

## CITY OF DOVER ORDINANCE #2014-09

**NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF DOVER, IN COUNCIL MET:**

**That Chapter 50 – Floods, of the Dover Code of Ordinances, be amended by deleting it in its entirety and inserting in lieu thereof the following:**

### **Chapter 50 FLOODS**

#### **ARTICLE I – IN GENERAL**

##### **Sec. 50-1. Findings.**

The Federal Emergency Management Agency (FEMA) has identified special flood hazard areas within the boundaries of the City of Dover, Delaware. Special flood hazard areas are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. Development that is inadequately elevated, improperly floodproofed, or otherwise unprotected from flood damage also contribute to the flood loss.

The City of Dover agreed to meet the requirements of the National Flood Insurance Program and was accepted for participation in the program on September 16, 1982. As of that date or the initial effective date of the City of Dover Flood Insurance Rate Map, all development and new construction as defined herein, are to be compliant with these regulations and the flood load and flood-resistant construction provisions of the building code.

##### **Sec. 50-2. Statement of purpose.**

It is the purpose of these regulations to promote the public health, safety and general welfare, and to:

- (A) Protect human life, health and welfare;
- (B) Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future;
- (C) Minimize flooding of water supply and sanitary sewage disposal systems;
- (D) Maintain natural drainage;
- (E) Reduce financial burdens imposed on the community, its governmental units and its residents, by discouraging unwise design and construction of development in areas subject to flooding;
- (F) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (G) Minimize prolonged business interruptions;
- (H) Minimize damage to public facilities and other utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges;
- (I) Reinforce that those who build in and occupy special flood hazard areas should assume responsibility for their actions;
- (J) Minimize the impact of development on adjacent properties within and near flood prone areas;
- (K) Provide that the flood storage and conveyance functions of the floodplain are maintained;
- (L) Minimize the impact of development on the natural and beneficial functions of the floodplain;

- (M) Prevent floodplain uses that are either hazardous or environmentally incompatible; and
- (N) Meet community participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. Section 59.22.

**Sec. 50-3. Areas to which these regulations apply.**

These regulations shall apply to all special flood hazard areas within the jurisdiction of the City of Dover, as identified in Section 50-4.

**Sec. 50-4. Basis for establishing special flood hazard areas.**

For the purposes of these regulations, and for the purpose of establishing flood hazard areas in the building code [Section 1612.3 and Table R301.2(1)], the following are adopted by reference as a part of these regulations and serve as the basis for establishing special flood hazard areas:

- (A) The FEMA Flood Insurance Study for Kent County, Delaware and Incorporated Areas dated July 7, 2014 and all subsequent amendments and/or the most recent revision thereof.
- (B) The FEMA Flood Insurance Rate Map for Kent County, Delaware and Incorporated Areas dated July 7, 2014, and all subsequent amendments and/or the most recent revision thereof.
- (C) Other hydrologic and hydraulic engineering studies and/or maps prepared pursuant to these regulations or for other purposes, and which establish base flood elevations, delineate 100-year floodplains, floodways or other areas of special flood hazard.
- (D) The City of Dover may identify and regulate new local flood hazard or ponding areas. These areas should be delineated and adopted on a “Local Flood Hazard Map” using best available topographic data and locally derived information such as flood of record, historic high water marks or approximate study methodologies.
- (E) Where field surveyed topography indicates that ground elevations are below the closest applicable base flood elevation, even in areas not delineated as a special flood hazard area on a flood hazard map, the area shall be considered as special flood hazard area.

Maps and studies that establish special flood hazard areas are on file at the City of Dover Department of Planning and Inspections.

**Sec. 50-5. Abrogation and greater restrictions.**

These regulations are not intended to repeal or abrogate any existing ordinances including subdivision regulations, zoning ordinances or building codes. In the event of a conflict between these regulations and any other ordinance, the more restrictive shall govern. These regulations shall not impair any deed restriction, covenant or easement, but the land subject to such interests shall also be governed by these regulations.

**Sec. 50-6. Interpretation.**

In the interpretation and application of these regulations, all provisions shall be:

- (A) Considered as minimum requirements;
- (B) Liberally construed in favor of the governing body;
- (C) Deemed neither to limit nor repeal any other powers granted under state statutes; and
- (D) Where a provision of these regulations may be in conflict with a state or Federal law, such state or Federal law shall take precedence, where more restrictive.

**Sec. 50-7. Warning and disclaimer of liability.**

The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. These regulations do not imply that land outside of the special flood hazard areas or uses that are permitted within such areas will be free from flooding or flood damage. These regulations shall not create liability on the part of the City of Dover, any officer or employee thereof, or the Federal Emergency Management Agency, for any flood damage that results from reliance on these regulations or any administrative decision lawfully made thereunder.

**50-8. Severability.**

Should any section or provision of these regulations be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof other than the part so declared to be unconstitutional or invalid.

**Secs. 50-9—50-19. Reserved.**

**ARTICLE II. ADMINISTRATION**

**50-20. Designation of the floodplain administrator.**

The city planner is hereby appointed to administer and implement these regulations and is referred to herein as the floodplain administrator. The floodplain administrator is authorized to: (A) Fulfill the duties and responsibilities set forth in these regulations, (B) Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees, or (C) Enter into a written agreement or written contract with another jurisdiction or agency, or private sector entity to administer specific provisions of these regulations, upon receiving necessary approvals. Administration of any part of these regulations by another entity shall not relieve the community of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. Section 59.22.

**50-21. Duties and responsibilities of the floodplain administrator.**

The duties and responsibilities of the floodplain administrator shall include but are not limited to:

- (A) Coordinate with the building official to support administration, interpretation, and enforcement of the flood load and flood-resistant construction provisions of the building code.
- (B) Review applications for permits to determine whether proposed activities will be located in special flood hazard areas.
- (C) Interpret floodplain boundaries and provide flood elevation and flood hazard information.
- (D) Review applications to determine whether proposed activities will be reasonably safe from flooding.
- (E) Review applications to determine whether all necessary permits have been obtained from those Federal, state or local agencies from which prior or concurrent approval is required.
- (F) Verify that applicants proposing to alter or relocate a watercourse have notified adjacent communities and the Delaware Department of Natural Resources and Environmental Control (Division of Watershed Stewardship), and have submitted copies of such notifications to the Federal Emergency Management Agency.
- (G) Issue permits to develop in special flood hazard areas when the provisions of these regulations have been met, or disapprove the same in the event of noncompliance.

- (H) Inspect special flood hazard areas to determine compliance with these regulations or to determine if noncompliance has occurred or violations have been committed.
- (I) Review submitted Elevation Certificates for completeness.
- (J) Submit to FEMA data and information necessary to maintain flood hazard maps, including hydrologic and hydraulic engineering analyses prepared by or for the City of Dover, corrections to labeling or planimetric details, etc.
- (K) Maintain and permanently keep all records for public inspection that are necessary for the administration of these regulations including Flood Insurance Rate Maps, Letters of Map Amendment and Revision, records of issuance and denial of permits, determinations of whether development is in or out of special flood hazard areas for the purpose of issuing permits, elevation certificates, other required certifications, variances, and records of enforcement actions taken for violations of these regulations.
- (L) Enforce the provisions of these regulations.
- (M) Assist with and coordinate flood hazard map maintenance activities.
- (N) Conduct, with the building official, determinations as to whether existing buildings and structures damaged by any cause and located in special flood hazard areas, have been substantially damaged.
- (O) Make reasonable efforts to notify owners of substantially damaged buildings and structures of the need to obtain a permit prior to repair, rehabilitation, or reconstruction, and to prohibit the non-compliant repair of substantially-damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a structure to prevent additional damage.
- (P) Undertake, as determined appropriate by the floodplain administrator due to the circumstances, other actions which may include but are not limited to: issuing press releases, public service announcements, and other public information materials related to permit requests and repair of damaged structures; coordinating with other Federal, state, and local agencies to assist with substantial damage determinations; providing owners of damaged structures materials and other information related to the proper repair of damaged structures in special flood hazard areas; and assisting owners with National Flood Insurance Program claims for Increased Cost of Compliance payments.
- (Q) Notify the Federal Emergency Management Agency when the corporate boundaries of the City of Dover have been modified.

#### **50-22. Permits required.**

It shall be unlawful for any person or entity to begin construction or other development which is wholly within, partially within, or in contact with any identified special flood hazard area, as established in Section 50-4, including but not limited to: subdivision of land, filling, grading, or other site improvements and utility installations; placement or replacement of a manufactured home; recreational vehicles; installation or replacement of storage tanks; or alteration of any watercourse, until a permit is obtained from the City of Dover. These regulations are intended to be administered and enforced in conjunction with the building code. No permit shall be issued until the requirements of these regulations and, as applicable, the flood load and flood-resistant construction provisions of the building code, have been met. Permit fees shall be as provided for in Appendix F – Fees and Fines.

## **50-23. Application required.**

Application for a permit shall be made by the owner of the property or his/her authorized agent, herein referred to as the applicant, prior to the actual start of construction. The application shall be on a form furnished for that purpose. For applications for buildings and structures, these required minimum contents of the application are in addition to the requirements of the building code.

### **(A) Application contents.**

At a minimum, applications shall include:

- (1) Site plans drawn to scale showing the nature, location, dimensions, existing and proposed topography of the area in question, the limits of any portion of the site that was previously filled, and the location of existing and proposed structures, excavation, filling, storage of materials, drainage facilities, and other proposed activities.
- (2) Elevation of the existing natural ground where structures are proposed, referenced to the datum on the Flood Insurance Rate Map, and an Elevation Certificate that shows the ground elevation and proposed building elevations (identified in Section C of the Elevation Certificate as "Construction Drawings").
- (3) Delineation of special flood hazard areas, floodway boundaries, flood zones, and base flood elevations. Where surveyed natural ground elevations are lower than the base flood elevations, base flood elevations shall be used to delineate the boundary of special flood hazard areas. If proposed, changes in the delineation of special flood hazard areas shall be submitted to and approved by FEMA in accordance with Section 50-23(B). Where special flood hazard areas are not delineated or base flood elevations are not shown on the flood hazard maps, the floodplain administrator has the authority to require the applicant to use information provided by the floodplain administrator, information that is available from other sources, or to determine such information using accepted engineering practices.
- (4) For subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, and where base flood elevations are not shown on Flood Insurance Rate Maps, hydrologic and hydraulic engineering analyses and studies as required by Section 50-31(D).
- (5) Elevation of the lowest floor, including basement, or elevation of the bottom of the lowest horizontal structural member, as applicable to the flood zone, of all proposed structures, referenced to the datum on the Flood Insurance Rate Maps.
- (6) Such other material and information as may be requested by the Floodplain Administrator necessary to determine conformance with these regulations.
- (7) For work on an existing structure, including any improvement, addition, repairs, alterations, rehabilitation, or reconstruction, sufficient information to determine if the work constitutes substantial improvement, including:
  - (a) Documentation of the market value of the structure before the improvement is started or before the damage occurred.
  - (b) Documentation of the actual cash value of all proposed improvement work, or the actual cash value of all work necessary to repair and restore damage to the before damaged condition, regardless of the amount of work that will be performed.
- (8) Certifications and/or technical analyses prepared or conducted by an appropriate design professional licensed in the State of Delaware, as appropriate to the type of development activity proposed and required by these regulations and the building code:

- (a) Floodproofing Certificate for dry floodproofed non-residential structures, as required by the building code.
- (b) Certification that flood openings that do not meet the minimum requirements for non-engineered openings but designed to automatically equalize hydrostatic flood forces, as required by the building code.
- (c) Technical analyses to document that the flood carrying capacity of any watercourse alteration or relocation will not be diminished and documentation of maintenance assurances as required in Section 50-40(C).
- (d) Hydrologic and hydraulic engineering analyses demonstrating that the cumulative effect of proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood by more than one foot in special flood hazard areas where the Federal Emergency Management Agency has provided base flood elevations but has not delineated a floodway, as required by Section 50-40(B).
- (e) Hydrologic and hydraulic engineering analyses of any development proposed to be located in an identified floodway, as required by Section 50-40(A).
- (f) Hydrologic and hydraulic engineering analyses to develop base flood elevations for subdivisions and large-lot developments, as required by Section 50-31(D) or otherwise required by the floodplain administrator.

**(B) Right to submit new technical data.**

The applicant has the right to seek a Letter of Map Change and to submit new technical data to FEMA regarding base maps, topography, special flood hazard area boundaries, floodway boundaries, and base flood elevations. Such submissions shall be prepared in a format acceptable by FEMA and the floodplain administrator shall be notified of such submittal. Submittal requirements and processing fees shall be the responsibility of the applicant.

**(C) Requirement to submit new technical data.**

The Floodplain Administrator shall notify FEMA of physical changes affecting flood hazard areas and flooding conditions by submitting technical or scientific data as soon as practicable, but not later than six (6) months after the date such information becomes available. The Floodplain Administrator has the authority to require applicants to submit technical data to FEMA for Letters of Map Change.

**50-24. Review, approval or disapproval.**

**(A) Review.**

The floodplain administrator shall:

- (1) Review applications for development in special flood hazard areas to determine the completeness of information submitted. The applicant shall be notified of incompleteness or additional information required to support the application.
- (2) Review applications for compliance with these regulations after all information required in Section 50-23 or identified and required by the floodplain administrator has been received.
- (3) Review all permit applications to assure that all necessary permits have been received from those federal, state or local governmental agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits, including but not

limited to:

- (a) Permits issued by the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, and the Delaware Environmental Protection Agency under Section 401 of the Clean Water Act.
- (b) Permits required by the State of Delaware.
- (4) Permit fees shall be as provided for in Appendix F – Fees and Fines.

**(B) Approval or disapproval.**

The floodplain administrator shall approve applications that comply with the applicable requirements of these regulations. The Floodplain administrator shall disapprove applications for proposed development that does not comply with the applicable provisions of these regulations and shall notify the application of such disapproval, in writing, stating the reasons for disapproval.

**(C) Expiration of permit.**

A permit is valid provided the actual start of construction occurs within 180 days of the date of permit issuance. If the actual start of construction is not within 180 days of the date of permit issuance, requests for extensions shall be submitted in writing. Upon reviewing the request and the permit for continued compliance with these regulations, the Floodplain Administrator may grant, in writing, one or more extensions of time, for periods not more than 180 days each. Permit fees shall be as provided for in Appendix F – Fees and Fines.

**50-25. Inspections.**

The Floodplain Administrator shall make periodic inspections of development permitted in special flood hazard areas, at appropriate times throughout the period of construction in order to monitor compliance. In addition to the inspections required by the building code, such inspections may include:

- (A) Stake-out inspection, to determine location on the site relative to the special flood hazard area and floodway.
- (B) Foundation inspection, upon placement of the lowest floor and prior to further vertical construction, to collect information or certification of the elevation of the lowest floor.
- (C) Enclosure inspection, including crawlspaces, to determine compliance with applicable provisions.
- (D) Utility inspection, upon installation of specified equipment and appliances, to determine appropriate location with respect to the base flood elevation.
- (E) Storage of Materials.

**50-26. Submissions required prior to issuance of a certificate of occupancy.**

The following certifications are required to be submitted by the permittee for development that is permitted in special flood hazard areas prior to the issuance of a Certificate of Occupancy:

- (A) For new or substantially improved residential structures or nonresidential structures that have been elevated, an Elevation Certificate that shows the ground elevation and finished elevations (identified in Section C of the Elevation Certificate as “Finished Construction”).
- (B) For nonresidential structures that have been dry floodproofed, a Floodproofing Certificate based

on “Finished Construction” (identified in Section II).

- (C) For all development activities subject to the requirements of Section 50-23(B), a Letter of Map Revision shall be provided.

**50-27. Flood insurance rate map use and interpretation.**

The floodplain administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. The following shall apply to the use and interpretation of special flood hazard maps and data:

- (A) In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified special flood hazard areas, any other flood hazard data available from a federal, state, or other source shall be reviewed and reasonably used. When a Preliminary Flood Insurance Rate Map has been provided by FEMA to identify base flood elevations where such elevations were not previously shown, the base flood elevations on the Preliminary Flood Insurance Rate Map shall be used.
- (B) Special flood hazard area delineations, base flood elevations, and floodway boundaries on FEMA maps and in FEMA studies shall take precedence over delineations, base flood elevations, and floodway boundaries by any other source that reflect a reduced special flood hazard area, reduced floodway width and/or lower base flood elevations.
- (C) Other sources of data shall be reasonably used, with the approval of the floodplain administrator, if they show increased base flood elevations and/or larger floodway areas than are shown on FEMA flood maps and studies.
- (D) Where field surveyed topography indicates that ground elevations are below the base flood elevation, even in areas not delineated as a special flood hazard on a flood hazard map, the area shall be considered as special flood hazard area.

**Secs. 50-28—50-29. Reserved.**

**ARTICLE III. REQUIREMENTS IN ALL SPECIAL FLOOD HAZARD AREAS**

**50-30. Application of requirements.**

The general requirements of this section apply to all development proposed within special flood hazard areas identified in Section 50-4.

**50-31. Subdivisions and developments.**

- (A) All subdivision and development proposals shall be consistent with the need to minimize flood damage and are subject to all applicable standards in these regulations.
- (B) All subdivision and development proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (C) All subdivision and developments proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (D) All subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, in FEMA-delineated special flood hazard areas where base flood elevation data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine base flood elevations and floodway delineations. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees

shall be the responsibility of the applicant.

**50-32. Protection of water supply and sanitary sewage systems.**

- (A) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.
- (B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.
- (C) On-site waste disposal systems shall be located to avoid impairment to or contamination from them during conditions of flooding.

**50-33. Buildings and structures.**

All new construction of buildings and structures, including placement of manufactured homes and substantial improvements to existing buildings and structures, that are to be located, in whole or in part, in special flood hazard areas shall comply with flood load and flood-resistant construction requirements of the building code.

**50-34. Fill.**

- (A) Disposal of fill, including but not limited to rubble, construction debris, woody debris, and trash, shall not be permitted in special flood hazard areas.
- (B) Where permitted by the building code (Zones A, AE, and AO), fill placed for the purpose of raising the ground level and to support a building or structure shall meet the following requirements:
  - (1) Extend laterally from the building footprint to provide for adequate access, as a function of use; the Floodplain Administrator may seek advice from the Fire Marshal's Office and/or the local fire services agency.
  - (2) Placed and compacted to provide for stability under conditions of rising and falling floodwaters and resistance to erosion, scour, and settling.
  - (3) Consist of soil or rock materials only.
  - (4) Sloped no steeper than one (1) vertical on two (2) horizontal, unless approved by the Floodplain Administrator.
  - (5) Designed with provisions for adequate drainage and no adverse effect on adjacent properties.
- (C) Fill placed for a purpose other than to support a building or structure shall meet the requirements of Section 50-(B)(2) through (B)(5).

**50-35. Historic structures.**

As specified by the building code, repair, alteration, or rehabilitation of historic structures shall be subject to the requirements of the building code unless a determination is made that compliance will preclude a structure's continued designation as a historic structure and a variance is granted in accordance with Section 50-46 and such variance is the minimum necessary to preserve the historic character and design of the structure.

**50-36. Recreational vehicles.**

- (A) Recreational vehicles in special flood hazard areas shall be fully licensed and ready for highway use, and shall be placed on a site for less than 180 consecutive days.

- (B) Recreational vehicles that are not fully licensed and ready for highway use, or that are to be placed on a site for more than 180 consecutive days, shall meet the requirements of Section 50-38 for manufactured homes.

#### **50-37. Gas or liquid storage tanks.**

- (A) Underground tanks in special flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (B) Above-ground tanks in special flood hazard areas shall be elevated and anchored to or above the base flood elevation plus 18 inches or shall be anchored at-grade and designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (C) In special flood hazard areas, tank inlets, fill openings, outlets and vents shall be:
  - (1) At or above the base flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the base flood.
  - (2) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.

#### **50-38. Manufactured homes.**

- (A) **Elevation.** All new and replacement manufactured homes to be placed or substantially improved in a flood hazard area shall be elevated such that the bottom of the lowest horizontal structural supporting member of lowest floor of the manufactured home is elevated to or above the base flood elevation plus 18 inches.
- (B) **Foundations.** All new and replacement manufactured homes, including substantial improvement of existing manufactured homes, shall be placed on permanent, reinforced foundations that are designed in accordance with Section R322 of the residential code based on the applicable flood zone identified on the FIRM.
- (C) **Anchoring.** All new and replacement manufactured homes to be placed or substantially improved in a special flood hazard area shall be installed using methods and practices which minimize flood damage. Manufactured homes shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. The anchor and tie-down specifications of the manufacturer are permitted, provided such specifications are specific to installation in special flood hazard areas. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
- (D) **Enclosures.** Fully enclosed areas below elevated manufactured homes shall comply with the requirements of Section R322 of the residential code based on the applicable flood zone identified on the FIRM.
- (E) **Protection of mechanical equipment and outside appliances.** Mechanical equipment and outside appliances shall comply with the requirements of Section R322 for protection of mechanical and electrical systems.

#### **50-39. Accessory structures.**

Accessory structures shall meet the requirements of these regulations. Accessory structures that have a footprint of no more than 200 square feet may be allowed without requiring elevation or floodproofing provided such structures meet all of the following requirements:

- (A) Useable only for parking or limited storage;
- (B) Constructed with flood damage-resistant materials below the base flood elevation;
- (C) Constructed and placed to offer the minimum resistance to the flow of flood waters;
- (D) Firmly anchored to prevent flotation, collapse, and lateral movement;
- (E) Electrical service and mechanical equipment elevated to or above the level of the base flood elevation plus 18 inches; and
- (F) Equipped with flood openings that meet the requirements of Section R322.2.2 of the residential code.
- (G) For guidance, see FEMA Technical Bulletin #7 – *Wet Floodproofing Requirements*.

**50-40. Protection of flood-carrying capacity.**

**(A) Development in floodways.**

Within any floodway area designated on the Flood Insurance Rate Map, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic engineering analysis that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge. Such technical data shall be submitted to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

The proposed development activity may be permitted if the analyses demonstrate that the activity:

- (1) Will not result in any increase in the base flood elevation; or
- (2) Will result in an increase in the base flood elevation, provided a Conditional Letter of Map Revision has been issued by FEMA and the applicant completes all of the following:
  - (a) Submits technical data required in Section 50-23(A)(8)(e);
  - (b) Evaluates alternatives which would not result in increased base flood elevations and an explanation why these alternatives are not feasible;
  - (c) Certifies that no structures are located in areas which would be impacted by the increased base flood elevation;
  - (d) Documents that individual legal notices have been delivered to all impacted property owners to explain the impact of the proposed action on their properties;
  - (e) Requests and receives concurrence of the City Manager of the City of Dover and the Chief Executive Officer of any other community impacted by the proposed actions; and
  - (f) Notifies the Delaware Department of Natural Resources and Environmental Control (Division of Watershed Stewardship).

**(B) Development in areas with base flood elevations but no foodways.**

For development activities in a special flood hazard area with base flood elevations but no designated floodways, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting the proposed activity and shall submit such analyses and data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a licensed professional engineer in a format required

by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

The proposed development activity may be permitted if the analyses demonstrate that the cumulative effect of the proposed development activity, when combined with all other existing and potential special flood hazard area encroachments will not increase the base flood elevation more than 1.0 (one) foot at any point.

**(C) Deliberate alterations of a watercourse.**

For the purpose of these regulations, a watercourse is deliberately altered when a person causes a change to occur within its banks. Deliberate changes to a watercourse include, but are not limited to: widening, deepening or relocating of the channel; installation of culverts; construction of bridges, and excavation or filling of the channel or watercourse banks.

For any proposed deliberate alteration of a watercourse, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting such changes and submit such technical data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

The proposed alteration of a watercourse may be permitted upon submission, by the applicant, of the following:

- (1) Documentation of compliance with Section 50-40(A) if the alteration is in a floodway or Section 50-40(B) if the alteration is in a watercourse with base flood elevations but no floodway.
- (2) A description of the extent to which the watercourse will be altered or relocated as a result of the proposed development.
- (3) A certification by a licensed professional engineer that the bankful flood-carrying capacity of the watercourse will not be diminished.
- (4) Evidence that adjacent communities, the U.S. Army Corps of Engineers, and the Delaware Department of Natural Resources and Environmental Control (Division of Watershed Stewardship) have been notified of the proposal and evidence that such notifications have been submitted to the Federal Emergency Management Agency.
- (5) Evidence that the applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the permit holder to enter into an agreement with the City of Dover specifying the maintenance responsibilities; if an agreement is required, the permit shall be conditioned to require that the agreement be recorded on the deed of the property which shall be binding on future owners.

**Secs. 50-41—50-45. Reserved.**

**ARTICLE IV. VARIANCES.**

**50-46. Variances.**

The City of Dover Construction Code Appeals Committee shall have the power to authorize, in specific cases, such variances from the requirements of these regulations and the flood load and flood load and flood-resistant construction of the building code, not inconsistent with Federal regulations, as will not be contrary to the public

interest where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations would result in unnecessary hardship.

**(A) Application for a Variance.**

- (1) Any owner, or agent thereof, of property for which a variance is sought shall submit an application for a variance to the Floodplain Administrator.
- (2) At a minimum, such application shall contain the following information: Name, address, and telephone number of the applicant; legal description of the property; parcel map; description of the existing use; description of the proposed use; location of the floodplain; description of the variance sought; and reason for the variance request. Each variance application shall specifically address each of the considerations in Section 50-46(B) and the limitations and conditions of Section 50-46(C).

**(B) Considerations for variances.**

In considering variance applications, the City of Dover Construction Code Appeals Committee shall consider and make findings of fact on all evaluations, all relevant factors, requirements specified in other sections of these regulations, and the following factors:

- (1) The danger that materials may be swept onto other lands to the injury of others.
- (2) The danger to life and property due to flooding or erosion damage.
- (3) The susceptibility of the proposed development and its contents (if applicable) to flood damage and the effect of such damage on the individual owner.
- (4) The importance of the services provided by the proposed development to the community.
- (5) The availability of alternative locations for the proposed use which are not subject to, or are subject to less, flooding or erosion damage.
- (6) The necessity to the facility of a waterfront location, where applicable, or if the facility is a functionally dependent use.
- (7) The compatibility of the proposed use with existing and anticipated development.
- (8) The relationship of the proposed use to the comprehensive plan for that area.
- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles.
- (10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.
- (11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

**(C) Limitations for variances.**

- (1) An affirmative decision on a variance request shall only be issued upon:
  - (a) A showing of good and sufficient cause. A “good and sufficient” cause is one that deals solely with the physical characteristics of the property and cannot be based on the character of the planned construction or substantial improvement, the personal characteristics of the owner or inhabitants, or local provisions that regulate standards other than health and public safety standards.

- (b) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the property.
  - (c) Increased cost or inconvenience of meeting the requirements of these regulations does not constitute an exceptional hardship to the applicant.
  - (d) A determination that the granting of a variance for development within any designated floodway, or special flood hazard area with base flood elevations but no floodway, will not result in increased flood heights beyond that which is allowed in these regulations.
  - (e) A determination that the granting of a variance will not result in additional threats to public safety; extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing local laws.
  - (f) A determination that the structure or other development is protected by methods to minimize flood damages.
  - (g) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (2) Upon consideration of the individual circumstances, the limitations and conditions, and the purposes of these regulations, the City of Dover Construction Code Appeals Committee may attach such conditions to variances as it deems necessary to further the purposes of these regulations.
  - (3) The City of Dover Construction Code Appeals Committee shall notify any applicant in writing to whom a variance is granted for a building or structure with a lowest floor elevation below the base flood elevation that the variance is to the floodplain management requirements only, and that the cost of federal flood insurance will be commensurate with the increased risk.

**Secs. 50-47—50-49. Reserved.**

## **ARTICLE V. ENFORCEMENT**

### **50-50. Compliance required.**

- (A) No structure or land development shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged or altered without full compliance with these regulations and all other applicable regulations which apply to uses within the jurisdiction of these regulations.
- (B) Failure to obtain a permit shall be a violation of these regulations and shall be punishable in accordance with Section 50-51.
- (C) Permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the specific activities set forth in such approved plans and applications or amendments thereto. Use, arrangement, or construction of such specific activities that is contrary to that authorized shall be deemed a violation of these regulations.

### **50-51. Violations and Penalties**

- (a) Violation of any provision or requirement of this ordinance or violation of any statement, plan, application, permit or certificate approved under the provisions of this ordinance shall be considered a misdemeanor.

- (b) The owner, general agent or contractor of a building, premises, or part thereof, where such a violation had been committed or does exist, shall be guilty of such misdemeanor.
- (c) Any agent, contractor, architect, builder, corporation or other person who commits, takes part or assists in such violation shall be guilty of such misdemeanor.
- (d) The imposition of a fine or penalty for any violation of, or noncompliance with, this article shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations or noncompliances within a reasonable time. Each day that a violation continues after due notice has been served shall be deemed a separate offense.
- (e) Penalties for violations or non-compliance shall be as provided for in Appendix F – Fees and Fines.

## ARTICLE VI. DEFINITIONS

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. Where terms are not defined in these regulations and are defined in the building code, such terms shall have the meanings ascribed to them in that code.

**Accessory structure:** For the purposes of these regulations, a structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal structure.

**Area of shallow flooding:** A designated Zone AO on a community's Flood Insurance Rate Map with a one percent annual chance or greater of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

**Base flood:** The flood having a one percent chance of being equaled or exceeded in any given year; the base flood also is referred to as the 100-year flood (or the 1%-annual-chance flood).

**Base flood discharge:** The volume of water resulting from a Base Flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).

**Base flood elevation:** The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the community's Flood Insurance Rate Map.

**Basement:** Any area of the building having its floor subgrade (below ground level) on all sides.

**Building Code:** The family of building codes specifically adopted by the City of Dover in the Dover Code of Ordinances – Chapter 22 – Buildings and Building Regulations. The code that applies to one- and two-family dwellings is referred to as the “residential code.”

**Development:** Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, placement of manufactured homes, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**Dry floodproofing:** A combination of measures which results in a structure, including attendant utilities and equipment, being watertight with all elements substantially impermeable and with structural components having the capacity to resist flood loads.

**Elevation Certificate:** The *National Flood Insurance Program, Elevation Certificate* (FEMA Form 086-0-33), used to document building elevations and other information about buildings. When required to be certified, the form shall be completed by a licensed professional land surveyor.

**Federal Emergency Management Agency (FEMA):** The federal agency with the overall responsibility for administering the National Flood Insurance Program.

**FEMA Technical Bulletin:** A series of guidance documents published by FEMA to provide guidance concerning building performance standards of the National Flood Insurance Program. See sections where specific TBs are identified.

**Flood or Flooding:** A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters, and/or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

**Flood damage-resistant materials:** Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. See FEMA Technical Bulletin #2 – *Flood Damage-Resistant Materials Requirements* and FEMA Technical Bulletin #8 – *Corrosion Protection for Metal Connectors in Coastal Areas*.

**Flood Insurance Rate Map (FIRM):** An official map on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

**Zone A:** Special flood hazard areas inundated by the 1% annual chance flood; base flood elevations are not determined.

**Zone AE:** Special flood hazard areas subject to inundation by the 1% annual chance flood; base flood elevations are determined; floodways may or may not be determined.

**Zone AO:** Areas of shallow flooding, with or without a designated average flood depth.

**Zone X (shaded):** Areas subject to inundation by the 500-year flood (0.2% annual chance); areas subject to the 1% annual chance flood with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected by levees from the base flood.

**Zone X (unshaded):** Areas determined to be outside the 1% annual chance flood and outside the 500-year floodplain.

**Flood Insurance Study:** The official report provided by the Federal Emergency Management Agency (FEMA) containing the Flood Insurance Rate Map (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevations of the base flood and supporting technical data.

**Floodplain:** Any land area susceptible to being inundated by water from any source (see “Flood” or “Flooding”).

**Floodproofing Certificate:** The *National Flood Insurance Program, Floodproofing Certificate for Non-Residential Structures* (FEMA Form 86-0-34), used by registered professional engineers and architects to certify dry floodproofing designs.

**Floodway:** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to pass the base flood discharge such that the cumulative increase in the water surface elevation of the base flood discharge is no more than a designated height.

**Functionally dependent use:** A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water; the term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

**Highest adjacent grade:** The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**Historic structure:** Any structure that is:

- (1) Individually listed in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district.

**Hydrologic and hydraulic engineering analysis:** An analysis performed by a professional engineer, licensed in the State of Delaware, in accordance with standard engineering practices as accepted by FEMA, used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.

**Letter of Map Change:** A Letter of Map Change is an official FEMA determination, by letter, to amend or revise an effective Flood Insurance Rate Map, Flood Boundary and Floodway Map, and Flood Insurance Study. Letters of Map Change include:

**Letter of Map Amendment (LOMA):** An amendment based on technical data showing that a property was inadvertently included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a special flood hazard area.

**Letter of Map Revision (LOMR):** A revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a Letter of Map Revision Based on Fill (LOMR-F), is a determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood; in order to qualify for this determination, the fill must have been permitted and placed in accordance with these regulations.

**Conditional Letter of Map Revision (CLOMR):** A formal review and comment as to whether a proposed flood protection project complies with the minimum National Flood Insurance Program requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies; upon submission to and approval of certified as-built documentation, a Letter of Map Revision may be issued.

**Lowest floor:** The lowest floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage

provided that such enclosure is not built so as to render the structure in violation of the non-elevation requirements specified in the building code for enclosures below the lowest floor.

**Manufactured home:** A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

**New construction:** Buildings and structures for which the "start of construction" commenced on or after September 16, 1982, including any subsequent improvements to such structures

**Person:** An individual or group of individuals, corporation, partnership, association, or any other entity, including state and local governments and agencies.

**Recreational vehicle:** A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

**Special flood hazard area:** The land in the floodplain subject flood hazards and shown on a Flood Insurance Rate Map as Zones A, AE, and AO. The term includes areas shown on other flood hazard maps that are specifically listed or otherwise described in Section 50-4.

**Start of construction:** The date of issuance of permits for new construction and substantial improvements to existing structures, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days after the date of issuance. The actual start means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings, or construction of columns. Permanent construction does not include land preparation (such as clearing, grading and filling), the installation of streets or walkways, excavation for a basement, footings, piers, or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual "start of construction" means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**Structure (or building):** That which is built or constructed.

**Substantial damage:** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Substantial improvement:** Any repair, alteration, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.

**Violation:** The failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the Elevation Certificate, other

certifications, or other evidence of compliance required in these regulations is presumed to be in violation until such time that documentation is provided.

**ARTICLE VII. APPLICABILITY**

For the purposes of jurisdictional applicability, this ordinance shall apply in the City of Dover, Delaware. This ordinance shall apply to all applications for development, including building permit applications and subdivision proposals, submitted on or after July 7, 2104.

**BE IT FURTHER ORDAINED:**

**That Chapter 22 – Buildings and Building Regulations, Article III – Building Code, Section 22-61 – Adopted, (a) International Building Code adopted, Section 1612.3 - Establishment of flood hazard areas, of the Dover Code, be amended by deleting it in its entirety and inserting in lieu thereof the following:**

Section 1612.3: Flood Insurance Study for the City of Dover, dated July 7, 2014, or as subsequently amended or revised.

**That Chapter 22 – Buildings and Building Regulations, Article III – Building Code, Section 22-61 – Adopted, (a) International Residential Code adopted, Section R301.2, Table R301.2(1) Climatic and Geographic Design Criteria, of the Dover Code, be amended by deleting it in its entirety and inserting in lieu thereof the following:**

**Table R301.2(1) Climatic and Geographic Design Criteria**

Ground Snow Load	Wind Design		Seismic Design Category <sup>f</sup>	Subject to Damage From			Winter Design Temp <sup>e</sup>	Ice Barrier Under-layment Required <sup>h</sup>	Flood Hazards <sup>g</sup>	Air Freezing Index <sup>i</sup>	Mean Annual Temperature <sup>j</sup>
	Speed <sup>d</sup> (mph)	Topographic effects <sup>k</sup>		Weathering <sup>a</sup>	Frost line Depth <sup>b</sup>	Termite <sup>c</sup>					
25	95 gust 77 fastest	NO	A	Severe	24"	Moderate To Heavy	14°	NO	Adopted in Chapter 50 of the Code of the City of Dover	450	55°

**BE IT FURTHER ORDAINED:**

**That Chapter 22 – Buildings and Building Regulations, Article III – Building Code, Section 22-61 – Adopted, (a) International Building Code adopted, be amended by inserting Section 1612.4.1, as follows:**

**Section 1612.4.1 Elevation requirements.** The minimum elevation requirements shall be as specified in ASCE 24 or the base flood elevation plus 18 inches, whichever is higher.

**BE IT FURTHER ORDAINED:**

**That Chapter 22 – Buildings and Building Regulations, Article III—Building Code, Section 22-61 – Adopted, International Residential Code Adopted, be amended by inserting the following:**

Table R301.2(1), footnote (g): September 16, 1982, Flood Insurance Study for Kent County and Incorporated Areas], dated July 7, 2014, or as subsequently amended or revised.

**R322.2.1 Elevation requirements.**

1. Buildings and structures in flood hazard areas not designated as Coastal A Zones shall have the lowest floors elevated to or above the base flood elevation plus 18 inches or the design flood elevation, whichever is higher.
2. Buildings and structures in flood hazard areas designated as Coastal A Zones shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or to the design flood elevation, whichever is higher.
3. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated at least as high above the highest adjacent grade as the depth number specified in feet on the FIRM plus 18 inches or at least 3.5 feet if a depth number is not specified.
4. Basement floors that are below grade on all sides shall be elevated to or above the base flood elevation plus 18 inches or the design flood elevation, whichever is higher.

**Exception:** Enclosed areas below the design flood elevation, including basements whose floors are not below grade on all sides, shall meet the requirements of Section R322.2.2.

**BE IT FURTHER ORDAINED:**

That Appendix F – Fees and Fines, Chapter 50 – Floods, be amended to read as follows:

Chapter 50 - Floods, Article II. Administration		
50-22. Permits required.	Permit	\$50.00
	Permit Extension	\$25.00
	Violation and non-compliance; penalties	Not less than \$25.00 nor more than \$100.00, plus cost of prosecution

**ADOPTED: JUNE 9, 2014**

**SYNOPSIS**

The proposed amendment replaces Chapter 50 – Floods, of the Dover Code of Ordinances in its entirety, adopts flood hazard maps, designates a floodplain administrator, adopts administrative procedures, coordinates with the building code, and adopts criteria for development in flood hazard areas. Additionally, Chapter 22 – Buildings and Building Regulations and Appendix F – Fees and Fines have been amended accordingly.

Actions History

- 06/09/2014 - Final Reading at Council/Adopted
- 05/27/2014 - First Reading at Council
- 04/28/2014 - Introduced at the Legislative, Finance, and Administration Committee