



Delaware River Basin Commission

FLOOD PLAIN REGULATIONS

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Delaware River Basin Commission



DRBC Flood Plain Regulations

- Authority
- Regulations
- Enforcement

Delaware River Basin Commission

- ❑ Founded in 1961
- ❑ Five Members:
 - Delaware
 - New Jersey
 - Pennsylvania
 - New York State
 - Federal Government



President Kennedy and the governors of Pennsylvania, Delaware and New Jersey at a ceremonial signing of the Delaware River Basin Compact on Nov. 2, 1961 in the White House.



Delaware River Basin Compact

Article 6 – Flood Protection:

Section 6.1 General Powers

Section 6.2 Flood Plain Zoning

Section 6.3 Flood Lands Acquisition

Section 6.4 Flood and Stream Stage Warnings and Posting



Delaware River Basin Compact

Section 6.1 General Powers. The commission may plan, design, construct and operate and maintain projects and facilities, as it may deem necessary or desirable for flood damage reduction.

It shall have power to operate such facilities and to store and release waters on the Delaware River and its tributaries and elsewhere within the basin, in such manner, at such times, and under such regulations as the commission may deem appropriate to meet flood conditions as they may arise.



Delaware River Basin Compact

6.2 Flood Plain Zoning.

(a) The commission shall have power to adopt, amend and repeal recommended standards, in the manner provided by this section, relating to the nature and extent of the uses of land in areas subject to flooding by waters of the Delaware River and its tributaries.

Such standards shall not be deemed to impair or restrict the power of the signatory parties or their political subdivisions to adopt zoning and other land use regulations not inconsistent therewith.



Delaware River Basin Compact

6.2 Flood Plain Zoning.

(b) The commission may study and determine the nature and extent of the flood plains of the Delaware River and its tributaries. Upon the basis of such studies, it may establish encroachment lines and delineate the areas subject to flood, including a classification of lands with reference to relative risk of flood and the establishment of standards for flood plain use which will safeguard the public health, safety and property.



Delaware River Basin Compact

6.3 Flood Lands Acquisition. The commission shall have power to acquire the fee or any lesser interest in lands and improvements thereon within the area of a flood plain for the purpose of restricting the use of such property so as to minimize the flood hazard, converting property to uses appropriate to flood plain conditions, or preventing unwarranted constrictions that reduce the ability of the river channel to carry flood water.

Any such action shall be in accord with the standards adopted and promulgated pursuant to Section 6.2.



Delaware River Basin Compact

6.4 Flood and Stream Stage Warnings and Posting.

The commission may cause lands particularly subject to flood to be posted with flood hazard warnings, and may from time to time cause flood advisory notices to be published and circulated as conditions may warrant.



DRBC Flood Plain Regulations

DELAWARE RIVER BASIN COMMISSION
Administrative Manual - Part III

BASIN REGULATIONS - FLOOD PLAIN
REGULATIONS

Adopted November 10, 1976
Effective January 1, 1977



DRBC Flood Plain Regulations

- Utilized in reviewing certain categories of water-related projects pursuant to Section 3.8 of the Compact.

- DRBC Rules of Practice and Procedure:

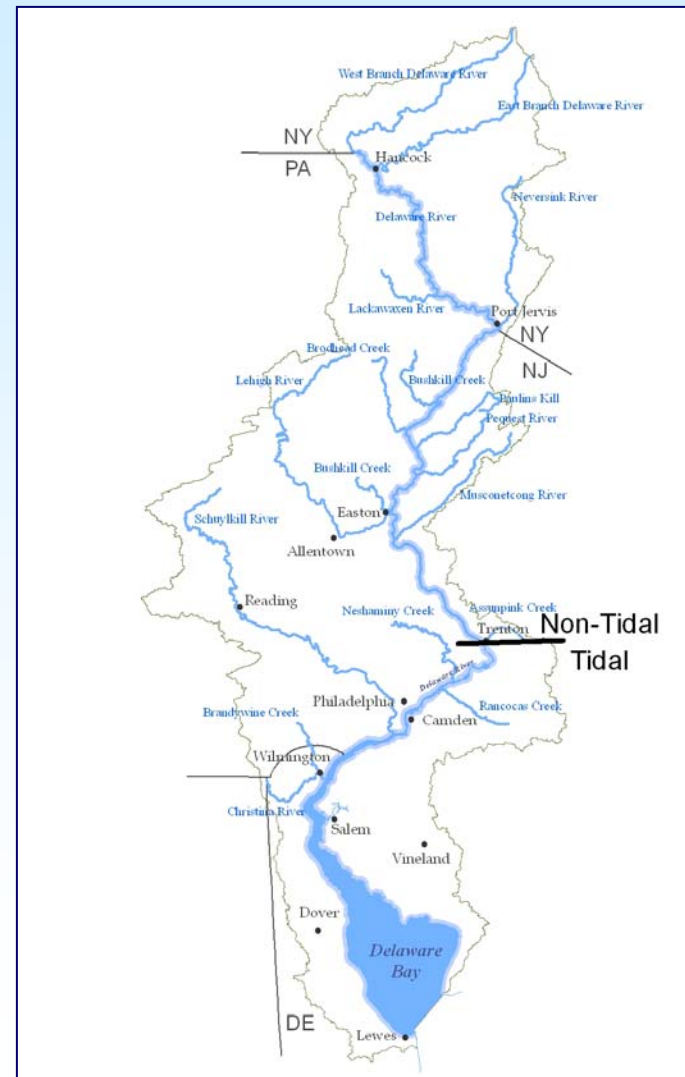
§2.3.5 Classification of Projects for Review Under Section 3.8

§2.3.5 B.9 “Among these are” projects that substantially encroach upon the stream or upon the 100-year flood plain of the Delaware River or its tributaries.

§2.3.5 B.16. “Among these are” State and local standards of floodplain regulation.

DRBC Flood Plain Regulations

- Designed as minimum compliance standards to be followed by local units of government in the promulgation of flood plain regulation ordinances.
- Regulations apply to the non-tidal portions of the Delaware River and its tributaries.





DRBC Flood Plain Regulations

“Major tributary” means the main stem of the following streams:

Pennsylvania: Brandywine Creek, Brodhead Creek, Big Bushkill Creek, Lackawaxen, Lehigh, Schuylkill, Neshaminy

New York: East Branch Delaware River, Mongaup, Neversink, West Branch Delaware River

Delaware: Brandywine Creek, Cristina

New Jersey: Assunpink, Musconetcong, Paulins Kill, Rancocas, Pequest



Types of Projects and Jurisdiction

Types of Projects:

Class I

Class II

Class I Projects:

- A. All projects subject to review by the Commission under Section 3.8 of the Compact and regulations thereunder.
- B. State and local standards of flood plain regulation.



Class I Projects

Section 3.8 of Compact

§2.3.5 (A, B, C, & D) of Rules of Practice and Procedure

Typical Section 3.8 Projects:

- Water withdrawals
- Impoundments
- Wastewater Discharge
- Hydroelectric power projects
- Electric generating or cogenerating facilities
- State and local standards of floodplain regulation



Class II Projects

Class II Projects: include all projects other than Class I projects, in non-tidal areas of the basin, which involve either:

A. a development of land, either residential or non-residential within a flood hazard area which:

1. includes one or more structures covering a total land area in excess of 50,000 square feet; or
2. contains in excess of 25 residential building lots or 25 dwelling units as part of an integrated development plan whether or not such development is included in a single application; or



Class II Projects

B. a development of land in the flood hazard area to mine, manufacture, process, store or dispose of materials which, if flooded, would pollute the waters of the basin or threaten damage to off-site areas, including, without limitation thereto, materials which are poisonous, radioactive, biologically undesirable or floatable.



Administration

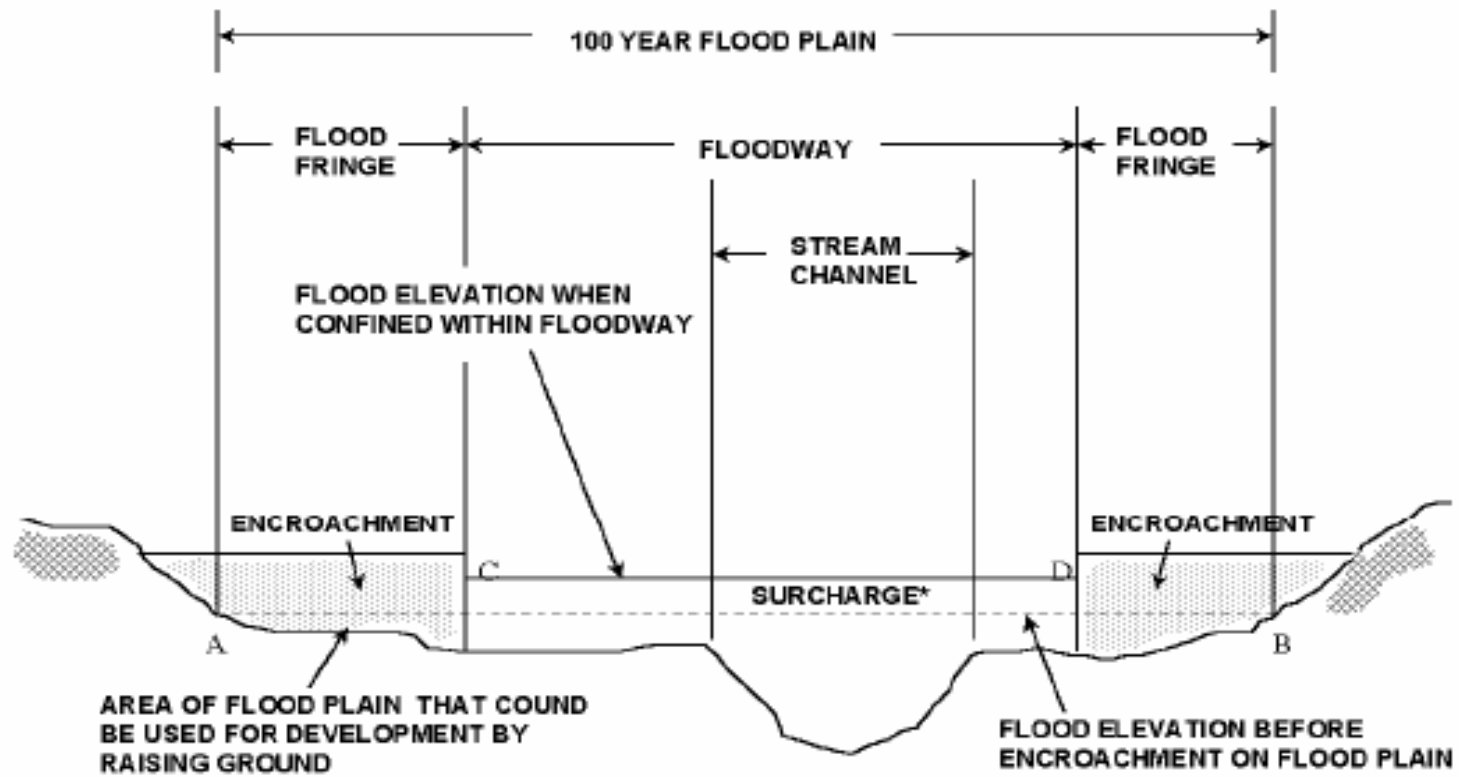
- A. Class I projects shall be subject to review and approval by the Commission.
- B. Class II projects shall be subject to review and approval by a **duly empowered state or local agency**; and if there be no such state or local agency at any time on and after January 1, 1978, and only during such time, the Commission may review any such project which has been identified by the Executive Director as having special flood hazards, and: (i) is located along the mainstream Delaware River or a major tributary thereof, or (ii) an agency of a signatory party requests such review.

Definitions

"Floodway" means the channel of the watercourse and those portions of the adjoining floodplains which are reasonably required to carry and discharge the regulatory flood.

For this purpose the limit of the floodway shall be established by allowing not more than a one-foot rise of the water surface elevation of the regulatory flood as a result of encroachment. Wherever practical, equal conveyance reduction from each side of the flood plain shall be used. (See Figure 1)

FIGURE 1



AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND

FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN

LINE A - B IS THE FLOOD ELEVATION BEFORE ENCROACHMENT
LINE C - D IS THE FLOOD ELEVATION AFTER ENCROACHMENT

*SURCHARGE NOT TO EXCEED 1.0 FOOT (FIA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE

Figure 1, DRBC Flood Plain Regulations (1976)



Definitions

"Flood fringe" means that portion of the flood hazard area outside the floodway.

"Flood hazard area" means the area inundated by the regulatory flood.

"Flood plain" means the area adjoining the channel of a stream which has been or hereafter may be covered by flood water.

"Official flood plain map" means a map showing the flood plain area of a community prepared pursuant to the National Flood Insurance Act, or a map recognized by the Executive Director as meeting equivalent hydraulic or engineering criteria.



Floodway - prohibited

Except as permitted by special permit, the following uses are prohibited:

1. Erection of any structure for occupancy at any time by humans or animals.
2. Placing, or depositing, or dumping any spoil, fill or solid waste.
3. Stock piling or disposal of pesticides, domestic or industrial waste, radioactive materials, petroleum products or hazardous material which, if flooded, would pollute the waters of the basin.
4. The storage of equipment or of buoyant materials, except for purposes of public safety.



Floodway - permitted

Within the floodway, the following uses are permitted to the extent that they do not require structures, fill or storage materials or permanently installed equipment, and do not adversely affect the capacity of the floodway:

1. Agricultural uses such as general farming, livestock and dairy farming, horticulture, truck farming, sod farming, forestry, wild crop harvesting, and normal operating practices associated therewith.
2. Industrial-commercial uses such as loading areas, parking areas and airport landing strips.



Floodway - permitted

3. Private and public recreational uses such as golf courses, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails.
4. Uses such as lawns, gardens, parking areas and play areas.



Flood Fringe - **prohibited**

Except as permitted by special permit, the following uses are prohibited:

1. Stock piling or disposal of pesticides, domestic or industrial waste, radioactive materials, petroleum products or hazardous material which, if flooded, would pollute the waters of the basin.
2. Any use which will adversely affect the capacity of channels or floodways of any tributary to the main stream, drainage ditch, or any other drainage facility.



Flood Fringe - permitted

Within the flood fringe, the following uses are permitted:

1. Any use permitted in the floodway.
2. Residences and other structures constructed so that the first floor, including basement, is above the Flood Protection Elevation.

When fill is used, the finished fill elevation shall be no lower than the Flood Protection Elevation for the particular area and shall extend at least 15 feet beyond the limits of any structure or building erected thereon.



Definitions

"Structure" means any assembly of material above or below the surface of land or water, including but not limited to, buildings, dams, fills, levees, bulkheads, dikes, jetties, embankments, causeways, culverts, roads, railroads and bridges.

"Flood protection elevation" means one foot above the elevation of the flood that has a one percent chance of occurring in any one year (The 100-year flood).



Floodway – special permit

Within the floodway, the following uses by special permit may be authorized:

1. Uses or structures accessory to open space use.
2. Circuses, carnivals and similar transient enterprises.
3. Drive-in theaters, signs and billboards.
4. Extraction of sand, gravel and other non-toxic materials.
5. Marinas, boat liveries, docks, piers, wharves and water control structures.
6. Fish hatcheries.
7. Railroads, streets, bridges, utility transmission lines and pipelines.



Flood Fringe – special permit

Within the flood fringe, the following uses by special permit may be authorized:

1. Non-residential uses generally.

Structures other than residences shall ordinarily be elevated as herein provided but may in special circumstances be otherwise flood proofed to a point above the Flood Protection Elevation.



Flood Fringe – special permit

2. Commercial uses.

Commercial structures shall be elevated so that no first floor or basement floor is below the Flood Protection Elevation, or such structures may be flood proofed to the Flood Protection Elevation. Accessory land uses, such as yards, railroad tracks and parking lots may be at lower elevations.

However, a permit for such facilities to be used by the general public shall not be granted in the absence of a flood warning system, if the area is inundated to a depth greater than two feet or subject to flood velocities greater than four feet per second upon the occurrence of the Regulatory Flood.



Flood Fringe – special permit

3. Manufacturing and industrial uses.

Manufacturing and industrial buildings, structures, and appurtenant works shall be elevated so that no first floor or basement floor is below the Flood Protection Elevation; or such structures may be flood proofed to the Flood Protection Elevation.

Measures shall be taken to minimize flood water interference with normal plant operations especially for streams having protracted flood durations. Certain accessory land uses as yards and parking lots may have lesser protection subject to the flood warning requirements setout in (2) above.



Flood Fringe – special permit

4. Utilities, railroad tracks, streets and bridges.

Public utility facilities, roads, railroad tracks and bridges shall be designed to minimize increases in flood elevations and shall be compatible with local comprehensive flood plain development plans to the extent applicable.

Protection to the Flood Protection Elevation shall be provided where failure or interruption of these public facilities would result in danger to the public health or safety, or where such facilities are essential to the orderly functioning of the area. Where failure or interruption of service would not endanger life or health, a lesser degree of protection may be provided for minor or auxiliary roads, railroads or utilities.



Flood Fringe – special permit

5. Water supply and waste treatment.

No new construction, addition or modification of a water supply or waste treatment facility shall be permitted unless the lowest operating floor of such facility is above the Flood Protection Elevation, or the facility is floodproofed according to plans approved by the Commission, nor unless emergency plans and procedures for action to be taken in the event of flooding are prepared. Plans shall be filed with the Delaware River Basin Commission and the concerned state or states.

The emergency plans and procedures shall provide for measures to prevent introduction of any pollutant or toxic material into the flood water or the introduction of flood waters into potable supplies.



Technical Standards

Standards used by state and local governments shall conform in principle to Commission standards but may vary in detail provided that resulting flood plain use will not be less restrictive than would result from the application of Commission standards.

The Commission will review proposed state and local flood plain regulations to determine their compliance with Commission standards.



Enforcement

Where: (i) the flood hazard at the site is clear, present and significant, or the local government having jurisdiction has special flood hazard areas identified pursuant to the National Flood Insurance Act; and (ii) the site is not subject to an approved state or municipal regulatory system having the same or similar effect on the flood hazard as this regulation, the Commission may condition its approval on any local government project under Section 3.8 of the Compact upon the adoption and enforcement of flood plain regulations, approved hereunder, by the state or local government having jurisdiction.



Enforcement

Prior Non-Conforming Structures. A structure which was lawful before the adoption of this regulation but which is not in conformity with the provisions hereof, shall be subject to the following conditions:

A. A non-conforming structure in the floodway may not be expanded, except that it may be modified, altered or repaired to incorporate flood proofing measures provided such measures do not raise the level of the 100-year flood.

B. A non-conforming structure in the floodway which is destroyed or damaged by any means, including a flood, to the extent of 50 percent or more of its market value at that time, may not be restored, repaired, reconstructed or improved except in conformity with the provisions of these regulations.



Recap:

1. Commission has authorities under Compact:
 - a) may plan, design, construct and operate and maintain flood damage reduction projects and facilities
 - b) shall have power to adopt, amend and repeal recommended standards
 - c) may study and determine the nature and extent of the flood plains of the Delaware River and its tribs.
 - d) may establish encroachment lines and delineate the areas subject to flood
 - e) shall have power to acquire the fee or any lesser interest in lands and improvements within the area of a flood plain
 - f) may cause lands particularly subject to flood to be posted with flood hazard warnings



Recap:

2. Rules of Practice and Procedure

3. Floodplain Regulations for Non-tidal Delaware and tributaries