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Public Awareness, Outreach, Training, and Capacity Building

Option Description

Sea level rise and increases in the frequency and intensity of flooding, storms, and storm surges are expected to have complex and far-reaching consequences for residents, businesses and trades, and local governments. Better preparation for sea level rise and for increases in the frequency and intensity of extreme weather events will reduce the impacts experienced. Modification of existing and implementation of new strategies and policies to address the increased risks will depend upon a wide variety of people and professions across many sectors and organizations. Given the complexity of the issue and the number of potentially people affected, it is imperative that there is coordinated and cohesive information presented to those responsible for preparation and response, as well as to those likely to be affected. It is important that all audiences be identified, along with their specific educational, outreach, training, and capacity building needs. For example, the needs of property owners within coastal counties will differ from the plans to ensure that mental health needs are addressed during and after a disaster.

Increased awareness of appropriate preparation for both the events and their consequences is needed to protect the public from the health consequences of sea level rise and increases in floods, storms, and storm surges. Of particular concern are communication systems and plans that address health issues associated with low-income and under-served populations and other vulnerable groups. Also needed are education, training, and outreach for programs to engage all levels in appropriate actions to reduce the impacts of outbreaks of vector-, food- and waterborne diseases, including to contaminated recreational water. Efforts will be increased to educate health care providers and the public on the signs and symptoms of these diseases, to improve detection and treatment.

Vulnerable infrastructure needs to be protected from greater storm surges and greater or more frequent flooding events. If new building codes are adopted to mitigate potential loss then the building and development community will need to be made aware of and understand how to implement these new polices. Additionally, local governments will need to understand how to implement and enforce new polices. Shoreline changes as a result of sea level rise and coastal hazards will also impact a broad group of constituents and those impacts need to be understood by a range of individuals from landscapers to mortgage brokers to property owners. Building the capacity of different constituents to prepare for and respond to sea level rise and its impacts will increase Maryland's effectiveness to incorporate new information into its mitigation and adaptation approaches as it becomes available.

Incorporation of climate change and sea level rise risks into formal training programs for

individuals entering impacted businesses would assure a strong capacity to address these issues in the future. The policy would focus on integration of information on sea level rise and associated risks and risk management strategies into existing, ongoing training programs and support the creation of new programs where they do not currently exist.

Option Design

Targets:

- Develop educational programs on appropriate behavior before, during, and following extreme events. Identify and engage all licensing, training, and capacity-building programs that currently exist in areas at serious risk from sea level rise and extreme weather events. Work with industry professionals and other groups or people that live or work in these areas to identify gaps in public awareness, training and capacity building.
- Recommend specific policy and program changes that will need to occur to enable these groups and programs to respond to future training and capacity needs in a manner best suited to their respective involvement in activities related to risks from sea level rise and in the frequency and intensity of extreme weather events.
- Continue to provide training and public awareness opportunities and capacity building assistance, but begin to offer more targeted support to areas that will be most seriously affected.
- Increase the ability of residents, businesses and trades, and local governments at risk from the impacts of climate change to understand the potential risks, gather the information necessary to make informed decisions, and work with partners to identify solutions.
- Develop educational programs to increase awareness of the risks of vector- and waterborne diseases in a warmer climate.

Timing:

- Increase the number of training programs and capacity building efforts in areas most at risk over the next five years.
- In areas most at risk, convene a group of industry professionals to review building codes and other regulations and work to identify and adopt necessary changes over the next ten years. Incorporate these activities into licensing training procedures.

Parties Involved:

- MD DNR, MD MDE, MD DHMH, MD DLLR, MEMA, local governments, property owners, and business and trade members in industries affected by sea level rise and climate change.

Implementation Mechanisms

Implementation of this recommendation would require a coordinated effort through a number of existing agencies/departments, groups, organizations, and programs. Successful implementation would require an investment in staff time and funding to: complete a review of current training

and capacity-building programs or delivery options; identify mechanisms through which new or revised programs would be most likely to succeed; and create or update policies and regulations.

Related Policies/Programs in Place

Existing policies and programs already in place include:

- The Maryland Department of Labor, Licensing, and Regulation's Division of Occupational and Professional Licensing Maryland Home Improvement Commission (MHIC) provides a variety of licensing services required by the State to industry professionals.
- The Maryland Coastal Program, and other coastal and shoreline groups within MD DNR, delivers technical and financial assistance, data tools, and training opportunities to groups such as property owners, local and state governments, marine contracting professionals, and other networked partners.
- The Chesapeake Bay National Estuarine Research Reserve's Coastal Training Program leads training events for professional coastal decision makers on a variety of coastal- and climate-change related issues in cooperation with a network of partners.
- The Department of Health and Mental Hygiene does outreach to health professionals related to vector-borne diseases. In addition, the Office of Preparedness and Response works with local health departments and Maryland Emergency Management Agency on public preparedness efforts.
- Other organizations and programs also work with related industries and groups to provide training, public awareness programs and capacity building.

Estimation of Adaptation Benefits and Costs

Provide a bulleted summary regarding the overall benefits and costs expected to result from the implementation of the option, as per the categories listed below.

- **Estimated Cost:** Characterize the option relative to the expected costs associated with implementation up to the previously indicated target level. This estimate can be provided either quantitatively or qualitatively depending on data availability.
- **Flexibility:** Characterize the option relative to its flexibility regarding future corrective action given reduction in uncertainty levels regarding future impacts. This estimate can be provided qualitatively as per the outcome of TWG discussions.
- **Adaptive capacity:** Characterize the option relative to the degree to which it builds adaptive management capacity among state institutions and among private entities. This estimate can be provided qualitatively as per the outcome of TWG discussions.
- **Other:** Identify and characterize as appropriate other adaptation benefits and costs that would need to be addressed to better understand the implications for the implementation of the option in the state.

Documentation of Adaptation Benefits and Costs

Provide a bulleted summary regarding the documentation for the estimated benefits and costs of the option, as per the categories listed below.

- **Data Sources:** Indicate as specifically as possible the sources that were used to characterize the option relative to its costs and benefits.
- **Quantification Methods:** Indicate as specifically as possible the methodology used to quantify the capital intensity of the option, as appropriate.
- **Key Assumptions:** Indicate as specifically as possible the key assumptions on which the characterization of the option's costs and benefits is based
- **Key Uncertainties:** Indicate as specifically as possible the key uncertainties embedded into the characterization of the option's costs and benefits.

Additional Benefits and Costs

Provide a 1-paragraph describing additional benefits and costs, if any, that have not been captured in the estimate of costs and benefits described earlier.

Feasibility Issues

Provide a 1-paragraph describing state-specific issues related to implementation feasibility.

Status of Group Approval

At the conclusion of the process, provide an indication of the status of TWG approval. Three categories are possible: full TWG consensus, super-majority, or majority consensus based on a number of objection(s).

Barriers to Consensus

At the conclusion of the process, provide a brief and specific description of any objections to the option.