEA LEVEL RISE, 15 INCREASED PRECIPITATION AND TEMPERATURE, STORM SURGES, FLOODING, AND 16 EXTREME WEATHER EVENTS.

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Article – State Finance and Procurement

18 3-602.3.

19 (a) (1) In this section the following words have the meanings indicated.

20 (2) "100-year base flood" means a flood having a 1% chance of being 21 equaled or exceeded in any given year.

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- (3) "Base flood elevation" means:

(i) the water surface elevation of the 100-year base flood as
 specified on Federal Emergency Management Agency flood insurance rate maps; or

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- (ii) in an area of shallow flooding:

1. the highest adjacent natural grade added to the depth number specified in feet on the flood insurance rate map; or

282. if the depth number is not specified on the flood insurance29 rate map, 4 feet.

30 (4) (i) "Coast Smart" means a construction practice in which 31 preliminary planning, siting, design, construction, operation, maintenance, and repair of a 32 structure avoids or minimizes future impacts associated with coastal flooding and sea level 33 rise.

"Coast Smart" includes design criteria and siting criteria that are

 $\mathbf{2}$ applicable throughout the entire life cycle of a project. 3 "Design criteria" means standard specifications related to the shape, (5)size, or form of a construction practice. 4 "HIGHWAY" HAS THE MEANING STATED IN § 8-101 OF THE $\mathbf{5}$ (6) 6 **TRANSPORTATION ARTICLE.** "Replacement cost" means, at the time of reconstruction, 7 **[**(6)**] (7)** (i) 8 the cost of reconstructing a structure and its surrounding property to full use with materials of the same kind and quality as the original materials. 9 10 "Replacement cost" does not include: (ii) 1. the value of the land on which a structure is located; or 11 122.for tax purposes, a deduction for depreciation. 13"Siting criteria" means specifications related to the location or **[**(7)**] (8)** 14use of a structure. "Special flood hazard area" means land in a tidally influenced 15**[**(8)**] (9)** floodplain that is: 1617(i) subject to at least a 1% chance of flooding in any given year; and 18 (ii) designated by the Federal Emergency Management Agency in flood insurance studies and on flood insurance rate maps as Zone A, AE, AH, AO, A1–30, 19 A99, VE, or V1–30. 20"Structure" means: 21**[**(9)**] (10)** 22a walled or roofed building; (i) 23(ii) a manufactured home; or 24(iii) a gas or liquid storage tank that is principally above ground. 25[(10)] (11) "Substantial damage" means damage caused by any source that 26is sustained by a structure such that the cost of reconstruction to its before-damaged 27condition is at least half of the structure's replacement cost before the damage occurred. 28(b)This subsection applies to State capital projects planned and built by (1)

28 (b) (1) This subsection applies to State capital projects planned and built 29 units of State government that are partially or fully funded with State funds.

(ii)

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1 (2) Beginning July 1, 2015, if a State capital project includes the 2 construction of a structure or the reconstruction of a structure with substantial damage, 3 the structure shall be constructed or reconstructed in compliance with siting and design 4 criteria established under subsection (c) of this section.

5 (3) BEGINNING JULY 1, 2016, IF A STATE CAPITAL PROJECT 6 INVOLVES THE CONSTRUCTION OF A HIGHWAY, THE HIGHWAY SHALL BE 7 CONSTRUCTED IN COMPLIANCE WITH SITING AND DESIGN CRITERIA ESTABLISHED 8 UNDER SUBSECTION (C) OF THIS SECTION.

9 (c) (1) In consultation with the Department of Natural Resources, the Coast 10 Smart Council established under § 3–1002 of the Natural Resources Article shall establish 11 Coast Smart siting and design criteria to address sea level rise and coastal flood impacts 12 on capital projects.

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- (2) The criteria adopted under this subsection shall include:

(i) guidelines, and any other directives applicable to the preliminaryplanning and construction of a proposed capital project;

16 (ii) a requirement that the lowest floor elevation of each structure 17 located within a special flood hazard area is built at an elevation of at least 2 feet above the 18 base flood elevation; and

19 (iii) provisions establishing a process to allow a unit of State 20 government to obtain a waiver from complying with the requirements of subsection (b) of 21 this section.

(D) ON OR BEFORE JULY 1, 2016, THE DEPARTMENT OF PLANNING, IN CONSULTATION WITH THE COAST SMART COUNCIL, SHALL DEVELOP MODEL LOCAL LAWS AND ORDINANCES THAT INCORPORATE COAST SMART SITING AND DESIGN CRITERIA IN THE DEVELOPMENT AND CONSTRUCTION OF STRUCTURES AND HIGHWAYS.

27 5-7A-01.

The State Economic Growth, Resource Protection, and Planning Policy is the following:

30 (1) quality of life and sustainability: a high quality of life is achieved 31 through universal stewardship of the land, water, and air resulting in sustainable 32 communities and protection of the environment;

1 (2) public participation: citizens are active partners in the planning and 2 implementation of community initiatives and are sensitive to their responsibilities in 3 achieving community goals;

4 (3) growth areas: growth is concentrated in existing population and 5 business centers, growth areas adjacent to these centers, or strategically selected new 6 centers;

7 (4) community design: compact, mixed-use, walkable design consistent 8 with existing community character and located near available or planned transit options is 9 encouraged to ensure efficient use of land and transportation resources and preservation 10 and enhancement of natural systems, open spaces, recreational areas, and historical, 11 cultural, and archeological resources;

12 (5) infrastructure: growth areas have the water resources and 13 infrastructure to accommodate population and business expansion in an orderly, efficient, 14 and environmentally sustainable manner;

15 (6) transportation: a well-maintained, multimodal transportation system 16 facilitates the safe, convenient, affordable, and efficient movement of people, goods, and 17 services within and between population and business centers;

18 (7) housing: a range of housing densities, types, and sizes provides 19 residential options for citizens of all ages and incomes;

20 (8) economic development: economic development and natural 21 resource–based businesses that promote employment opportunities for all income levels 22 within the capacity of the State's natural resources, public services, and public facilities are 23 encouraged;

(9) environmental protection: land and water resources, including the
Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air
and water, natural systems, and living resources;

(10) resource conservation: waterways, forests, agricultural areas, open
 space, natural systems, and scenic areas are conserved;

(11) stewardship: government, business entities, and residents are
 responsible for the creation of sustainable communities by collaborating to balance efficient
 growth with resource protection; [and]

(12) implementation: strategies, policies, programs, and funding for growth
 and development, resource conservation, infrastructure, and transportation are integrated
 across the local, regional, State, and interstate levels to achieve these visions; AND

35(13) PREPARATION AND ADAPTATION: CONSIDERATION OF CLIMATE36CHANGE RISKS, INCLUDING SEA LEVEL RISE, INCREASED PRECIPITATION AND

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1 TEMPERATURE, STORM SURGES, AND FLOODING, BASED ON AVAILABLE DATA 2 PREDICTING THE LIKELIHOOD OF FUTURE EXTREME WEATHER EVENTS.

3 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 4 1, 2015.