



*Commonwealth of Virginia*  
*Office of the Governor*

## *Executive Order*

### **NUMBER TWENTY-FOUR (2018)**

#### **INCREASING VIRGINIA'S RESILIENCE TO SEA LEVEL RISE AND NATURAL HAZARDS**

##### **Importance of the Initiative**

Sea level rise, land subsidence, higher average temperatures, more frequent and intense weather events, severe drought, and increased development, have increased risk and will continue to increase and exacerbate risk from natural hazards across the Commonwealth of Virginia. The number of federally declared disasters has steadily increased nationally and in Virginia. The number has experienced a 250 percent increase in federally declared disasters over the past 20 years, including declarations for flooding, hurricanes, severe storms, and wildfire.

The best available science predicts that this trend will continue to worsen. A recent report from the United Nations Intergovernmental Panel on Climate Change states that the world is likely to experience dramatic increases in coastal flooding and severe weather events. Additional studies show that water levels in the Hampton Roads region are now 18 inches higher than they were a century ago, and that they are expected to gain up to five more feet, while the land sinks as much as 7.5 inches, by 2100. That combined rise is faster than anywhere else on the East Coast. The most recent National Climate Assessment reported that the intensity, frequency, and duration of North Atlantic hurricanes, as well as the frequency of the strongest hurricanes, have all increased.

This increase in extreme weather events and natural disasters will continue to have a profound impact on Virginia. It threatens public health and safety, our environment and natural resources, and the economic wellbeing of the Commonwealth, including our ports, military installations, transportation infrastructure, tourism assets, farms, and forests. We must act now to protect lives and property from multiple threats and reduce taxpayer exposure through fiscally responsible planning.

## **Directive**

Accordingly, by virtue of the authority vested in me as the Chief Executive by Article V of the Constitution of Virginia and under the laws of the Commonwealth, I hereby order my administration to take the following actions to increase statewide resilience to natural hazards and extreme weather:

### **Section 1: Making Commonwealth Holdings More Resilient**

- A. Designation of the Chief Resilience Officer of the Commonwealth of Virginia: The Secretary of Natural Resources shall serve as the Chief Resilience Officer of the Commonwealth of Virginia. The Chief Resilience Officer shall be responsible for planning and implementing pre-disaster mitigation strategies to reduce the near and long term impacts of natural hazards across the Commonwealth. The Chief Resilience Officer will serve as the primary point of contact on all issues relating to pre-disaster hazard mitigation and shall be responsible for coordination and planning of resilience initiatives across state government.
- B. Review of Vulnerability of Commonwealth Owned Buildings: It is imperative that the Commonwealth assess the vulnerability of state-owned buildings and takes steps to improve the resilience of state-owned buildings when appropriate. To properly assess the need for resilience upgrades and adaptation strategies for state-owned buildings, the Chief Resilience Officer will develop a facility assessment process and define a data set to be used to identify vulnerability of state-owned buildings. The Secretary of Administration shall collect the identified building data to be used by the Chief Resilience Officer in determining the vulnerability of state-owned buildings, identify steps to increase the resilience of those buildings that are most at risk, and where appropriate and feasible, seek alternative locations for state operations.
- C. Unified Sea Level Rise Projection for State-Owned Buildings: The Commonwealth of Virginia must have a standard approach for predicting sea level rise when scoping, designing, siting, and constructing state-owned buildings. The Chief Resilience Officer shall work collaboratively within state government and with assistance from regional, state, and national experts and stakeholders, to issue, within 180 days from issuance of this Order, a regional or statewide sea level rise projection. The standard shall apply to all projects beginning initial design for state-owned buildings, beginning on or after January 1, 2020. This standard shall apply to new construction and not renovations to existing state buildings and be applied barring extenuating circumstances as determined by the Chief Resilience Officer. In creating this standard, the Chief Resilience Officer shall consult with: the Secretary of Administration, the Secretary of Commerce and Trade, the Secretary of Finance, the Secretary of Transportation, and the Virginia Institute of Marine Science.
- D. Freeboard Standard for State-Owned Buildings: The Commonwealth of Virginia must ensure the resilience of state-owned buildings by setting a minimum freeboard standard for state-owned buildings. The Chief Resilience Officer shall collaboratively work within state government and with assistance from regional, state, and national experts, and stakeholders, to issue, within 180 days from issuance of this Order, a regional or statewide freeboard

standard. The standard shall apply to all projects beginning initial design for state-owned buildings beginning on or after January 1, 2020. This standard shall apply to new construction and not renovations to existing state buildings and be applied barring extenuating circumstances as determined by the Chief Resilience Officer. In creating this standard, the Chief Resilience Officer shall consult with: the Secretary of Administration, the Secretary of Commerce and Trade, the Secretary of Finance, the Secretary of Transportation, and the Virginia Institute of Marine Science.

## **Section 2: Reviews, Reports, and Recommendations**

- A. Virginia Coastal Resilience Master Plan: The Commonwealth of Virginia has a responsibility to assist local governments in reducing flood risk through planning and implementing large scale flood protection and adaptation initiatives. The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall create and implement a Coastal Resilience Master Plan for coastal Virginia to reduce the impacts of tidal and storm surge flooding.

The plan shall:

1. Incorporate all ongoing planned and proposed federal, state, and local projects and infrastructure to reduce tidal and storm surge flooding and flood risk. Provide recommendations for additional hazard mitigation, flood control, and adaptation projects to fill in gaps and improve the preparedness and resilience of the entire coastal area of Virginia for flooding and sea level rise;
2. Be based upon the best available science and engineering;
3. Be updated and amended every five years;
4. Mitigate flood risks at the community level or greater whenever possible;
5. Employ natural and nature-based solutions to the maximum extent possible and provide guidance for land conservation efforts by identifying land providing resilience benefits along with other ecological services;
6. Consider potential areas and options for managed coastal retreat when appropriate;
7. Include detailed funding analysis with a needs assessment and recommendations for potential funding sources;
8. Conform to National Flood Insurance Program requirements and incorporate relevant sections of the floodplain protection plan required by 10.1-602 of the *Code of Virginia*.

In developing the Virginia Coastal Resilience Master Plan, the Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall consult with the following:

1. Local governments;
2. Relevant state agencies, boards, and advisory bodies;
3. Regional Planning District Commissions;
4. The Secure and Resilient Commonwealth Panel;
5. Federal partners, including but not limited to: the Department of Defense, including the U.S. Army Corps of Engineers; the National Atmospheric and Oceanic Administration; the Department of Transportation, the Department of Agriculture; the Department of the Interior; and the Department of Housing and Urban Development;
6. The Virginia Institute for Marine Science, the partner universities in the Virginia Sea Grant Program, the Commonwealth Center for Recurrent Flooding Resiliency; and
7. Non-governmental stakeholders including civic organizations, the business community, and non-profit organizations.

B. Review of State Pre-disaster Mitigation Programs: The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall inventory all state-run programs to encourage and implement pre-disaster mitigation. The inventory shall include pre-disaster mitigation programs for all natural hazards including flooding, wildfire, and earthquake. Within 180 days from issuance of this Order, each Cabinet Secretary shall submit to the Chief Resilience Officer a report on any and all pre-disaster hazard mitigation programs administered by his or her Secretariat.

1. Reports to the Chief Resilience Officer shall include: the formal title of the program, the statutory authorization for the program, a summary of the program and its goals and successes, the name of the lead staff member assigned to the program, a summary of the annual available funding for the program, and a summary of unmet funding needs.
2. Within 90 days of receiving reports from Cabinet Secretaries, the Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall compile and make available to the public a comprehensive report of the findings from all secretariats, and make recommendations for improvements or additions to pre-disaster mitigation programs.

- C. Review of Compliance with Flood Protection and Dam Safety Laws: The Director of the Department of Conservation and Recreation (DCR), in coordination with the Chief Resilience Officer, shall review DCR's implementation of the *Code of Virginia*, Title 10, Chapter 6, Flood Protection and Dam Safety.

This review shall include:

1. Review of existing requirements to ensure that state-owned development is appropriately protected from flooding. The review shall also ensure that state-owned development is designed so that human health, safety, and welfare, as well as the natural and beneficial uses of the floodplain, are not at an increased risk of flooding, as authorized under state and federal law. The Director of DCR shall report his findings to the Chief Resilience Officer within 90 days from issuance of this Order, identifying critical updates to regulations, previous executive actions or guidance necessary to meet the objectives of this Order. In addition, the Director shall assess the effectiveness of current dam safety regulations in accounting for changing precipitation patterns and conditions;
2. Review of existing requirements to ensure the Commonwealth, as a participating community of the National Flood Insurance Program, continues to comply with 44 CFR § 60.11-13 and 23 CFR § 650, as authorized under state and federal law, and identifying within 90 days from issuance of this Order critical updates to regulations or guidance necessary to meet the objectives of this Order;
3. Assessment of the enforceability of existing state requirements, and the use of penalties for violations, and determining if changes are needed;
4. Development of a protocol for engagement with the Office of the Attorney General on enforcement efforts;
5. Assessment of any gaps in DCR resources or authorities necessary to address challenges identified under this review: and
6. The Director of the Department of Conservation and Recreation shall report to the Chief Resilience Officer within 180 days from issuance of this Order on the reviews required under this section.

- D. Sea Level Rise Projection Guidance for Local Governments: The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall provide guidance to assist local governments with respect to regional or statewide sea level rise projections and work collaboratively to ensure these projections are useful for local decision-making. In developing this guidance, the Chief Resilience Officer shall consult with the following: localities, planning district commissions, impacted state and

federal agencies, the Virginia Institute for Marine Science, and the Commonwealth Center for Recurrent Flooding Resiliency.

- E. Freeboard Guidance for Local Governments: The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall provide guidance for local governments with respect to local options to ensure best practices in establishing freeboard standards based on regional or statewide data and assistance. In developing this recommendation, the Chief Resilience Officer shall consult with the following: localities with flood prone areas, planning district commissions, impacted state and federal agencies, and the Commonwealth Center for Recurrent Flooding Resiliency.

### **Section 3: Coordination and Objectives**

- A. Risk Communication: The Chief Resilience Officer, the Secretary of Public Safety and Homeland Security, and all relevant state agencies shall work to increase the Commonwealth's risk communication with regard to helping Virginia residents and local governments better understand their current and future risk from natural hazards.
- B. Increased Coordination of Hazard Mitigation Programs and Initiatives: The Chief Resilience Officer, or his designee, shall convene regular cross-agency, cross-secretariat meetings to ensure all programs identified in the report mandated by Section 2, subtitle B, paragraph 2, of this Order are working in concert with one another, removing barriers to success and leveraging one another for maximum benefit.
- C. Enhanced State and Military Collaborative Resilience: The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection and the Secretary of Veterans and Defense Affairs, shall work with military installations, local governments, Department of Defense leaders, and other impacted stakeholders to identify and develop collaborative adaptation and mitigation opportunities in support of military and community readiness.
- D. Increased Scale and Scope of Pre-Disaster Hazard Mitigation: To the maximum extent possible, state agencies, in coordination with the Chief Resilience Officer, or his designee, should use their planning, grant-making, and legal authorities to ensure natural hazard mitigation projects are conducted on a community-wide, rather than individual property scale. This approach will ensure greater protection for all Virginia residents, public and private property, and natural features and ecosystems that provide valuable barriers to flooding and other services.
- E. Empower Localities to Reduce Risk: To the maximum extent possible, state agencies, in coordination with the Chief Resilience Officer, or his designee, should use their planning, grant-making, and legal authorities to empower local governments to plan and create more resilient communities. This may include: technical assistance and planning grants, sample zoning ordinances, assistance engaging federal programs like the National Flood

Insurance Program and the Community Rating System, Federal Emergency Management Agency (FEMA) Hazard Mitigation grants, and others.

The Department of Housing and Community Development shall consult with relevant stakeholders and subject matter experts for the purpose of identifying and suggesting resilience-specific improvements to the Uniform Statewide Building Code (USBC) for inclusion in the 2018 code update.

- F. Position the Commonwealth of Virginia to be a Leader in Resilience Technology: The Chief Resilience Officer, with the assistance of the Special Assistant to the Governor for Coastal Adaptation and Protection, shall work with the Secretary of Commerce and Trade to ensure state, local, and regional efforts to test and implement resilience technologies are coupled with a coordinated effort to commercialize research and start and grow these businesses in the Commonwealth.
- G. Empower Individuals to Reduce their Risk: To the maximum extent possible, state agencies should use their planning, grant-making, and legal authorities to empower Virginian residents to take individual actions to increase resilience of private property to natural hazards. This includes creating tools and places where property owners can review data related to their risk, teaching Virginians best management practices to reduce risk to existing structures and planning tools to limit risk to new structures and encouraging the purchase of flood insurance policies both inside and outside of the Special Flood Hazard Area. State agencies and departments shall help Virginian property owners identify and apply for state and federal pre-disaster mitigation grants.

**Effective Date of the Executive Order**

This Executive Order shall be effective upon its signing and shall remain in full force and effect until amended or rescinded by further executive order.

Given under my hand and under the Seal of the Commonwealth of Virginia this 2<sup>nd</sup> day of November, 2018.



A handwritten signature in cursive script, reading "Ralph S. Northam".

Ralph S. Northam, Governor

Attest:

A handwritten signature in cursive script, reading "Kelly Thomasson".

Kelly Thomasson, Secretary of the Commonwealth