

Chapter 46

FLOOD DAMAGE CONTROL

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[HISTORY: Adopted by the Mayor and Commissioners of the Town of Perryville 11-5-1991 as Ord. No. 91-5.¹ Amendments noted where applicable.]

GENERAL REFERENCES

Building Construction – See Chapter 32.

Soil erosion and sediment control – See Chapter 71.

Stormwater management – See Chapter 73.

Subdivision of land – See Chapter 74.

ARTICLE I
General Provisions

§ 46-1. **Purpose and authority.**

- A. The purposes of this chapter are to protect human life and health, minimize property damage, encourage appropriate construction practices to minimize future damage, protect individuals from unwittingly buying land subject to flood hazards and to protect water supply, sanitary sewage disposal and natural drainage. The prevention of unwise development in areas subject to flooding will reduce financial burdens to the community and the state and will prevent future displacement and suffering of its residents. This protection is achieved through the review of all activities proposed within identified floodplains and by the issuance of permits for those activities that comply with the objectives of this chapter.

¹ Editor's Note: This ordinance repealed former Chapter 46, Flood Damage Prevention, adopted 1-3-1989 as Ord. No. 89-1.

- B. Floodplains are an important asset to the community. They perform vital natural functions, such as temporary storage of floodwaters, moderation of peak flood flows, maintenance of water quality, groundwater recharge, prevention of erosion, habitat for diverse natural wildlife populations, recreational opportunities and aesthetic quality. These functions are best served if floodplains are kept in their natural state. Wherever possible, the natural characteristics of floodplains and their associated wetlands and water bodies should be preserved and enhanced.

- C. This chapter provides a unified, comprehensive approach to floodplain management which addresses these natural floodplain functions and the federal and state programs concerned with floodplain management. These programs are: the National Flood Insurance Program (44 CFR 59-79); the state's Waterway Construction Permit Program for nontidal floodplains; the state's Tidal and Nontidal Wetlands Permit Programs; the United States Army Corps of Engineers' Section 10 and 404 Permit Programs; and the state's Coastal Zone Management Program. Decisions to alter floodplains, especially floodways and stream channels, should be the result of careful planning processes which evaluate resource conditions and human needs.

§ 46-2. Abrogation and greater restrictions.

This chapter supersedes any ordinance in effect in flood-prone areas. However, any other ordinance shall remain in full force to the extent that its provisions are more restrictive.

§ 46-3. Applicability.

Any person or entity proposing to do any development within the floodplain zone regulated by this chapter must first obtain a permit for that development from the local permitting agency and must comply with all provisions of this chapter.

§ 46-4. Partial invalidity and severability.

If any part of this chapter is declared invalid, the remainder of the chapter shall not be affected and shall remain in force.

§ 46-5. Disclaimer of liability.

The degree of flood protection provided by this chapter is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study. Floods of greater magnitude may occur or flood heights may be increased by man-made or natural causes. This chapter does not imply that flooding will not occur outside

of the delineated floodplain zone, nor that permitted development and land uses within the floodplain will be free of flooding and associated flood damage. This chapter does not create liability on the part of the community or any officer or employee thereof for any damage which may result from reliance on this chapter.

ARTICLE II Definitions

§ 46-6. Words and terms defined.

As used in this chapter, the following terms shall have the meanings indicated:

ACCESSORY STRUCTURE – A detached structure on the same parcel of property as the principal structure, the use of which is incidental to the principal structure, e.g., a shed or detached garage.

APPROXIMATE FLOODPLAIN – Floodplain areas which are mapped, but for which no detailed studies are available and no water surface elevations determined for the one-hundred-year flood.

BASE FLOOD – The one-hundred-year frequency flood event as indicated in the Flood Insurance Study, as amended, the elevation of which is used for regulatory purposes in this chapter.

BASEMENT – An enclosed area which is below grade on all four (4) sides.

BREAKAWAY WALL – A wall that is not part of the structural support of a building and is intended to collapse under specific lateral loading forces without causing damage to the supporting foundation system of the building.

CERTIFICATE OF OCCUPANCY OR USE – A permit to legally occupy or use a building for the intended purpose.

DEVELOPMENT – Any man-made change to improved or unimproved real estate, including, but not limited to, buildings and other structures, dredging, fill, grading, paving, clearing, excavation, dumping, extraction or storage of equipment or materials. “Development” includes subdivision of land.

ELEVATION CERTIFICATE – Form supplied by the Federal Emergency Management Agency (FEMA) to certify as-built elevations of structures above mean sea level (NGVD).

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FLOOD – General and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters or rapid unusual accumulation of runoff from any source.

FLOOD INSURANCE RATE MAP (FIRM) – Map which depicts the minimum special flood hazard area to be regulated by this chapter (unless a Floodway Map is available).

FLOODPLAIN – That land typically adjacent to a body of water with ground surface elevations that are inundated by the base flood.

FLOODPROOFING – Any combination of structural or nonstructural changes which reduce or eliminate flood damage to improved property.

FLOODPROOFING CERTIFICATE – Form supplied by FEMA to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

FLOOD PROTECTION ELEVATION (FPE) – The elevation of the base flood plus one (1) foot freeboard.

FLOODWAY – The channel and adjacent land area required to discharge the waters of the one-hundred-year flood of a watercourse without increasing the water surface elevations more than a specified height.

FLOODWAY FRINGE – That portion of the floodplain outside the floodway.

FLOODWAY MAP – Map which depicts floodways and special flood hazard areas to be regulated by this chapter.

FREEBOARD – An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, wave actions, subsidence or other unpredictable effects.

HISTORIC STRUCTURE – A structure listed individually on the National Register of Historic Places, the Maryland Inventory of Historic Properties, a local inventory of historic places certified by the Maryland Historic Trust or the Secretary of the Interior or preliminarily determined as meeting the requirements for such listing by the Maryland Historic Trust or the Secretary of the Interior or determined as contributing to the historic significance of an historic district registered with the Secretary of the Interior.

LOWEST FLOOR – The lowest floor of the lowest enclosed area, including basement. An unfinished enclosure constructed of flood-resistant materials used solely for parking of vehicles, storage or building access in an area other than a

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basement is not the “lowest floor”, as long as it is supplied with water-equalizing vents.

MANUFACTURED HOME – A transportable structure which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities.

NEW CONSTRUCTION – A structure for which the start of construction commenced on or after the effective date of the adoption of a floodplain management ordinance, and includes any subsequent improvements.

NGVD – National Geodetic Vertical Datum of 1929 elevation reference points set by the National Geodetic Survey, based on mean sea level.

ONE-HUNDRED-YEAR FREQUENCY FLOOD – The base flood, having one (1) chance in a hundred (one-percent chance) of being equaled or exceeded in any year.

PERMANENT CONSTRUCTION – Any structure occupying a site for more than one hundred eighty (180) days per year.

RECREATIONAL VEHICLE – A vehicle built on a single chassis which is four hundred (400) square feet or less at the longest horizontal projection, self-propelled or towable, and designed primarily for temporary living while traveling or camping.

START OF CONSTRUCTION – The date of issue of the building permit for any development, including new construction and substantial improvements, provided that the actual start of the construction or improvement was within one hundred eighty (180) days of permit issuance. The actual “start of construction” is the placement of slab or footings, piles, columns or actual placement of a manufactured home. For substantial improvement, the “start of construction” is the first alteration of any structural part of the building.

STRUCTURE – A walled and roofed building, including, but not limited to, manufactured homes, gas and liquid storage tanks, garages, barns and sheds.

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 fifty percent (50%) of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT – Any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure (less land value) either before the improvement or repair is started or, if the structure has incurred substantial damage and been

restored, before the damage occurred. “Substantial improvement” occurs when the first alteration of any wall, ceiling, floor or other structural part of the building commences. The minimum repairs needed to correct previously identified violations of local health, safety or sanitary codes, and alterations to historic structures which do not preclude their continued designation as historic structures are not considered “substantial improvements”.

TEMPORARY STRUCTURE – Any structure completely removed within one hundred eighty (180) days from issuance of the permit.

VARIANCE – The grant of relief from a term or terms of this chapter.

WETLAND – Any land which is:

- A. Considered private wetland or state wetland pursuant to Title 9, Wetland and Riparian Rights, Natural Resources Article, Annotated Code of Maryland; or
- B. Defined as wetland under the procedures described in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands by the Federal Interagency Committee for Wetland Delineation, 1989, as amended.

ARTICLE III Permit Procedures

§ 46-7. General requirements.

A permit is required for all development in any floodplain zone. It shall be granted only after all necessary permit applications are submitted to federal and state agencies. A permit issued by the local permitting official² under this chapter is not valid until all necessary permits for development are obtained. Receipt of federal or state permits does not exempt development from the provisions of this chapter.

² Editor’s Note: The preamble to the ordinance appearing in this chapter (Ord. No. 91-5) provided that “the Manager, Town of Perryville, herein referred to as the ‘local permitting official,’ will have the authority and responsibility to implement this ordinance.”

§ 46-8. Application information.

- A. Applications for a building permit shall contain, at a minimum, the following information:
- (1) Name, address and phone number of the applicant (owner or agent of the owner).
 - (2) Name, address and phone number of the owner, if different.
 - (3) Name, address and phone number of the contractor.
 - (4) Legal description of site location.
 - (5) Proposed uses for the site.
 - (6) Type, dimensions and estimated cost of the development proposed.
 - (7) Site characteristics and improvements.
 - (8) Other information deemed appropriate by the local permitting official.
- B. Exclusive of new structures as may be permitted in § 46-11 and less than substantial improvements, all permit applications must have a site plan drawn to scale which shows:
- (1) Dimensions of site;
 - (2) Size and location of existing and proposed structures or alterations;
 - (3) Setbacks;
 - (4) Elevation contours in mean sea level (NGVD);
 - (5) Delineation of the one-hundred-year flood elevation and boundary; and
 - (6) Proposed elevation of the lowest floor and method of elevation, if applicable.
- C. The local permit official may require plans for tree maintenance, stormwater management, revegetation, establishment of vegetated buffers and final grading as part of the permit application process.
- D. All applicants shall agree in writing to provide an elevation certificate completed by a registered professional engineer or surveyor to certify the as-built lowest floor of a structure, which must be elevated to or above the flood protection elevation.

An elevation certificate must be submitted before a certificate of occupancy or use may be issued. Work undertaken prior to submission of the certification is at the applicant's risk. For enclosed areas below the flood protection elevation, a nonconversion agreement may be required, which includes an agreement to install water-equalizing vents as specified in § 46-22 of this chapter.

- E. If an improvement to an existing structure is proposed, adequate information on the cost of the improvement and the market value of the structure before the improvement must be supplied to the local permitting official to allow a determination of substantial improvement. The local permitting official may use tax assessment records to determine substantial improvement. In floodway and coastal high-hazard areas, permit shall be tracked by a property location to determine if the cumulative value of improvements constitutes substantial improvement of a structure.

§ 46-9. Subdivision proposals.

- A. In addition to the information required in § 46-8, an applicant for subdivision in the nontidal floodplain zone shall submit a plan to demonstrate that a building site for each lot is outside of the one-hundred-year floodplain. The local permitting official shall assure that a plan for the perpetual protection of the floodplain areas in their natural state, as required under § 46-19A, is included.
- B. Subdivision plans for the tidal floodplain zone shall be reviewed to assure that the provisions of § 46-19A are met, especially with regard to avoiding wetlands, low areas and existing forest cover.
- C. In all proposed floodplain subdivisions, plans for maintenance of forest cover, flood protection setbacks, revegetation, accommodation of stormwater runoff, prevention of erosion and other plans required by the local permitting official must be submitted with subdivision proposals. The plans shall be evaluated as a whole to achieve satisfactory preservation of the natural and beneficial floodplain functions, desirable resources and characteristics of each site. The plan for utility ingress, stormwater drainage structures, road access and other rights-of-way shall be evaluated in light of the site characteristics.

§ 46-10. Issuance of permit.

- A. Considerations.
 - (1) Prior to issuance of a permit, the local permitting official shall determine the location of the project relative to floodways, floodplains or V-zones and shall note on the permit the property elevation to which the lowest floor of proposed structures must be elevated. In approximate floodplains

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where an elevation is not available, the applicant shall be required to obtain such elevation. The applicant must agree to secure all other required permits, an elevation certificate, floodproofing certificate, engineering analysis or other required verifications deemed appropriate by the local permitting official.

- (2) Floodplain permits granted by the local permitting official shall be subject to compliance with the requirements of this chapter, all other applicable local codes and ordinances and all other necessary permits or approvals. Permits are valid only after all other necessary permits are granted.

B. Dam safety. Caution should be exercised when approving development downstream of existing or proposed dams. The condition of the dam, as well as the design criteria, hazard class and the danger reach, should be investigated to avoid increasing potential hazards. Dams must meet design criteria based on the potential impacts downstream of the dam. Downstream development within the dam break flood wave shall be denied unless the dam meets the design standards for a high-hazard dam.

C. After issuance and during construction.

- (1) After issuance of a permit, no changes of any kind shall be made to the application, permit or any of the plans, specifications or other documents submitted with the application without the written approval of the local permitting official. A copy of the permit or other verification must be displayed at the construction site during construction activity.
- (2) Work on the permitted activity shall begin within one hundred eighty (180) days of the issuance of the permit or the permit shall expire, unless a written extension is granted by the local permitting official. Work shall be completed within one (1) year of the date of the permit, unless a greater time is specified in the permit or a written extension is granted.
- (3) During construction, the local permitting official or an authorized representative shall inspect the site to determine that the work is in compliance with the permit. Any work found to be noncompliant must be corrected before any additional work is undertaken.

D. Record of permits. A record of all floodplain permits shall be maintained and be available upon request by the Federal Emergency Management Agency or its authorized agent (Water Resources Administration) during periodic assessments of this community's participation in the National Flood Insurance Program. All documents needed to support any permit action, such as elevation certificates, map amendments or revisions and variance actions, shall be available for review during these assessments.

§ 46-11. Conditioned permits for accessory structures and garages.

- A. A conditioned permit may be issued at the discretion of the local permitting official when the three-hundred-square-foot exemption is exceeded for accessory structures up to a total size of six hundred (600) square feet. In order to qualify, the structure's use must be incidental to the primary structure, and it can be used only for limited storage and parking of vehicles. The provisions of § 46-26 must be met.
- B. A conditioned permit is subject to the applicant's completion of a nonconversion agreement stating that the use of the accessory structure may not change from that permitted and that it must be equipped with the proper water-equalizing vents. A statement of the greater flood risk and possibly higher flood insurance premiums must be included. In addition, a recordation on the deed or memorandum of land restriction must be made as described in § 46-30, stating that the permitted structure may not be used for human habitation without first complying with the construction requirements of this chapter.

§ 46-12. Fees.

A fee may be charged at the time of application.

§ 46-13. Violations and penalties.

- A. A person who does not comply with a permit issued pursuant to the provisions of this chapter is guilty of a misdemeanor. Alternatively or in addition, the violation may be considered a civil infraction and a fine imposed, but a fine does not excuse the violation. Each day a violation continues is a separate offense. The violation must be corrected prior to any further work progressing on the project.
- B. The Federal Insurance Administrator and the Water Resources Administration must be notified by the local permitting official within thirty (30) days after issuance of the citation of any violation which requires a fine or court appearance. New or renewal federal flood insurance may be denied any structure remaining in violation of this chapter. The violation may also violate state law, may be subject to separate action and may incur a separate penalty.

ARTICLE IV
Establishment of Floodplain Zones

§ 46-14. Identification of flood zones.

The regulatory floodplain shall be those areas of the Town of Perryville which are subject to the one-hundred-year flood, delineated on the most recent revision of the community's Floodway Maps and Flood Insurance Rate Maps (FIRM) and described in the Flood Insurance Study (FIS) prepared by the Federal Emergency Management Agency (FEMA). Floodway maps and the FIS, if available for the community, must be used. Areas along nontidal streams that do not have FEMA delineations as described above are subject to regulation by this chapter and the state.

§ 46-15. Types.

A community may have one (1) or more of the following floodplain zones:

- A. Nontidal floodplains consist of the floodway and the floodway fringe. Nontidal floodplains may have detailed engineering study data, profiles and water surface elevations or may have approximate delineations only.
- B. Tidal floodplains consist of areas subject to coastal or tidal flooding by the one-hundred-year flood. These areas are flooded due to high tides, hurricanes, tropical storms and steady on-shore winds.

§ 46-16. Floodplain boundaries.

- A. Floodplain Zone determination. The local permitting official will determine the floodplain zone in which the development activity is proposed using the Floodway Maps and FIS, if available, or, if not, by using the FIRM. Without prior approval from FEMA, the community shall use no other data to enforce floodplain management regulations. Where map boundaries and elevations disagree, elevations prevail, with no approval from FEMA required.
- B. Approximate floodplain determination. For development proposed in the approximate floodplain (no water surface elevations or floodway data provided), the applicant must use the best available information to determine the elevation of the one-hundred-year flood and the extent of the floodway and must delineate these on the site plan submitted for approval. For new subdivisions, the applicant must have the one-hundred-year flood elevations certified by a registered professional engineer based on hydrologic and hydraulic analyses, which include a floodway analysis. For individual lot development, if no data are available, the point-on-the-boundary method may be used. In this method, the distance is scaled

from a reference point at the site to the edge of the one-hundred-year floodplain boundary indicated on the FIRM. An elevation of the one-hundred-year flood is determined at that point by survey.

- C. Unmapped streams. In cases in which development is proposed in the vicinity of unmapped streams, which have no delineated one-hundred-year floodplain, the fifty-foot flood protection setback from the banks of the stream described in § 46-18D shall be used. State permits may be required and applicants are advised to seek a determination from the state.

ARTICLE V

Development Regulations in Floodplain Zones

§ 46-17. Provisions applicable to all development.

In order to prevent excessive flood damage and to allow for the protection of the natural and beneficial floodplain functions, the following provisions shall apply to all development, new construction and substantial improvements to existing structures in all floodplain zones. If a structure is in more than one (1) zone, the more stringent provisions shall apply to the entire structure. The specific requirements contained in Article VI also apply to development in this Article. Any approved development shall comply with all other zoning, environmental, water quality and sanitary regulations, as well as applicable state and federal requirements.

- A. Watercourses. In all floodplain zones, any development which proposes to alter a watercourse must obtain a variance. All conditions for encroachment in the floodway must be met and adverse impacts to aquatic resources must be minimized. Adjacent communities and property owners, FEMA and the Maryland Water Resources Administration must be notified by the applicant before any modification may occur to watercourse.
- B. Wetlands. Encroachment by development into wetlands is not allowed without state and federal permits. It is state and federal policy that disturbance of wetlands shall be avoided. The applicant must demonstrate that no alternatives exist and the encroachment is the minimum necessary. Mitigation may be required by the appropriate regulatory authorities.
- C. Sediment and stormwater management. Any land disturbance permitted in the floodplain must have a stormwater management and sediment and erosion control plan as required by state and local regulations. The plan must include design of land contours that will not increase surface water runoff onto neighboring properties. Ground cover must be established immediately after disturbance, and a plan for permanent plantings, including trees, should provide for adequate

vegetative cover within the flood protection setback from watercourses to prevent erosion.

§ 46-18. Nontidal and tidal floodplain zones.

A. General. Development may not occur in the floodplain where alternative locations exist due to the inherent hazards and risks involved. Before a permit is issued, the applicant shall demonstrate that new structures cannot be located out of the floodplain and that encroachments onto the floodplain are minimized.

B. Elevation requirements for new and substantially improved structures.

(1) Residential structures. All new or substantially improved residential structures, including manufactured homes, shall have the lowest floor elevated to or above the flood protection elevation. Basements are not permitted. In nontidal floodplains, horizontal expansions which increase the footprint and that are less than substantial shall also have the lowest floor elevated to or above the flood protection elevation. The elevation of the lowest floor shall be certified by a registered surveyor or professional engineer on the elevation certificate, after the lowest floor is in place. Enclosures below the flood protection elevation must be constructed with water-equalizing vents to meet the specifications of § 46-22. Improvements in tidal floodplains which are less than substantial shall be constructed to minimize damage during flooding or shall be elevated to the greatest extent possible.

(2) Nonresidential structures.

(a) Excluding structures as may be permitted in § 46-26, all new or substantially improved nonresidential structures shall either be elevated as set forth above for residential structures or shall be floodproofed. Horizontal expansions in the nontidal floodplain which increase the footprint and that are less than substantial shall also have the lowest floor elevated to or above the flood protection elevation. State regulations do not allow basements or the floodproofing option for new nonresidential structures in nontidal floodplains.

(b) Floodproofing designs must ensure that areas below the flood protection elevation are watertight, with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If the floodproofing option is chosen, a floodproofing certificate must be completed by a registered professional engineer or architect who shall review the

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design and specifications and certify that the nonresidential structure will meet this standard.

C. Flood protection setback requirement.

- (1) A minimum one-hundred-year flood protection setback shall be maintained from the edge of the banks of any watercourse delineated as having a floodplain on the Floodway Map or FIRM, except where the setback may extend beyond the floodplain. To prevent erosion, natural vegetation shall be maintained in this area. Where natural vegetation does not exist along the watercourse, and conditions for replanting are suitable, high priority shall be given to planting trees in the setback area to stabilize banks and to enhance aquatic resources.
- (2) A minimum fifty-foot flood protection setback shall be maintained from the top of the bank of any stream which has no designated floodplain. Natural vegetation shall be maintained and, if needed, trees planted.
- (3) Within the Chesapeake Bay Critical Area, a critical area buffer exemption will exempt proposed development from the flood protection setback requirement. However, new construction is prohibited within the reach of mean high tide.
- (4) The local permitting official may consider a variance based on hardship if the applicant demonstrates that it is impossible to accommodate any development without encroachment into the flood protection setback area. The variance shall be the minimum necessary and shall be made only after due consideration is given to varying other siting standards, such as side, front and back lot line setbacks. Necessary public works and temporary construction may be exempted from this section.

D. Subdivision requirements.

- (1) To achieve long-term flood damage avoidance and protection of the natural and beneficial floodplain functions, creation of any new flood-prone building sites shall not be encouraged in any proposed subdivisions, regardless of size, number of lots and location.
- (2) Within proposed subdivisions, the undeveloped floodplain areas and their natural vegetation shall be preserved to the extent possible and dedicated to natural buffer areas, open space, recreation and similar compatible uses by deed restriction, restrictive covenants or donation to a land trust. At a minimum, the area preserved shall include the flood protection setback area and, to the greatest extent possible, other floodplain area. Steep slopes and forested areas adjacent to watercourses shall also be given high priority for preservation.

- (3) All other provisions of this Article and Article VI apply to subdivisions. The local permitting official may specify additional provisions in the plan review.
- E. Nontidal floodplains. In proposed subdivisions in nontidal floodplains, each lot platted must have a suitable building site outside the floodplain. Consideration must be given to clustering development out of the floodplain. The flood protection setback requirement of Subsection D shall be met. An access road at or above the elevation of the one-hundred-year flood shall be provided.
- F. Tidal floodplains. Proposed subdivisions in tidal floodplains shall be designed to develop the highest natural land available before floodplain lots are platted. The flood protection setback requirement of Subsection D shall be met. High priority should be given to clustering development out of the floodplain while preserving the low-lying land and forested areas in natural vegetation.

§ 46-19. Floodways.

A. General.

- (1) Floodways shall be preserved to carry the discharge of the one-hundred-year flood. Floodways present increased risks to human life and property because of their relatively faster and deeper flowing waters. Fill shall not be permitted. New structures shall not be permitted. New development shall not be permitted in the floodway where alternatives exist elsewhere or if any increase in water surface elevations will result from the one-hundred-year flood.
 - (2) Any development in the floodway which may result in any increase in water surface elevations or change to the floodway must be submitted to FEMA for a conditional letter of map revision. Hydrologic and hydraulic analyses based on existing floodway models and performed in accordance with standard engineering practices and certified by a registered professional engineer must be submitted. Failure to receive this letter shall be grounds for denial of the permit.
 - (3) An alternative analysis must be prepared for any development in the floodway before a permit may be issued. The provisions of § 46-18 above, as well as § 46-19 apply to floodways.
- B. Alternative analysis requirement. Before a permit may be issued, an applicant shall submit an alternative analysis which demonstrates that:

- (1) No reasonable alternatives exist outside the floodway;

- (2) Encroachment in the floodway is the minimum necessary;
 - (3) The development will be designed to withstand the one-hundred-year flood without significant damage; and
 - (4) The development will not increase downstream or upstream flooding or erosion.
- C. Existing structures. Existing structures in the floodway shall be substantially improved only by variance and if they can comply with this chapter without increasing the footprint. Minor additions (less than substantial) must be elevated to the flood protection elevation on pilings or columns. In the event of substantial damage or replacement, the applicant shall submit an alternative analysis to determine if the structure can be relocated to a less hazardous site. Where replacement structures cannot be relocated, they shall be limited to the footprint of the previous structure and must comply with the elevation requirements of § 46-18B of this chapter. Permits for incremental improvements and additions shall be tracked by the local permitting official, and if cumulative improvements constitute substantial improvement, no further permits may be issued unless the structure conforms to the provisions of this chapter.
- D. Maintenance of natural channel. The natural watercourse shall be maintained for protection of aquatic resources. A variance is required for alteration of watercourses. Any variance issued must assure that the conditions for encroachment in the floodway are met, adverse impacts to aquatic resources are minimized and the public good outweighs the adverse impacts. The provisions of Article V pertaining to altering a watercourse must be met.
- E. Obstructions. Structures or fill which may impede, retard or change the direction of the flow of floodwaters or any materials that may be carried downstream to cause damage shall not be placed below the flood protection elevation. Fences, except two-wire fences, shall not be placed in the floodway.

ARTICLE VI

Specific Requirements

§ 46-20. Applicability.

In addition to the requirements outlined in Article V, the following specific requirements must be applied.

§ 46-21. Placement of buildings and materials.

In general, buildings and accessory structures should be located entirely out of the floodplain, out of the flood protection setback or on land that is least susceptible to flooding. All structures permitted in the floodplain shall be oriented so as to offer the least resistance to the flow of floodwaters. Materials which are buoyant, flammable, explosive, hazardous to health or which, at times of flooding, may be injurious to human, animal or plant life shall not be stored below the flood protection elevation.

§ 46-22. Enclosures below lowest floor.

- A. Buildings which have been elevated and have fully enclosed areas below the flood protection elevation, as well as garages and accessory structures which are not elevated (§ 46-26), shall be constructed with water-equalizing vents which meet or exceed the following standards:
- (1) A minimum of two (2) openings on different walls having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;
 - (2) The bottom of all openings shall be no higher than one (1) foot above grade; and
 - (3) Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters to equalize hydrostatic forces on the walls.
- B. Fully enclosed areas below the flood protection elevation shall be used solely for parking of vehicles, access to the building or storage. If such areas are enclosed, a nonconversion agreement, as described in §46-11, must be signed by the applicant.

§ 46-23. Manufactured homes and manufactured home parks.

- A. Proposed manufactured homes and manufactured home parks are prohibited in the coastal high hazard area and in the floodway. In other floodplain zones, all new, replacement or substantially improved manufactured homes, whether in a manufactured home park or not, shall comply with § 46-18B of this chapter.
- B. Methods of anchoring shall include use of over-the-top and frame ties to ground anchors. Pilings or columns shall be used to maintain storage capacity of the floodplain. Concrete block support pilings must be reinforced by placing reinforcing bars inside and extending them into the footing, filling the hollows with cement and using mortar to cement the blocks together. FEMA Publication

85, Manufactured Home Installation in Flood Hazard Areas, should be consulted for specific recommendations.

- C. Manufactured homes repaired or replaced because of substantial damage due to flooding or other causes are considered to be new structures and must fully comply with § 46-18B.
- D. Owners of manufactured home parks or subdivisions that are partially or fully within the floodplain must file an evacuation plan with the local emergency management agency. In nontidal floodplains, a flood-free access road shall be provided in all new manufactured home parks and subdivisions.

§ 46-24. Anchoring.

All structures shall be firmly anchored in accordance with acceptable engineering practices to prevent flotation, collapse and lateral movement during flooding. All air ducts, large pipes and storage tanks located below the flood protection elevation shall be firmly anchored to resist flotation.

§ 46-25. Utilities.

- A. Electric. All electric utilities to the building side of the meter, both interior and exterior to the building, are regulated by this chapter. Distribution panel boxes must be at least two (2) feet above the flood protection elevation. All outlets and electrical installations, such as heat pumps, air conditioners, water heaters, furnaces, generators and distribution systems, must be installed at or above the flood protection elevation.
- B. Plumbing. Toilets, sinks, showers, water heaters, pressure tanks, furnaces and other permanent plumbing installations must be installed at or above the flood protection elevation.
- C. Gas. Gas meters, distribution lines and gas appliances must be installed at or above the flood protection elevation.
- D. Water supply and sanitary facilities. Water supply distribution and sanitary disposal collection systems must be designed to minimize or eliminate the infiltration of floodwaters into the systems or discharges from the systems into floodwaters and shall be located and constructed so as to minimize or eliminate flood damage. On-site sewage disposal systems shall meet these same standards.

§ 46-26. Accessory structures and garages.

- A. Where feasible, accessory structures and garages should be located out of the floodplain or elevated to or above the flood protection elevation. When these measures are not feasible, the following apply:
- (1) The floor of the structure must be at or above grade;
 - (2) The structure must be located, oriented and constructed so as to minimize flood damage; and
 - (3) The structure must be firmly anchored to prevent flotation.
- B. Attached garages. A garage attached to the main structure shall be elevated to the greatest extent possible, but may be permitted as an exemption to the strict elevation requirement if it is used solely for parking of vehicles, storage or building access and is no more than six hundred (600) square feet in area. Attached garages must meet the venting requirements of § 46-22, have all interior walls, ceilings and floors below the flood protection elevation unfinished and have no machinery or electric devices or appliances located below the flood protection elevation. A nonconversion agreement, as described in § 46-11, must be signed by the property owner stating that the garage may never be used for human habitation without first becoming fully compliant with this chapter.
- C. Detached garages and accessory structures.
- (1) An accessory structure or detached garage may be permitted as an exemption to the elevation requirement if it is less than three hundred (300) square feet, used solely for parking of vehicles and limited storage, meets the venting requirements of § 46-22, has all interior wall, ceiling and floor elements below the flood protection elevation unfinished and has no machinery, electric devices or appliances located below the flood protection elevation. A nonconversion agreement must be signed by the property owner.
 - (2) An accessory structure or a detached garage between three hundred (300) square feet and six hundred (600) square feet may be permitted below the flood protection elevation only by a conditioned permit described in § 46-11.
 - (3) An accessory structure or garage larger than six hundred (600) square feet in area must be elevated properly or be able to meet all applicable requirements under the variance procedure in § 46-29 of this chapter.

§ 46-27. Recreational vehicles.

- A. Recreational vehicles located within the floodplain may be exempted from the elevation and anchoring requirements, provided that they are:
 - (1) Located on the site less than one hundred eighty (180) consecutive days per year;
 - (2) Fully licensed and ready for highway use; and
 - (3) Properly permitted.
- B. A recreational vehicle is ready for highway use if it is on its wheels and jacking system, is attached to the site only by quick-disconnect-type utilities and securing devices and has no permanently attached additions. If it cannot meet all of these criteria, the recreational vehicle must be considered a manufactured home and is subject to the elevation and construction standards of this chapter.

§ 46-28. Fill.

- A. Fill is discouraged because storage capacity is removed from floodplains. Other methods of elevating structures should be considered first and fill used only if other methods are not feasible. Fill may not be placed in the floodway. Fill may not be used for structural support in coastal high hazard areas. Fill may not be placed in tidal or nontidal wetlands without the required state and federal permits.
- B. Fill must consist of soil and rock materials only. Dredged material may be used as fill only upon certification of suitability by a registered professional geotechnical engineer. Landfills, rubble fills, dumps and sanitary fills are not permitted in the floodplain.
- C. Fill used to support structures must be compacted to ninety-five percent (95%) of the maximum density obtainable by the Standard Proctor Test (ASTM Standard D-698), and its suitability to support structures certified by a registered professional engineer. Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.
- D. The use of fill shall not increase flooding or cause drainage problems on neighboring properties.

ARTICLE VII
Variances

§ 46-29. Reasons for granting.

- A. The Perryville Board of Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of this chapter. Conditions may be attached to the variance action, and variance actions must be consistent with sound floodplain management. Variances may not be issued except as specified below, nor shall variances be issued for any encroachment in floodways if any increase in the one-hundred-year flood levels will result.
- B. Variances shall only be issued upon:
 - (1) A showing of good and sufficient cause;
 - (2) A determination that failure to grant a variance would result in exceptional hardship (other than economic) to the applicant; and
 - (3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud or victimization of the public or conflict with existing local and state laws or ordinances.
- C. The variance action shall be the minimum necessary, considering the flood hazard, to afford relief. In considering a variance action, comments from the State Coordinating Office of the Water Resources Administration must be taken into account and maintained with the permit file.

§ 46-30. Conditions.

- A. Variances may not be granted for the following:
 - (1) Placement of fill or any development in the floodway if any increase in flood levels would result; or
 - (2) New buildings in the floodway.
- B. For any variance issued, a letter shall be sent to the applicant indicating the terms and conditions of the variance, the increased risk to life and property in granting the variance and the increased premium rates for National Flood Insurance coverage. The applicant shall be notified, in writing, of the requirement for recordation of these conditions on the deed or memorandum of land restriction prior to obtaining a permit and of the need to secure all necessary permits as

conditions for granting a variance. The memorandum is described in §§ 3-102 and 3-203 of the Real Property Article of the Annotated Code of Maryland.

- C. The local permitting official shall maintain a record of all variance actions and the justification for their issuance, as well as all correspondence. This record must be submitted as a part of the biennial report to FEMA, and be available for periodic review. The number of variance actions should be kept to a minimum.

§ 46-31. Functionally dependent uses.

Variations may be issued for new construction and substantial improvements for the conduct of a functionally dependent use. A functionally dependent use cannot perform its intended purpose unless it is located or carried out in close proximity to water. It 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. The variance may be issued only upon sufficient proof of the functional dependence. The provisions of §§ 46-29 and 46-30 must be met, and the structure must be protected by methods that minimize flood damage up to the flood protection elevation and must create no additional threats to public safety. This may require methods of wet floodproofing which allow the structure to flood without significant damage. Methods of floodproofing must not require human intervention.

ARTICLE VIII
Effect; Amendments

§ 46-32. Effective date; subsequent amendments.

This chapter is hereby enacted and shall become effective November 26, 1991. this chapter shall be amended as required by the Federal Emergency Management Agency, 44 Code of Federal Regulations. All subsequent amendments to this chapter are subject to approval of the Federal Emergency Management Agency and the Maryland Department of Natural Resources.