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Brief Description of Proposed Priority Options Human Health, Safety, and Welfare Technical Working Group DRAFT

HHSW-1. Health Impacts Assessments of the Climate Change Action Plan

Option Description

Policy instruments will be developed to require health Impact Assessments be conducted for adaptation and mitigation options selected for implementation under the Maryland Climate Change Action Plan to ensure that they promote human health across all sectors of the population. A plan will be developed so that options that compromise or diminish human health can be modified accordingly.

Option Design

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Other: As needed, identify other factors/parties that would need to be engaged for successful implementation of the option in the state.

Implementation Mechanisms

Provide up to one paragraph describing how the option would be implemented. Specify whether implementation would be based on changes to existing rules/regulations, new legislation, provision of incentives, or other mechanisms.

Related Policies/Programs in Place

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Feasibility Issues

Provide up to one paragraph describing state-specific issues related to implementation feasibility.

Status of Group Approval

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Barriers to Consensus

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HHSW-2. Coordination Across Agencies Responsible for Human Health and Safety

Option Description

A gap analysis will be conducted to determine if there is adequate coordination of county and city level adaptation options to ensure consistency in response to health emergencies across county boundaries, including in response to large-scale floods and storms, and infectious disease outbreaks. Any recommendations resulting from the analysis will recognize and account for differences in response capacity between counties and recommend mitigation and augmentation options to minimize disruption in services due to lack of capacity. The analysis will determine if there is a geographical basis for differences.

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HHSW-3. Public Health Response Plans for Large-Scale Floods, Storms, and Storm Surges

Option Description

The adverse health consequences of flooding, storms, and storm surges are complex and far-reaching, and include the physical health effects experienced during the event or clean-up process, or from effects brought about by damage to infrastructure, including population displacement. The physical effects largely manifest themselves within weeks or months following the event, and may be direct (such as injuries) and indirect (such as increased rates of vector-borne and other diseases). Extreme weather events are also associated with mental health effects, such as post-traumatic stress disorder, resulting from the experience of the event or from the recovery process. These psychological effects tend to be much longer lasting and may be worse than the direct physical effects.

To address these risks, in collaboration with appropriate public health agencies and stakeholders, effective approaches will be developed to communicate appropriate responses that protect human health during large-scale 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. Plans will be developed for moving critical acute and longer term care facilities if they will need to be closed because sea level rise, storm surges, or flooding will put them at risk. The plans will ensure that climate change concerns are integrated into activities of the Maryland Institute for Emergency Medical Services Systems and other organizations engaged in disaster response. Stakeholders will include managers of hospitals, public buildings, and infrastructure that provide emergency security, communications, and health services, to reduce the vulnerability of critical activities and equipment during an extreme event or other climate-related event.

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HHSW-4. Uniform Indicators and Data Systems

Option Description

In coordination with the CDC Environmental Public Health Indicators Project, the State Environmental Health Indicators Collaborative (SEHIC), and other national initiatives, uniform indicators, metrics and data systems will be developed to monitor climate change-related health impacts. Standards will be shared across all levels of government. Thresholds for action will be determined based on uniform data and criteria. Monitoring systems will be evaluated to ensure efficacy and cost-effectiveness of actions, and to align actual results with expectations.

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HHSW-5. Public Health Surge Capacity Support

Option Description

Climate change will have environmental effects that may alter the distribution and burden of a wide range of health outcomes. Extreme weather events (such as floods, droughts, windstorms, and heat waves) affect human health and safety. Climate change may affect health through alterations in the geographic range and intensity of transmission of vector-, tick-, and rodent-borne diseases and food- and waterborne diseases, and changes in the prevalence of diseases associated with air pollutants and aeroallergens. Climate change may alter or disrupt natural systems, making it possible for diseases to spread or emerge in areas where they had been limited or had not existed, or for diseases to disappear by making areas less hospitable to the vector or the pathogen. The cause-and-effect chain from climate change to changing patterns of health determinants and outcomes is often complex and includes factors such as wealth, distribution of income, status of the public health infrastructure, provision of medical care, and access to adequate nutrition, safe water, and sanitation.

These possible risks are likely to place extraordinary demands on public health programs and activities designed to protect the health and safety of Maryland residents and visitors. Increases in illnesses, injuries, and deaths would be expected unless plans are developed to ensure effective functioning of these programs. Therefore, a plan will be developed to ensure sufficient public health surge capacity during and following extreme events such as flooding, storms and storm surges, and to address outbreaks of climate-related outbreaks of vector-, food-, and waterborne diseases. This capacity must be present, consistent, and effective in analyzing the safety of drinking water, monitoring for the appearance of vector-borne diseases, and providing acute and chronic care for persons suffering from the effects of climate-related events. Issues to be addressed will include the financial, human, and institutional capacity at all levels of government and institutional service providers.

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HHSW-10. Vector-borne Surveillance and Control Programs

Option Description

Climate is a primary determinant of whether a particular location has environmental conditions suitable for the transmission of several vector-, rodent-, and tick-borne diseases, including West Nile virus, Lyme disease, dengue, and others. A change in temperature may hinder or enhance vector and parasite development and survival, thus lengthening or shortening the season during which vectors and parasites survive. Small changes in temperature or precipitation may cause previously inhospitable ecosystems to become conducive to disease transmission.

To prepare for these risks, existing surveillance and control programs will be augmented for vector-borne diseases that are likely to become more common or widespread with climate change. Local municipalities will be provided assistance in designing programs to monitor for the appearance of vector-borne diseases following floods and storms. New strategies will be developed to control vector-breeding sites, particularly in swales, storm water drainage systems, ponds, and agricultural ditches. Efforts will be increased to educate health care providers and the public on the signs and symptoms of vector-borne diseases, to improve detection and treatment.

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HHSW-12. Heat Wave Awareness and Early Warning

Option Description

Heat waves affect human health via heat stress, heatstroke, and death, as well as exacerbations of underlying conditions that can lead to an increase in mortality from all causes of death (not just heatstroke). Older adults, children, city-dwellers, the poor, and people taking certain medications are at the highest risk during a heat wave. The numbers of heat-related deaths are projected to increase with climate change; these projections are likely to both over- and underestimate the number of future heat wave-related deaths. Studies have not fully captured the extent to which future mortality will be influenced by changes in behavioral, physiological, and technological factors, and therefore may overestimate future mortality. On the other, some studies have not incorporated factors that could increase future health impacts, including demographic change, which could underestimate future mortality.

In response to these risks, programs will be developed to inform care givers, pharmacists, churches, and others who work with vulnerable groups of the risks of and effective responses to heat waves. Where risk of mortality is high during heat waves, early warning and response systems will be developed, based on experience with other systems.

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