

## VIRGINIA FLOODPLAIN MANAGEMENT STANDARDS

### AUTHORITY

#### **Section 1.1 – Statutory authority for state-owned properties [44 CFR § 60.12; VA Code § 10.1-603]**

- A. The Code of Virginia requires the establishment and enforcement of floodplain management standards that, at a minimum, satisfy the criteria set forth by the National Flood Insurance Program (NFIP).

In accordance with Code of Virginia § 10.1-603 A, all agencies and departments of the Commonwealth shall comply with the following when undertaking development activities, including the construction or rehabilitation of buildings and structures, on state-owned property located in a floodplain:

1. Adhere to all local floodplain management regulations as defined in Code of Virginia § 10.1-600; or
2. Receive formal approval from the Department of Conservation and Recreation (DCR) regarding compliance with the applicable state standard for development in a floodplain, provided that such standard does not jeopardize a locality's participation in the National Flood Insurance Program.

- B. If any State-owned property is located in a non-participating local community, then the State shall comply with the requirements of the Virginia Floodplain Management Standards (the Standards).

No state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within state-managed floodplains in any community unless a variance permit is issued by the Department of Conservation and Recreation (DCR), as outlined in these Standards.

#### **Section 1.2 – Applicability (April 12, 2023)**

- A. These Standards shall apply to all state-owned or leased property, including those lands underlying the secondary state highway system, within the Commonwealth of Virginia and identified as floodplain by DCR.
- B. These state-level Standards apply to all agencies, authorities, and departments of the Commonwealth of Virginia and replace the floodplain management standards for state-owned properties in special flood hazard areas (SFHA) as represented in Executive Order 45 (2019) and [44 CFR 60.12A(1)].

**Section 1.3 - Compliance and Liability**

- A. No land shall hereafter be developed, and no building shall be located, relocated, constructed, reconstructed, enlarged, or structurally altered except in full compliance with the terms and provisions of these Standards.
- B. The degree of flood protection sought by the provisions of these Standards is considered reasonable and compliant for regulatory purposes and is based on acceptable engineering methods of study, but does not imply total flood protection. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. These Standards do not imply that lands outside the floodplain or land uses permitted within the floodplain will be free from flooding or flood damages.
- C. These Standards shall not create liability on the part of the Commonwealth or any officer or employee thereof for any flood damages that result from reliance on these Standards, or any administrative decision lawfully made thereunder.

**Section 1.4 - Abrogation and Greater Restrictions [44 CFR § 60.1(b)]**

In the event of a conflict between these Standards and any other statutory or regulatory requirements of the Commonwealth of Virginia, the more restrictive statutory or regulatory requirement shall govern.

**STANDARDS**

**Section 2.1 – General Floodplain Development Standards for state-owned properties**

Compliance with the provisions of Section 1.1 shall be documented and provided in the form of a permit issued by the Department to the applicant. The permit shall be issued prior to preliminary design approval of a project by the Department of General Services, if such approval by the Department of General Services is required. If any changes are made to the preliminary design during the review conducted by the Department of General Services, the Department of General Services will coordinate with the Department to ensure the permit issued is still appropriate.

Floodplain boundaries used for development review shall be based on FEMA SFHAs.

The following provisions shall apply to all development in a floodplain, unless otherwise exempted in Section 3.2 of these Standards:

- A. New construction or substantial improvements shall be built according to these Standards and the VA USBC, and anchored to prevent flotation, collapse, or lateral movement of the building or structure.
- B. New construction or substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- C. New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

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- D. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities, including ductwork, shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- E. New or replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- F. New or replacement sewage collection or treatment systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.
- G. On-site sewage disposal systems shall be located and constructed to avoid impairment or contamination from them during flooding.
- H. Prior to any proposed alteration or relocation of a watercourse within the Commonwealth of Virginia, a permit shall be obtained from the U. S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission, if required (a joint permit application is available from any of these organizations). Furthermore, in riverine areas, notification of the proposal shall be given by the applicant to all affected adjacent jurisdictions and DCR and submit copies of such notifications to FEMA and other required agencies.
- I. The flood carrying capacity within an altered or relocated portion of any watercourse shall be maintained.
- J. All development shall, at a minimum, comply with the applicable requirements of the NFIP [44 CFR §§ 60.3 through 60.6].

### **Section 2.2 –Freeboard Requirements**

- A. Riverine Floodplain Areas (Zones A, AE, AO, AH, Shaded-X)
  - 1. All new or substantially improved state-owned buildings located in riverine floodplains shall be constructed so that the top of the lowest floor, including all equipment, is no less than two (2) feet above the Base Flood Elevation (or Flood Depth if an AO Zone), based on the effective flood insurance rate map (FIRM) and Flood Insurance Study (FIS).
  - 2. All new or substantially improved state-owned buildings located in a shaded-X flood zone shall be constructed so that the top of the lowest floor, including all equipment, is no less than two (2) feet above the Water Surface Elevation or the Base Flood Elevation, whichever is less, based on the effective FIS.
- B. Coastal Floodplain Areas (Zones V, VE, and Coastal A)

All new construction and substantial improvements in V, VE, and Coastal A flood zones shall be elevated on pilings or columns so that:

- 1. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood elevation plus three (3) feet if the lowest horizontal structural member is parallel to the direction of wave approach or

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elevated at least three feet above the base flood level if the lowest horizontal structural member is perpendicular to the direction of wave approach; and,

2. The pile or column foundation and building attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (one-percent annual chance).

### **Section 2.3 – Existing Buildings and Accessory Structures in the Floodplain**

Any building or use of a building, accessory structure or premises must be brought into conformity with these Standards when it is changed, repaired, or improved unless one of the following exceptions is established before the change is made:

- A. The Floodplain Administrator has determined that:
  1. Change is not a substantial repair or substantial improvement; AND
  2. No new square footage is being built in the floodplain that is not compliant; AND
  3. No new square footage is being built in the floodway; AND
  4. The change complies with these standards and the VA USBC.
- B. The changes are required to comply with a citation for a health or safety violation. This includes changes necessary to comply with a citation for an accessibility violation.
- C. The building is a historic structure, and the change required would not preclude the continued designation as a historic structure.

### **Section 2.4 – Limitations of the FEMA SFHA and Additional Resources for Floodplain Planning**

Agencies should be aware that significant flood risk can exist outside of the mapped FEMA SFHA. FEMA maps have limitations which frequently result in an incomplete depiction of flood risk or are based on outdated information. Agencies are encouraged to consult flood hazard data from the FATHOM® dataset provided by the DCR for the identification and management of floodplain boundaries and flood risk. FATHOM® data represents a more complete picture of flood risk for a given site within the Commonwealth. FATHOM® data can be found on the Virginia Flood Risk Information System (VFIRS): <https://casdsis.dcr.virginia.gov/VFRIS/>.

## **PERMITS**

Floodplain Development Permits shall be issued only after the Floodplain Administrator has determined that the development activities will be conducted in a manner minimally compliant with these Standards.

### **Section 3.1 – General Provisions**

- A. The issuance of a floodplain development permit does not waive the requirement to comply with the requirements outlined by the NFIP upon which these Standards are based, or any other applicable state or federal rules or regulations.

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- B. Technical justification will be required for issuing a floodplain development permit. Flood hazard data utilized in permit applications and reviews shall consist of FEMA SFHAs. Permit application reviews will be in conformance with the provisions of these Standards and consider the following additional factors, if applicable:
1. The development will occur on a lot of one-half acre or less in size, contiguous to and surrounded by lots with existing buildings or structures constructed below the base flood level.
  2. It has been demonstrated that granting a floodplain development permit will not result in unacceptable, unallowable or prohibited increases in flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or, in the case of NFIP participating communities, conflicts with their existing local floodplain ordinances.
  3. The proposed design of the building complies with the freeboard and floodproofing standards adopted in these Standards.
  4. The building or structures are demonstrated to be a functionally dependent use, such as water treatment facilities, boat houses, boat docks, boat ramps, fishing piers, sewage treatment facilities, walking trails, fish hatcheries, and other similar uses.
  5. The building or structure is historic and requires repair or rehabilitation, and it has been demonstrated that the proposed repair or rehabilitation will not preclude the continued historic designation, and the permit application request is the minimum necessary to preserve the historic character and design of the structure.
  6. The building or structure is demonstrated to be necessary to protect public health, safety, and welfare.
  7. The development activity is required to ensure conformance with the requirements of the Americans with Disability Act or the Code of Virginia § 2.2-1159.
  8. Alternative siting of proposed development outside of the state-managed floodplains is unavailable or unfeasible.
- C. A floodplain development permit is required for the maintenance of existing structures within the floodplain if they are structural in nature and result in a change to the footprint, functional use, or are determined to have a significant effect on flooding characteristics of a structural property.
- D. All structural repairs to existing buildings within the floodplain that are performed because of damage incurred from flooding or any other source must receive a floodplain development permit.
- E. A floodplain development permit may be issued for new construction, substantial improvements, or development necessary for the conduct of a functionally dependent use, provided that the planning and design criteria outlined below shall be met.
1. The building or development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.
  2. Proposed use, development, or activity within any regulatory floodway will not cause any increase in the base flood elevation.

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3. Materials or equipment that may be swept away or onto other lands or downstream to the injury of others will not be stored in the floodplain or floodway. An Emergency Action Plan, which includes the removal or anchoring of materials and equipment, must be included for linear transportation development activities.
  4. Proposed water supply and sanitation systems have the ability to prevent disease, contamination, and unsanitary conditions.
  5. The importance of the services provided by the proposed facility to the community is clearly defined.
  6. The requirements of the facility for a waterfront location are clearly defined.
  7. The availability of alternative locations not subject to flooding for the proposed use is provided.
  8. The planning and design criteria ensure the proposed use and development plan is consistent with existing local and regional planning requirements.
  9. The safety of access by ordinary and emergency vehicles to the property in times of flooding is unrestricted.
  10. The applicant demonstrates through quantitative analysis, the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters at the site remain unchanged.
  11. The planning and design criteria ensure the repair or rehabilitation of historic buildings will not preclude the continued designation as a historic structure, and the permit application request is the minimum necessary to preserve the historic character and design.
  12. Other factors which are relevant to the purposes of these Standards may also be considered.
- F. Appeal process for floodplain development permit: All permit applicants have 30 days to appeal the floodplain development permit decision in writing to the Department.
- G. The Floodplain Administrator shall notify in writing the permit applicant, Director of DGS and Director of DCR that the issuance of a floodplain development permit to construct a building with the lowest floor elevated below the base flood elevation increases the risks to life and property; and is therefore denied.
- H. Floodplain development permits that are issued shall be noted in the annual report for flood resilience.
- I. Upon receipt of approval of floodplain development permit applications from the Floodplain Administrator, the Department of General Services shall satisfy all remaining relevant factors and procedures specified in other sections of the Virginia building codes and other applicable zoning provisions.

### **Section 3.2 - Activities Exempted from Virginia Floodplain Management Standards**

Projects that have been determined to have an insignificant effect on flooding characteristics and water conveyance may be exempt from these Standards. Agencies are required to document and may enter into a memorandum of agreement identifying review procedures for the exempted

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activities that have occurred in the past year. The following list outlines projects that may qualify for variance from the permitting requirements:

- A. Routine Maintenance
- B. Small Projects
- C. Emergency Actions Necessary to Protect Public Health, Safety, and Welfare
- D. Maintenance, Repair, or Rehabilitation of Historic Structures
- E. Improvements with Location-Specific Functionally Dependent Uses
- F. Ground Disturbing Activities With No Change to Modeled Conditions

### **Section 3.3 – Memorandum of Agreement**

Agencies may elect to enter into a memorandum of agreement (MOA) with the Department to outline procedures and processes for reviewing proposed development activities, including the construction or rehabilitation of buildings and structures on state-owned property located in a floodplain. A memorandum of understanding with a state agency may also establish agency-specific approvals and processes for compliance with these Standards for certain eligible activities.

## **APPENDICIES**

Appendix A - Glossary

Appendix B – Flowchart

Appendix C – DCR Floodplain Management Database Application (permitting platform)