**ENVIRONMENTAL PROTECTION**

**LAND USE MANAGEMENT**

**Flood Hazard Area Control Act Rules, N.J.A.C. 7:13**

**Adopted Emergency Amendments and Concurrent Proposed Amendments: N.J.A.C. 7:13-1.2, 3.2 through 3.6, 7.2, 8.7, 8.8, 9.2, 10.4, 11.5, 11.6 and Appendix 2**

Emergency Amendments Adopted and Concurrent Proposed Amendments Authorized by: Bob Martin, Commissioner, Department of Environmental Protection

Filed:

Gubernatorial Approval:

Authority: N.J.S.A. 58:16A-50 et seq.; 58:10A-1 et seq.; 58:11A-1 et seq.; 13:20-1 et seq.; 13:1D-1 et seq.; and 13:1D-29 et seq.

Calendar Reference: See summary below for explanation of exception to calendar requirement

DEP Docket Number: 01-13-01

Emergency Amendments Effective Date:

Emergency Amendments Expiration Date:

A public hearing concerning this proposal will be held as follows:

Thursday, March 7, 2013, 5:30 P.M.

City of Long Branch Municipal Building

Council Chambers

344 Broadway, 2nd Floor

Long Branch, NJ 07740

Submit written comments by (30 days from publication) electronically at http://www.nj.gov/dep/rules/comments.

The Department of Environmental Protection (Department) encourages electronic submittal of comments. In the alternative, comments may be submitted on paper to:

Gary J. Brower, Esq.

Attention: DEP Docket No. 01-13-01

Office of Legal Affairs

Department of Environmental Protection

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This emergency adoption and concurrent proposal may be viewed or downloaded from the Department's website at http://www.nj.gov/dep/rules.

This is an emergency adoption and concurrent proposal of amendments to the Flood Hazard Area Control Act (FHACA) rules, N.J.A.C. 7:13. The amendments enable the use of the best available flood elevation data to determine the flood hazard area design flood elevation for a given site, including FEMA's recently released advisory flood maps for New Jersey's coast. The amendments also incorporate FEMA mapping issued as final (effective) that is developed in partnership with the Department such that it depicts the Department's flood hazard area design flood elevation and floodway limit; allow flood proofing measures to be used instead of elevating structures in certain, limited situations; and ensure consistency between the Department's standards for elevating buildings in flood hazard areas with the building standards of the Uniform Construction Code promulgated by the Department of Community Affairs at N.J.A.C. 5:23. The Department has determined that these amendments are necessary in view of

the significant adverse social, economic and environmental impacts of recent storms, including Superstorm Sandy and Tropical Storm Irene, and because the Department determined that certain aspects of the FHACA rules were likely to impede activities that must be undertaken to alleviate such adverse impacts.

These amendments have been adopted on an emergency basis and became effective upon acceptance for filing by the Office of Administrative Law (see N.J.S.A. 52:14B-4(c) as implemented by N.J.A.C. 1:30-6.6(b)). Concurrently, the provisions of this emergency adoption are proposed for readoption pursuant to the rulemaking requirements of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. The readopted amendments will be effective upon acceptance for filing by the Office of Administrative Law (N.J.A.C. 1:30-6.5(b)) if filed on or prior to the expiration date of the emergency rules.

Because it is an emergency rule published in accordance with N.J.S.A. 52:14B-4(c), this rulemaking is excepted from the rulemaking calendar requirement under N.J.A.C. 1:30-3.3(a)3.

The agency emergency adoption and concurrent proposal follows:

## Summary

New Jersey periodically experiences severe flood events due to its climate, topography and location along the Atlantic seaboard. Given the State's dense population and extensive level of existing development within flood hazard areas, this periodic flooding causes severe, repetitive and deleterious social and economic impacts. Flooding has and continues to be the most frequent, destructive and costly natural hazard in New Jersey and is responsible for the

large majority of disaster-related damage reported within the State. According to the 2011 State Hazard Mitigation Plan, floods present the highest natural disaster risk to the State with a high expectation of property damage and a near certainty of severe flooding. It is well documented that flooding causes major social disruptions due to the need to relocate flood victims and provide emergency services to affected residents, which necessarily diverts emergency personnel from other essential tasks, as well as the long-term social, economic and emotional impact on residents as a result of damaged or destroyed homes, schools, businesses and infrastructure upon which residents rely. Flooding also presents significant health risks and results in prolonged interruptions to private businesses, reduced access to emergency care and interruption of essential government functions. Improperly built structures can furthermore experience severe and repetitive flood damage, which threatens public safety and results in economic loss and adverse social impacts. Significant damage can also result from collapsed structures and improperly secured structures and materials that are carried along by floodwaters.

New Jersey ranks nationally as having one of the highest number of flood insurance claims annually and ranks high among states in repetitive flood claims, as defined by the National Flood Insurance Program. From 1993 until April 2010, New Jersey experienced 1,241 floods causing more than 1.25 billion dollars in property damage and resulting in 14 deaths and 197 injuries. In each of the last eight years, New Jersey has experienced at least one major disaster declaration from FEMA resulting in millions of dollars of flood damage. In 2011, FEMA made five major disaster declarations in the State, four of which were due to flooding from severe weather events. Recent floods, such as those associated with Tropical Storm Irene in

August 2011, have added significantly to these numbers. Most recently, in October 2012, Superstorm Sandy led the President of the United States to issue a major disaster declaration for all of New Jersey. The most recent estimates for Superstorm Sandy indicate that as many as 38 New Jersey residents lost their lives and that the statewide economic impact of the storm exceeds 37 billion dollars.

Unless structures in flood hazard areas are properly designed, constructed and elevated, they may not withstand future, severe flood events. Additionally, the reconstruction of structures without appropriate flood-proofing, such as constructing the lowest floor of buildings safely above flood elevations, will serve only to further heighten the risk of damage to surrounding structures. Damage also occurs from fallen structures, unsecured materials and other debris carried by floodwaters. In coastal communities, significant damage occurs when buildings and structures are dislodged or become buoyant, and subsequently move with the ebb and flow of floodwaters. These problems are exacerbated by the human activity inevitably associated with New Jersey's status as the most densely populated State in the nation. With over 8.4 million residents in its 8,721 square mile area and approximately 3.8 million residents in flood hazard areas, without swift and immediate action, the State is presented with a risk of severe impacts during the next flood event.

While many measures need to be taken to prevent and mitigate flood damage, one thing that will significantly reduce future flood impacts is the proper reconstruction of structures and elevating buildings to withstand flood events. Employing these measures has the potential to save the State's residents and taxpayers billions of dollars in property damage, economic loss,

and in response and mitigation costs, as well as reducing further loss of life. These standards will also have the benefit to homeowners of reducing flood insurance rates.

Given the above, the Department is concurrently proposing the emergency adopted amendments in order to establish requirements and more efficient procedures for authorizing persons to construct, reconstruct, relocate and elevate buildings and other structures in flood hazard areas or to otherwise flood-proof buildings to avoid and reduce the type and severity of flood damage experienced by many State residents as most recently exemplified by the Superstorm Sandy. This rulemaking is furthermore made in recognition of the current need to timely rebuild damaged structures within New Jersey's coastal communities on a monumental scale.

**FEMA Advisory Base Flood Elevations**

The Federal government, through FEMA, in many places maps the extent (elevation) of the 100-year flood, which is a flood that has a one percent chance of occurring in a given year. Over the past several years, and in cooperation with the Department, FEMA has been undertaking a comprehensive remapping of tidal flood elevations along New Jersey's Atlantic coastline. FEMA's flood elevation models for many coastal communities were developed decades ago using various methodologies that resulted in a patchwork of flood insurance rate maps with a variety of flood elevations. In response to concerns that FEMA's existing flood insurance studies underestimate the extent of tidal flooding in many communities, the Department has partnered with FEMA to develop more accurate coastal flood mapping. Using a

uniform modeling approach, and relying on data collected over the past several decades, FEMA has confirmed that its existing flood mapping along New Jersey's coastline generally underestimates today's actual 100-year flood elevation by approximately one to four feet and, in some circumstances, by as much as eight feet. Many people who constructed a building with its lowest floor at the 100-year flood elevation shown on FEMA's existing flood maps discovered during Superstorm Sandy that their building lies below the actual 100-year flood elevation. These buildings may be subject to greater flood damage potential over time and likely greatly increased flood insurance costs.

Following large storm events, such as Superstorm Sandy, FEMA typically provides any flood mapping currently under development to affected communities in order to support and guide their recovery efforts and help communities to be more resilient to future storms. For this reason, FEMA recently made its most current mapping for the New Jersey coastline and Hudson River area publicly available. These maps, which can be viewed at www.region2coastal.com, have been released on an advisory basis, since FEMA is currently finalizing its wave height analysis for some areas of the coast and has not yet undertaken its regulatory process to make these maps effective. This regulatory process includes public hearings, an appeal process and publication in the Federal Register, as described in more detail below. Advisory Base Flood Elevations (ABFEs) are now available for Atlantic, Bergen, Burlington, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean, and Union Counties. In the majority of cases, these advisory flood maps indicate that the 100-year flood elevation is higher than previously mapped by the Department and FEMA, and in some places significantly so. Accordingly, in order to best

protect public health, safety and welfare, these concurrently proposed amendments provide options to utilize the best available flood elevation data to determine the flood hazard area design flood elevation for a given site, including FEMA's recently released advisory flood maps for New Jersey's coast.

**Definitions (N.J.A.C. 7:13-1.2)**

The definition of "crawl space" is deleted because the term is not used in the amended individual permit requirements for buildings. The definition of "dry flood-proofing" is deleted because its substance is incorporated into the proposed definition for "flood-proofing" as described below. The definition of "FEMA flood insurance study" is amended to include contact information for FEMA. The definition of "FEMA flow rate" is deleted because it is not used in the chapter. A new definition is included for "FEMA 100-year flood elevation" to provide that this flood elevation at a given location is the one most recently released as an effective FEMA base flood elevation, or any more recent advisory or proposed flood elevation, if either is higher than the effective base flood elevation.

A new definition is included for "flood-proofing", which incorporates the substance of the existing definition of "dry flood-proofing" and adds the concept of "wet flood-proofing." Dry flood-proofing generally offers the best protection against flooding, since water is not permitted to enter the structure. However, it can be cost-prohibitive as well as physically impractical to implement. Under this rulemaking, wet flood-proofing is permitted in situations where dry flood-proofing is not practical. The definition of "lowest floor" is amended to clarify that the

lowest floor of a building includes any enclosed area that can be used for permanent or temporary occupation by humans, not including an unfinished, flood resistant enclosure useable solely for building access, storage and/or parking. The amended definition is substantively similar to the definition in the Uniform Construction Code and allows flexibility for such enclosures.

A new definition is included for "multi-residence building" to describe a type of residential building, previously defined as a subset of "public building," which is not eligible for wet flood-proofing. FEMA similarly does not permit residential space to be wet flood-proofed. A new definition is included for "100-year flow rate" to clarify the flow rate used to determine the 100-year flood elevation. The definitions of "repair" and "reconstruct" are amended to reflect the new definitions for "substantial damage" and "substantial improvement," both of which promote consistency with the requirements of the Uniform Construction Code and National Flood Insurance Program. "Substantial damage" refers to a threshold of economic cost to restore a damaged structure, above which the restoration is referred to as a "substantial improvement," which in turn triggers additional design and construction standards necessary to ensure continued public safety.

**Added flexibility for determining the flood hazard area and floodway (N.J.A.C. 7:13-3.2, 3.4, 3.5 and 3.6)**

The Department has mapped the extent of the flood hazard area design flood and floodway along more than 2,500 miles of New Jersey's waters. These flood maps are listed in

Appendix 2 of this chapter and are referred to as Department delineations.

As noted above, FEMA has recently released ABFEs for many communities. In the majority of cases, these advisory flood maps indicate that the 100-year flood elevation is higher than shown on the existing Department delineations, and in some cases significantly so. In light of this new mapping, which incorporates the best available flood elevation data, the Department is proposing to amend the methods that can be used to determine the flood hazard area on a site.

Under the amendments, a distinction is made between Department delineations promulgated prior to (the effective date of the emergency amendments) and Department delineations promulgated on or after (the effective date of the emergency amendments), including delineations promulgated in accordance with new N.J.A.C. 7:13-3.3(c). Since Department delineations promulgated on or after (the effective date of the emergency amendments) represent the best available flood data, the flood hazard area design flood elevation and floodway limits shown on these delineations must be used.

Where a Department delineation was promulgated prior to (the effective date of the emergency amendments), the flood hazard area and floodway limits can be determined using one of two options. Under the first option the Department delineation or FEMA mapping is used, whichever results in a higher flood hazard area design flood elevation and wider floodway limit. For example, if the Department delineation (under Method 1) shows a flood hazard area design flood elevation of 10 feet above sea level and the FEMA mapping (under Method 2) shows an advisory base flood elevation of 13 feet above sea level, the FEMA 100-year flood elevation will be used because it is higher than the Department's flood hazard area design flood elevation.

Under the second option, where a Department delineation was promulgated prior to (the effective date of the emergency amendments), a person may calculate the flood hazard area design flood elevation and floodway limits on a site, performing a localized analysis using site-specific data, which may result in a refinement of the flooding dynamics at the site and produce a more accurate picture of small variations in flood elevations or floodway limits applicable to that particular site.

In the absence of any Department delineation or FEMA mapping for a regulated water, the amended rules continue to allow the use of FEMA flood mapping, provided such mapping is available; or the calculation of the flood hazard area design flood elevation using various methods set forth in subchapter 3; or, in the absence of a Department delineation or FEMA flood mapping, the approximation of the flood hazard area design flood elevation in certain circumstances.

**Incorporation of certain FEMA maps as Department delineations (N.J.A.C. 7:13-3.3)**

The majority of the Department's flood maps were promulgated in the 1970s and 1980s. While there have been a number of minor revisions to these maps over the years, the Department has generally not undertaken large-scale remapping or new mapping of previously unmapped waters since that time. As a result, the Department's maps in some cases underestimate the actual extent of flooding. In order to provide more accurate flood mapping to the public, the Department has been working in cooperation with FEMA to revise many State and Federal flood maps in order to reflect current flooding conditions. In such cases, FEMA has agreed to depict on

the FEMA flood maps the Department's flood hazard area design flood elevation along with the 100-year flood elevation as part of FEMA's flood insurance studies. These new FEMA maps also indicate the limits of both of these flood events as well as the floodway limits. Such mapping has already been prepared along the Delaware River in Mercer, Hunterdon, Warren and Sussex Counties, as discussed further in the summary of Appendix 2 below, and joint mapping for additional areas throughout the State is currently under development. Furthermore, FEMA digitizes its maps and provides electronic copies free of charge on its website. See https://msc.fema.gov. Once these maps become effective under FEMA's map adoption process, individuals can readily identify both the 100-year flood elevation and flood hazard area design flood elevation on one, easily accessible map.

New N.J.A.C. 7:13-3.3(c) provides that the flood hazard design elevation and floodway limits for a regulated water depicted on a FEMA map that includes the Department's flood hazard area design flood elevation and that reflects FEMA's final determination of the 100-year flood elevation (base flood elevation) effective pursuant to 44 CFR 67.10 are incorporated into the FHACA rules as the Department delineation. The Department will publish notice in the New Jersey Register of any flood hazard area design flood elevation and floodway limits so incorporated. The notice shall include any necessary administrative change to the list of delineated waters in Appendix 2.

The regulatory and administrative due process to which FEMA must adhere for new and updated flood insurance studies is set forth in the Code of Federal Regulations and can be summarized as follows. Issuance of proposed maps is governed by 44 CFR Part 66.1(c) and Part

66.5(a) through (d), which require adequate dissemination of proposed maps to affected communities and provision of a 30-day public comment period. FEMA then typically holds a meeting with affected communities to discuss the results of the study, as well as any floodplain management requirements and the next steps of the administrative due process, in accordance with 44 CFR Part 66.5(f). FEMA then, as required by 44 CFR Part 67.4, publishes a notice of revised flood hazards in the Federal Register, notifies affected municipalities of the revised maps by certified mail, publishes notice of proposed flood hazard changes twice in a prominent local newspaper within ten days of the certified notice, and institutes a 90-day appeal period during which communities and individuals may submit comments and technical data to refute the proposed flood hazard changes. FEMA then reviews the submitted data and resolves any submitted technical appeals and other non-technical comments. Finally, pursuant to 44 CFR Part 67.8 through 67.11, FEMA issues a notification of the final flood elevation determinations, known as the Letter of Final Determination, to the community, and publishes a notice of the final determination in the Federal Register. The revised flood elevation becomes effective six months following issuance of the Letter of Final Determination.

**Permits-by-Rule, General Permits and Individual Permits (N.J.A.C. 7:13-7.2, 8.7, 8.8, 9.2, 10.4, 11.5 and 11.6)**

Three permits-by-rule, two general permits and the individual permit standards for buildings are amended to facilitate reconstruction, relocation, elevation and flood-proofing of buildings in flood hazard areas, in accordance with FEMA requirements and New Jersey's

Uniform Construction Code. The amendments require substantially damaged buildings to be properly elevated to help avoid future flood losses, facilitate the elevation and relocation of buildings, and remove restrictions on the height of crawl spaces so that structurally-sound masonry foundations can be constructed where such foundations are permitted in flood hazard areas under the Uniform Construction Code. This rulemaking also allows wet flood-proofing of non-residential buildings where elevating or dry flood-proofing prove to be infeasible.

The application requirements for individual permits refer to flood-proofing requirements in the individual permit building section. The citation to these requirements is amended to reflect recodification of these provisions. Furthermore, references to dry flood-proofing are expanded to cover all flood-proofing under this chapter, and the requirements for a flood-proofing certificate are clarified. The procedures for calculating flood storage displacement for individual permits refer to enclosed areas beneath buildings. The citation to these requirements is amended to reflect recodification of these provisions.

As noted above, the term “multi-residence building” is bifurcated from the definition of “public building.” In order to ensure that “multi-residence building” continue to provide adequate roadway access during flood events, the individual permit requirements for a railroad, roadway or parking area are amended to include both terms. This does not alter the meaning of this section.

**Appendix 2: List of Department Delineated Waters**

Appendix 2 provides a list of Department delineations of regulated waters, organized by

county and municipality. A note is added explaining that Department delineations promulgated on or after (the effective date of the emergency amendments) are indicated with an asterisk, to facilitate the procedure for using Department delineations under N.J.A.C. 7:13-3.2.

Also, as noted in the summary of N.J.A.C. 7:13-3.3 above, this rulemaking incorporates FEMA flood mapping along the main stem of the Delaware River in every municipality of Hunterdon, Warren and Sussex Counties that borders the river. These FEMA maps can be viewed at www.msc.fema.gov. Accordingly, asterisks are added by the names of the affected studied waters in the applicable municipalities in Hunterdon County and in Warren County south of White Township, as well as the remainder of Warren County and three municipalities in Sussex County that border the Delaware River.

**Social Impact**

The concurrently proposed amendments will have a positive social impact in several ways. This rulemaking facilitates the reconstruction and elevation of structures in flood hazard areas to a safer height and incorporates the best available flood mapping. These amendments will help minimize flood damage potential throughout the flood hazard areas of the State and help protect New Jersey's residents from the deleterious impacts of flooding. It is well documented that flooding causes major social disruptions due to the need to relocate flood victims and provide emergency services to affected residents, which necessarily diverts emergency personnel from other essential tasks, as well as the long-term social, economic and emotional impact on residents as a result of damaged or destroyed homes, schools, businesses and infrastructure upon

which residents rely. It is the Department's expectation that the public will experience fewer impacts from periodic flooding as a result of the amendments. The Department therefore believes that the proposed amendments provide social benefit through the protection of public health, safety and welfare as well as the protection of important environmental resources associated with the State's surface waters.

**Economic Impact**

The concurrently proposed amendments will have an overall positive economic impact. Primarily they will help reduce the substantial, long-term economic cost from flood damage. The Department consequently expects the accrual of economic benefits by establishing improved construction standards designed to further reduce loss of life and property as a result of flooding. Use of the best available flood mapping will provide additional protection to New Jersey residents and businesses in flood hazard areas and will help individuals and communities avoid future flood losses. Benefits include increased flood resistance for buildings and infrastructure, reduced risk of property damage and injury to residents from floating or submerged debris during a flood event, reduced impacts from business interruption and additional protection for residents living in elevated structures. Reducing these risks will furthermore result in some direct cost savings, such as reduced flood insurance premiums for individual homeowners, businesses and government entities, as well as reduced need for emergency response and relief spending following a flood event. Furthermore, use of FEMA's new advisory flood maps provides municipalities with additional credit under the National Flood Insurance Program Community

Rating System, which lowers flood insurance premiums, and enables residents to access Increased Cost of Compliance assistance from FEMA, through which individuals can receive monetary assistance to elevate buildings above the Federal minimum elevation in order to comply with state or local building codes. The expansion of permits-by-rule will also reduce the number of individual permit applications prepared by prospective applicants, which will generate a savings in preparation costs and application review fees. Given the above, the Department anticipates that the proposed amendments will result in increased public safety, minimization of property damage, reduced need for relief measures, and reduced costs for permits, and thus will have a net positive economic impact.

**Environmental Impact**

The concurrently proposed amendments will encourage individuals to relocate buildings further from regulated waters and require buildings to be constructed at higher elevations based upon more accurate flood elevation information. The Department anticipates that this will subsequently reduce both the total amount of debris created during flood events that must be disposed of in landfills and the amount of debris and pollutants that commonly enter floodwaters when buildings are inundated. As indicated by Governor Christie in his State of the State address, from Superstorm Sandy alone, as of January 8, 2013 over 2.5 million cubic yards of debris from the storm had been removed with removal continuing. As a result of the storm, nearly 1,400 vessels were either sunk or abandoned. In Mantoloking alone, 58 buildings and eight cars were washed into Barnegat Bay. The amendments are designed to reduce these

impacts in the event of future flooding events. Therefore, the amendments will have a positive environmental impact.

**Federal Standards Statement**

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a comparison with Federal law.

The Department's authority for regulating development within flood hazard areas comes solely from State statute, specifically N.J.S.A. 58:16A-50 et seq., 58:10A-1 et seq., 58:11A-1 et seq. and 13:1D-1 et seq. The Flood Hazard Area Control rules are not promulgated under the authority of, or in order to implement, comply with, or participate in any program established under Federal law or under a State statute that incorporates or refers to Federal laws, Federal standards or Federal requirements. The Federal Emergency Management Agency (FEMA) delineates flood hazard areas in the State for the purposes of the Federal flood insurance program. However, there is no Federal agency or program that directly regulates activities in flood prone areas based on their potential flooding impacts. The Code of Federal Regulations, at 44 CFR Part 60, enables FEMA to require municipalities who participate in the National Flood Insurance Program (NFIP) to adopt certain flood hazard reduction standards for construction and development in 100-year flood plains. However, a community's participation in the NFIP is voluntary, and FEMA does not otherwise regulate land uses in flood hazard areas. Furthermore, the Federal flood reduction standards at 44 CFR Part 60 are administered by local governments.

However, while the amendments do not derive authority from any Federal law or under any State statute that incorporates or refers to Federal laws, standards or requirements, the FHACA rules allow the use of FEMA flood insurance studies in order to determine the extent of the flood hazard area design flood. FEMA periodically updates these studies, in which case the flood elevation at a particular location can change. This would, in turn, alter the extent of the flood hazard area and the elevation at which buildings must be constructed, in cases where an applicant chooses to use a FEMA flood insurance study.

**Jobs Impact**

The concurrently proposed amendments alter the scope of authorization for three permits-by-rule, two general permits and the individual permit standards for elevating, reconstructing, relocating and flood-proofing buildings. Based on the scale of damage that Superstorm Sandy caused to individual homes, multi-family dwellings, businesses and public structures, significant rebuilding and repair will occur in coastal communities over the coming months and years. As a result, the construction and trade industries, as well as the construction-related manufacturing sector are expected to experience a significant and sustained upswing in job creation and/or level of business activity. To the extent that these rules require elevation in whole or in part of a number of buildings that are substantially damaged or which are proposed to be relocated, the rules will add to that job creation and increased intensity of construction-related business activity.

## Agriculture Industry Impact

Pursuant to N.J.S.A. 52:14B-4, the Department has evaluated this rulemaking to determine the nature and extent of the impact of the adopted amendments on the agriculture industry. To the extent that any habitable buildings used in the agricultural industry lie within the flood hazard areas regulated by these rules, those buildings may be impacted by the requirements to elevate or flood-proof such buildings in cases where substantial damage has occurred. However, the Department believes that the benefits of those impacts in terms of protection of public health and safety outweigh any detrimental economic effect of the concurrently proposed amendments on the agricultural industry in the same way that other sectors of the population will benefit from increased protection, long-term flood damage cost avoidance and decreased flood insurance premiums.

## Regulatory Flexibility Analysis

In accordance with the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has determined that a number of contractors, builders and property owners that will be affected by the proposed amendments are "small businesses" as defined by the Regulatory Flexibility Act at N.J.S.A. 52:14B-17. The concurrently proposed amendments apply to any person or entity owning property containing a flood hazard area who intends to or is required to construct, reconstruct, relocate or elevate an existing building above the flood hazard area design flood elevation or flood-proof that building to address flooding impacts.

It is not possible for the Department to accurately estimate the number of small businesses affected by the proposed amendments. However, the concurrently proposed amendments will reduce overall reporting or recordkeeping requirements on small businesses, since some activities that previously required an individual permit now qualify for a permit-by-rule, which requires no application to the Department, or a general permit, which requires fewer application materials than an individual permit.

**Housing Affordability Analysis**

In accordance with N.J.S.A. 52:14B-4 as amended effective July 17, 2008, by P.L. 2008.c.46, the Department has evaluated this rulemaking to determine the impact if any on the affordability of housing. Use of the best available flood mapping will provide additional protection to New Jersey residents and businesses in flood hazard areas and will help individuals and communities avoid future flood losses. This will in some cases cause the lowest floor of houses that are being reconstructed and elevated to be situated higher than were required previous to this rulemaking. However, it is anticipated that the added cost of compliance in such a case will be offset over the life of the structure as a result of lower flood insurance rates applicable to elevated structures. Because the concurrently proposed amendments are limited to areas of the State within flood hazard areas, and any initial construction costs are anticipated to be minor, there is an extreme unlikelihood that the rules will evoke a change in the overall average costs associated with housing in the State.

**Smart Growth Development Impact Analysis**

In accordance with N.J.S.A. 52:14B-4, as amended effective July 17, 2008, by P.L. 2008, c.46, the Department has evaluated the proposed amendments to determine the impact, if any, on housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan (State Plan). This rulemaking will facilitate the reconstruction, relocation and elevation of existing structures. Use of the best available flood mapping will provide additional protection to New Jersey residents and businesses in flood hazard areas and will help individuals and communities avoid future flood losses. Because the adopted amendments are limited to areas of the State within flood hazard areas, and any initial construction costs are anticipated to be minor, there is an extreme unlikelihood that the rules will evoke a change in housing production within planning areas 1 or 2 or within Designated Centers.

Full text of the emergency adoption follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

N.J.A.C. 7:13 Flood Hazard Area Control Act rules

SUBCHAPTER 1. GENERAL PROVISIONS

7:13-1.2 Definitions

["Crawl space" means an enclosed area beneath a building's lowest finished floor, in which the vertical distance between the floor of the enclosed area and the building's lowest finished floor is no more than six feet.]

[“Dry flood-proofing” means a modification to a building designed to eliminate or reduce potential flood damage to the building and its contents by preventing floodwaters from entering the building up to a certain elevation.]

…

"FEMA flood insurance study" means a document providing various information regarding the potential for a water to flood, published by FEMA for certain waters in certain municipalities. A FEMA **flood insurance** study can include flood profiles, floodway maps, flow rates and other information related to flooding along the water covered by the FEMA study. **FEMA maps can be viewed at https://msc.fema.gov.**Requests for copies of the available FEMA flood insurance studies [or flood profiles,] as well as any questions regarding their use, derivation or modification, should be directed to FEMA at (800) 358-9616.

…

["FEMA flow rate" means the calculated peak rate at which floodwaters would flow in a given water during a 100-year flood, published by FEMA as part of a FEMA flood insurance study. FEMA flow rates are not included in all FEMA flood insurance studies.]

**“FEMA 100-year flood elevation” means the 100-year water surface elevation at a given location, most recently released as an effective FEMA base flood elevation, or any more recent advisory or proposed flood elevation, if either elevation is higher than the effective base flood elevation. These elevations are available from FEMA at the address provided in the definition elsewhere in this section of "FEMA flood insurance study."**

**…**

**"Flood-proofing" means measures applied to a building that are intended to prevent or provide resistance to displacement, buoyancy and damage from flooding up to a certain elevation, so as to eliminate or reduce potential flood damage to the building and its contents. There are two types of flood-proofing:**

1. **Wet flood-proofing, which are measures that allow floodwaters to enter a building, and thereby balance hydrostatic pressure on the structure during a flood. Wet flood-proofing generally includes using flood-resistant materials, protecting mechanical and utility equipment, and using openings or breakaway walls; and**
2. **Dry flood-proofing, which are measures that prevent floodwaters from entering a building. Dry flood-proofing generally includes making the building watertight through sealing openings, installing waterproof doors and windows, or sealing walls with waterproof coatings, impermeable membranes and/or a supplementary layer of masonry or concrete.**

**…**

"Lowest floor" means the lowest floor of a building, including a basement or any other **enclosed** area [that can be occupied]**, which is or may be used for permanent or temporary occupation** by humans[, except for a crawl space, garage or other enclosed area that meets the requirements at N.J.A.C. 7:13-11.5(m), (n) or (o), respectively]. **An unfinished enclosure, such as a crawl space, entryway and/or garage serving a private residence, which is useable**

**solely for building access, storage and/or parking, is not considered the lowest floor of a building, provided that such enclosure is constructed in compliance with all applicable design standards of N.J.A.C. 7:13-11.5(n), (o) and (p).**

…

**"Multi-residence building" means any building intended to provide three or more units of temporary or permanent residence for humans. Examples of a multi-residence building include an apartment building, condominium complex, townhouse complex, hotel, motel and any mixed-use building that contains three or more units of temporary or permanent residence. A private residence or a public building as defined in this section is not a multi-residence building.**

…

**"100-year flow rate" means the peak rate at which floodwaters would flow in a given water during a 100-year flood.**

…

"Public building" means a habitable building that serves as one or more of the following:

1 – 7. No change.

[8. A residential rental unit of three or more units, such as an apartment, hotel or motel;]

[9]**8**. A school or college; and

[10]**9**. Any other building designed for a public use that is similar to 1 through [9]**8,** above.

…

"Reconstruct" means to patch, mend, replace, rebuild and/or restore a lawfully existing structure to a usable condition after decay or damage has occurred, in which [greater than] 50 percent **or greater** of the structure is replaced and/or the size, shape or location of the structure is altered. For habitable buildings, the percentage of replacement shall be determined by comparing the cost of the reconstruction to the [replacement] **market** value of the building **as determined before the start of construction; where the percentage of replacement is 50 percent or greater, such reconstruction shall also constitute a substantial improvement as defined in this section**. For all other structures, the percentage of replacement shall be determined by comparing the area of the structure being reconstructed to the total area of the structure.

…

"Repair" means to patch, mend, replace, rebuild and/or restore a lawfully existing structure to a usable condition after decay or damage has occurred, in which [no more] **less** than 50 percent of the structure is replaced and the size, shape or location of the structure is not altered. For habitable buildings, the percentage of replacement shall be determined by comparing the cost of the reconstruction to the [replacement] **market** value of the building **as determined before the start of construction; where the percentage of replacement is less than 50 percent, such repair shall not constitute a substantial improvement as defined in this section**. For all other structures, the percentage of replacement shall be determined by comparing the area of the structure being [reconstructed] **repaired** to the total area of the structure.

…

**"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its condition before damage would equal or exceed 50 percent of the market value of the structure before the damage occurred. Restoration of a substantially damaged structure shall constitute a substantial improvement as defined in this section.**

**"Substantial improvement" means any 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 as determined before the start of construction of the improvement. This term includes structures that have sustained substantial damage regardless of the actual repair work performed. Substantial improvement does not include:**

1. **Any project for improvement of a structure to correct existing violations of State or local health, sanitary or safety code specifications which have been identified by the local code enforcement officer and which are the minimum necessary to assure safe living conditions; or**
2. **Any alteration of a building designated by the State as an historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure.**

SUBCHAPTER 3. DETERMINING THE FLOOD HAZARD AREA AND FLOODWAY

7:13-3.2 Selecting a method for determining the flood hazard area and floodway along a regulated water

(a) [This section establishes the methods by which the flood hazard area and floodway shall be determined along a regulated water. The flowchart at the end of this section illustrates the correct use of this process. The Flood Hazard Area Technical Manual, available from the Department at the address listed at N.J.A.C. 7:13-1.1(g), also provides further guidance on how to perform calculations for those methods that require calculations.

(b)] There are a number of factors that influence the selection of a method for determining the flood hazard area and floodway **on a given site, as set forth in (b) through (e) below**. These factors include the existence of a Department delineation or FEMA flood insurance study, whether the applicant [proposes a regulated activity in the flood hazard area] **prefers to calculate the flood hazard area and/or floodway limits** and what type of project is proposed. Furthermore, each method has certain limitations on its usefulness and availability as described in this subchapter. Applicants are encouraged to carefully review the entire subchapter before selecting a method.

[(c) The flood hazard area and floodway limits along a regulated water shall be determined as follows:

1. If a Department delineation exists for a regulated water, an applicant shall use Method 1 as described at N.J.A.C. 7:13-3.3. Appendix 2 of this chapter lists the Department

delineated waters of New Jersey.

2. If no Department delineation exists for a regulated water, an applicant may:

   i. Determine the flood hazard area and/or floodway from FEMA mapping, if such mapping exists for the section of regulated water in question, using Methods 2, 3 or 4 as described at N.J.A.C. 7:13-3.4(d), (e) and (f), respectively;

   ii. Determine the approximate limit of the flood hazard area using Method 5 as described at N.J.A.C. 7:13-3.5 if no FEMA mapping is exists for the section of regulated water in question; or

   iii. Determine the flood hazard area and/or floodway by calculation using Method 6 as described at N.J.A.C. 7:13-3.6.]

**(b) Where a Department delineation for a regulated water has been promulgated on or after {effective date of emergency adopted amendments}, an applicant shall determine the flood hazard area and floodway limits using this delineation in accordance with Method 1, as set forth at N.J.A.C. 7:13-3.3.**

**(c) Where a Department delineation for a regulated water has been promulgated prior to {effective date of emergency adopted amendments}, an applicant may:**

**1. Determine the flood hazard area and/or floodway in accordance with (c)1i or (c)1ii below, whichever results in a higher flood hazard area design flood elevation and wider floodway limit:**

**i. The Department delineation described in (c) above, in accordance with Method 1, as set forth at N.J.A.C. 7:13-3.3; or**

**ii. FEMA mapping, in accordance with Method 2 in a tidal flood hazard area or Method 3 in a fluvial flood hazard area, as set forth at N.J.A.C. 7:13-3.4(d) and (e), respectively; or**

**2. Determine the flood hazard area and/or floodway by calculation, in accordance with Methods 4 or 6, as set forth at N.J.A.C. 7:13-3.4(f) and 3.6, respectively.**

**(d) Where no Department delineation exists for a regulated water, an applicant may:**

**1. Determine the flood hazard area and/or floodway using FEMA mapping, provided such mapping exists for the section of regulated water in question, in accordance with Methods 2, 3 or 4, as set forth at N.J.A.C. 7:13-3.4(d), (e) and (f), respectively;**

**2. Determine the approximate limit of the flood hazard area in accordance with Method 5, as set forth at N.J.A.C. 7:13-3.5, provided no FEMA mapping exists for the section of regulated water in question; or**

**3. Determine the flood hazard area and/or floodway by calculation, in accordance with Method 6, as set forth at N.J.A.C. 7:13-3.6.**

Recodify existing (d) as **(e)** (No change in text.)

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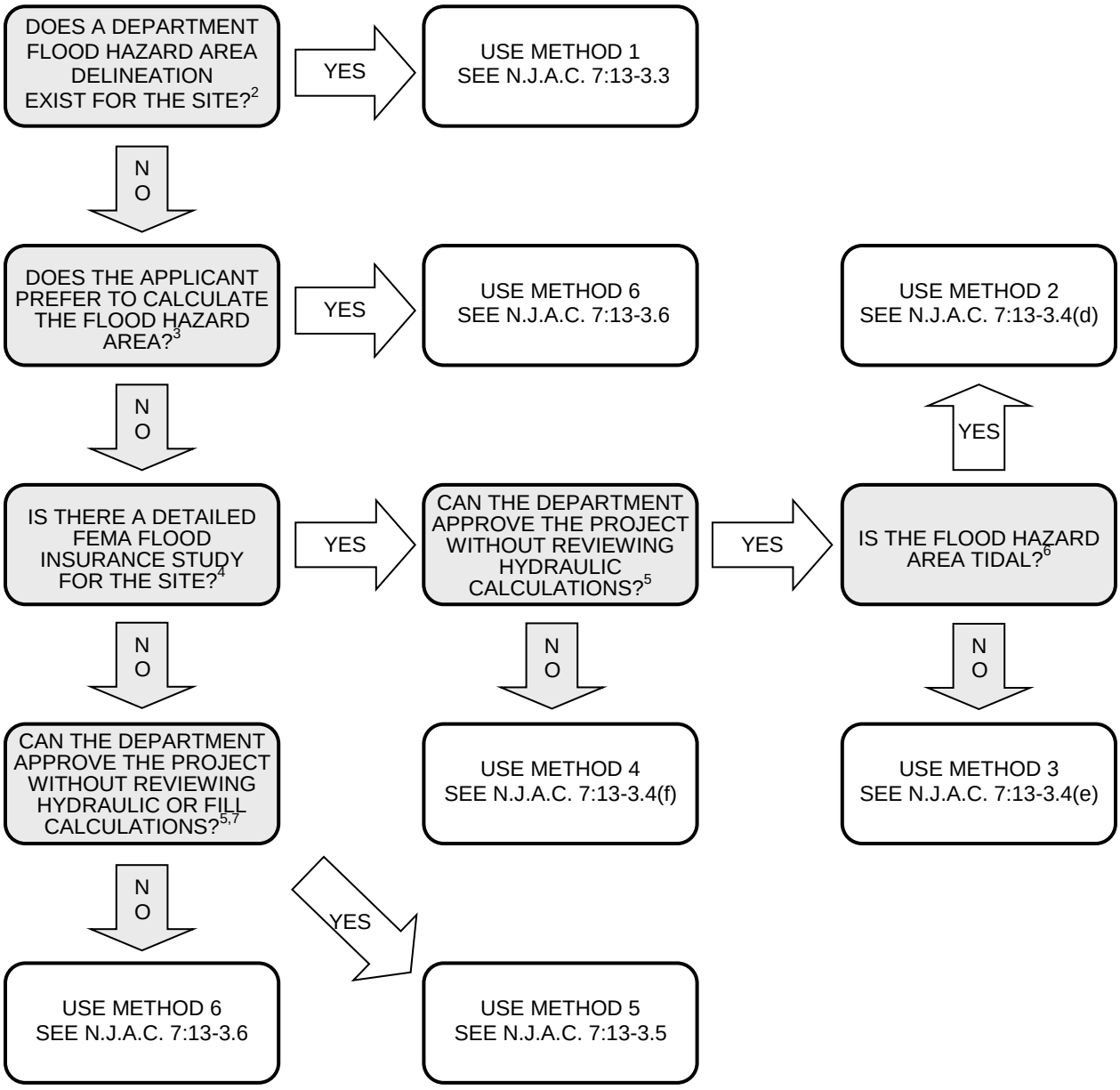
[FLOW CHART FOR DETERMINING THE FLOOD HAZARD AREA ON A SITE[1]




1. This chart is provided for information purposes only as an aid to applicants who are deciding which method is most appropriate for determining the flood hazard area and floodway on a site. This chart supplements, but does not supersede, the text at N.J.A.C. 7:13-3. If there is any discrepancy between this chart and N.J.A.C. 7:13-3, the rule text shall govern.
2. A complete list of Department delineated waters can be found in Appendix 2.
3. As noted at N.J.A.C. 7:13-3.2(c), an applicant may choose to submit hydrologic and hydraulic calculations to delineate the flood hazard area and floodway where no Department delineation exists.
4. N.J.A.C. 7:13-3.4 describes the requirements which a FEMA study must meet in order to be used to determine the flood hazard area and floodway on a site. Not all FEMA studies may be used.

5. As noted at N.J.A.C. 7:13-11.1(f) and (g), certain projects such as bridges and culverts alter the hydraulic capacity of a channel or flood hazard area. It therefore may be necessary to provide a hydraulic analysis for such projects to demonstrate that flood elevations will not be increased offsite.
6. Flood hazard areas are either tidal or fluvial. See the definitions at N.J.A.C. 7:13-1.2 for more detail.
7. Calculations are sometimes necessary to demonstrate compliance with fill restrictions at N.J.A.C. 7:13-10.4. Method 5 does not provide the information needed for such calculations. Therefore in absence of a State delineation or FEMA study, Method 6 must be used.]

7:13-3.3 Flood hazard area and floodway based on a Department delineation (Method 1)

(a) (No change.)

(b) [The following apply if a Department delineation has been promulgated under this chapter for a regulated water]**Under Method 1**:

1. – 2. (No change.)

**(c) The flood hazard design elevation and floodway limits for a regulated water depicted on a FEMA map that includes the Department's flood hazard area design flood elevation and that reflects FEMA's final determination of the 100-year flood elevation (base flood elevation) effective pursuant to 44 CFR 67.10 are incorporated into this chapter as the Department delineation of the regulated water.**

**1. The Department shall publish notice in the New Jersey Register of any flood hazard area design flood elevation and floodway limits so incorporated. The notice shall include any necessary administrative change to the list of delineated waters in Appendix 2.**

**(d)** An applicant seeking to modify a Department delineation shall submit an application for a revision as provided at N.J.A.C. 7:13-13.4.

[(d)]**(e)** If an applicant proposes construction in a Department delineated floodway, and must prepare hydraulic calculations to demonstrate that the construction meets the requirements of this chapter, the applicant shall base the calculations on the [original data used by the Department to

determine the delineation] **the flow rates and other hydraulic data that were used to determine the flood hazard area and floodway limits in the Department delineation.** Such data is available from the Department at the address listed in (a) above.

7:13-3.4 Flood hazard area and floodway based on a FEMA flood insurance study (Methods 2 through 4)

(a) This section sets forth the procedure for determining a flood hazard area design flood elevation and floodway limit from a FEMA flood insurance study [where no Department delineation exists]. **FEMA flood maps can be viewed at https://msc.fema.gov.** Requests for copies of the available FEMA flood insurance studies [or flood profiles,] as well as any questions regarding their use, derivation or modification, should be directed to FEMA at (800) 358-9616.

(b) The methods set forth in this section for determining the flood hazard area and floodway along a regulated water may be used only if the following requirements are satisfied:

1. [No Department delineation exists for the section of regulated water in question; and
2.] A FEMA flood insurance study exists for the section of regulated water in question, which [meets the following:
    i. The FEMA flood insurance study includes] **is dated January 31, 1980, or later, and includes** the information needed for the Method that is being used. For example, Methods 2 and 3 below require that the FEMA **flood insurance** study includes the regulated water's 100-year flood elevation, and Method 4 below requires that the FEMA study includes the regulated water's 100-year flow rate;

**and**

[ii. The flood insurance study used is dated January 31, 1980, or later; and

iii. The flood insurance study used is the most recent study published by FEMA for that municipality.]

**2. The floodway limits and 100-year flow rate being used are the most recently released by FEMA for the municipality in which the site is located, including any advisory, proposed or effective mapping.**

(c) – (f) (No change.)

7:13-3.5 Flood hazard area determined by approximation (Method 5)

(a) – (c) (No change.)

(d) Method 5 is intended to be conservative and may in some cases overestimate the actual limits of flooding onsite to ensure that public health, safety and welfare is adequately protected in absence of a Department delineation or FEMA flood insurance study. [Note that an applicant may use Method 6 under N.J.A.C. 7:13-3.6 to determine the flood hazard area and floodway along any regulated water for which no Department delineation exists].

(e) (No change.)

7:13-3.6 Flood hazard area and floodway determined by calculation (Method 6)

(a) This section sets forth the procedure for determining a flood hazard area design flood elevation and floodway limit via hydrologic and hydraulic calculations. [An applicant may use

Method 6 to determine the flood hazard area and floodway along any regulated water for which no Department delineation exists. If a Department delineation does exist on a site, the applicant shall use Method 1 as set forth at N.J.A.C. 7:13-3.3].

(b) – (c) (No change.)

SUBCHAPTER 7. PERMITS-BY-RULE

7:13-7.1 General Provisions for Permits by Rule

(a) – (e) (No change)

Table A
SUMMARY OF PERMITS-BY-RULE
This Table is for informational purposes only. See N.J.A.C. 7:13-7.2(a) through (f) for specific applicable limits and requirements for each permit-by-rule

| |
|---|
| (a) Activities that require 14-day prior notice to the Department |
| … |
| 3. [Elevating] **Reconstructing, relocating or elevating** a building above the flood hazard area design flood elevation |
| … |

7:13-7.2 Permits-by-rule

(a) The permits-by-rule at (a)1 through 8 below apply to the specified construction and maintenance activities listed therein. Pursuant to N.J.A.C. 7:13-7.1(d), prior written notice to the Department is required for each of these permits-by-rule.

1. – 2. (No change)

3. The **reconstruction, relocation and/or** elevation of a lawfully existing building outside a floodway[, in order to reduce flood damage potential], provided:

   i. The **footprint of the** building [to be elevated] is not [relocated] **increased by more**

**than 300 square feet**;

ii. The lowest [finished] floor of the building is [raised to] **reconstructed or elevated to** at least one foot above the flood hazard area design flood elevation;

iii. The area below the lowest [finished] floor of the building is not used for habitation and remains open to floodwaters, in accordance with N.J.A.C. 7:13-11.5[(l)]**(n), (o) and (p)**;

iv. **The building is not expanded or relocated closer to any regulated water or within a floodway;**

**v. Any building being relocated is either moved outside any riparian zone or situated within an area where previous development or disturbance has occurred (such as an area maintained as a lawn or garden or an abandoned parking area that has partially revegetated);**

**vi.** No vegetation is cleared, cut or removed in a riparian zone, except for vegetation within 20 feet of the building if such disturbance is necessary to facilitate its **reconstruction, relocation and/or** elevation; and

[v.]**vii.** All vegetated areas temporarily disturbed within the riparian zone are replanted with indigenous, non-invasive species upon completion of the regulated activity;

4. The construction of an addition that is connected to a lawfully existing building outside a floodway, provided:

i. – iii. (No change)

iv. **The construction of the addition, in combination with all other proposed**

**improvements, does not result in a substantial improvement to the building being expanded;**

**v.** No vegetation is cleared, cut or removed in a riparian zone, except for vegetation within 20 feet of the addition if such disturbance is necessary to facilitate its construction; and

[v.]**vi.** All vegetated areas temporarily disturbed within the riparian zone are replanted with indigenous, non-invasive species upon completion of the regulated activity;

5. – 8. (No change)

(b) The permits-by-rule at (b)1 through 18 below apply to the specified construction and maintenance activities listed therein.

1. – 6. (No change)

7. The construction of an addition above a lawfully existing building outside a floodway, provided:

i. (No change)

ii. The lowest [finished] floor of the addition is constructed at least one foot above the flood hazard area design flood elevation;

iii. **The construction of the addition, in combination with all other proposed improvements, does not result in a substantial improvement to the building being expanded;**

**iv.** No part of the addition extends into a floodway;

[iv.]**v.** No vegetation is cleared, cut or removed in a riparian zone, except for vegetation

within 20 feet of the building if such disturbance is necessary to facilitate the construction of the addition; and

[v.]**vi.** All vegetated areas temporarily disturbed within the riparian zone are replanted with indigenous, non-invasive species upon completion of the regulated activity;

8. – 19. (No change)

(c) – (f) (No change)

SUBCHAPTER 8. GENERAL PERMITS

7:13-8.7 General permit 5 for the relocation of a building to reduce flood damage

(a) (No change)

(b) In addition to satisfying the requirements applicable to all general permits at N.J.A.C. 7:13-8.1(b), the relocation of a lawfully existing building is eligible for authorization under general permit 5 only if:

1. – 3. (No change)

4. The lowest [finished] floor of the building is raised to at least one foot above the flood hazard area design flood elevation;

5. The area below the lowest [finished] floor of the building is not used for habitation and remains open to floodwaters, in accordance with N.J.A.C. 7:13-11.5[(l)]**(n), (o) and (p)**;

6. – 7. (No change)

(c) (No change)

7:13-8.8 General permit 6 for the reconstruction of a damaged or destroyed residence

(a) (No change)

(b) In addition to satisfying the requirements applicable to all general permits at N.J.A.C. 7:13-8.1(b), the reconstruction of a lawfully existing private residence is eligible for authorization under general permit 6 only if:

1. The residence has been damaged or destroyed by fire, flood or other natural disaster within [one year] **five years** prior to application to the Department under this general permit authorization;

2. – 4. (No change)

5. The lowest [finished] floor of the new residence is constructed at least one foot above the flood hazard area design flood elevation;

6. The area below the lowest [finished] floor of the residence is not used for habitation and remains open to floodwaters, in accordance with N.J.A.C. 7:13-11.5[(l)]**(n), (o) and (p)**;

7. – 8. (No change)

(c) (No change)

SUBCHAPTER 9. INDIVIDUAL PERMITS

7:13-9.2 Application requirements for an individual permit

(a) – (d) (No change)

(e) An application that proposes [to construct] a [dry] flood-proofed building shall include the

following material, signed and sealed by an architect or engineer:

1. Drawings that clearly show the proposed [dry] flood-proofing measures;

2. (No change)

3. A [dry] flood-proofing certification, [listing each applicable dry flood-proofing requirement at N.J.A.C. 7:13-11.5(q), and stating how the building meets each requirement.] **which confirms that the requirements of N.J.A.C. 7:13-11.5(q), (r) and/or (s) are met, as applicable, and which is accompanied by all supporting documentation, calculations and other information upon which the certification is based.**

(f) – (h) (No change)

SUBCHAPTER 10. INDIVIDUAL PERMIT REQUIREMENTS WITHIN VARIOUS REGULATED AREAS

7:13-10.4 Requirements for a regulated activity in a flood fringe

(a) – (c) (No change)

(d) The following regulated activities (or combination of regulated activities) are not subject to the flood storage volume displacement limits of this section, provided the activity is not associated with a Major Highlands Development:

1. – 4. (No change)

5. The construction of one private residence provided:

i. (No change)

ii. Any enclosed area beneath the flood hazard area design flood elevation meets the requirements of N.J.A.C. 7:13-11.5[(l)]**(n), (o) and (p)**; and

iii. (No change)

6. – 7. (No change)

SUBCHAPTER 11. INDIVIDUAL PERMIT REQUIREMENTS FOR VARIOUS REGULATED ACTIVITIES

7:13-11.5 Requirements for a building

(a) This section sets forth specific design and construction standards that apply to any building proposed in the areas listed in (b) below. Subsection (c) below establishes standards that apply to all buildings, and subsections (d) through [(q)]**(t)** below provide additional standards for various types of buildings.

(b) (No change)

(c) The Department shall issue an individual permit to construct or reconstruct a building of any kind only if the following requirements are satisfied:

1. – 4. (No change)

5. All applicable requirements contained in (d) through [(q)]**(t)** below are satisfied.

(d) (No change)

(e) The Department shall issue an individual permit [for the reconstruction of] **to elevate or reconstruct** a lawfully existing building in a floodway only if the following requirements are

satisfied:

1. – 3. (No change)

(f) (No change)

[(g) The Department shall issue an individual permit to construct or reconstruct a private residence only if the lowest floor of the building meets the elevation requirements at (k) below.

(h) The Department shall issue an individual permit to construct or reconstruct a public building only if the following requirements are satisfied:

1. The lowest floor of the building meets the elevation requirements at (k) below;
2. For a new building in a fluvial flood hazard area, the applicant demonstrates that the building is served by at least one roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation; and
3. For a new building in a tidal flood hazard area, or for any reconstructed building, the applicant demonstrates that the building is served by at least one roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation, where feasible.

(i) The Department shall issue an individual permit to construct or reconstruct a habitable building that is neither a private residence nor a public building, only if one of the following requirements is satisfied:

1. The lowest floor of the building meets the elevation requirements at (k) below; or
2. The applicant does the following:
    i. Demonstrates that it is not feasible to meet the elevation requirements at (k) below;

ii. Constructs the lowest floor of the building as close to one foot above the flood hazard area design flood elevation as feasible; and

iii. Certifies that the building will be constructed in accordance with the dry flood-proofing requirements at (q) below.

(j) The Department shall issue an individual permit for the conversion of a building into a private residence or public building only if the following requirements are satisfied:

1. The lowest floor of the building meets the elevation requirements at (k) below; and
2. For a public building, the applicant demonstrates that the building is served by at least one roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation, where feasible.

(k) The elevation requirements for a building listed at (g) through (j) above are as follows:

1. For a new building, the lowest floor shall be constructed at least one foot above the flood hazard area design flood elevation;
2. For the reconstruction of a building that has been damaged by fire, flooding or other natural disaster, the lowest floor shall be constructed at least one foot above the flood hazard area design flood elevation, unless the applicant demonstrates that it is not feasible to do so. In such a case, the lowest floor shall be constructed as close to this elevation as feasible;
3. For the reconstruction of a building not covered in (k)2 above, such as the voluntary razing a building and constructing a new one in its place, the lowest floor shall be constructed at least one foot above the flood hazard area design flood elevation; and

4. For the enlargement of a building, such as the construction of an addition, the lowest floor of the new portion of the building shall be constructed at least one foot above the flood hazard area design flood elevation. The original building does not need to be elevated unless the original building was constructed in violation of this chapter. The Department shall not issue a permit to enlarge a building that was constructed in violation of this chapter unless the applicant first does the following:
   i. Receives a permit under this chapter to legalize the existing building; and
   ii. Performs any modifications to the existing building that the Department determines are necessary to bring the building into compliance with the requirements of this chapter.

(l) The Department shall issue an individual permit for a habitable building with an enclosed area beneath the flood hazard area design flood elevation only if the enclosed area meets one of the following requirements:

1. The enclosed area is a crawl space that meets the requirements of (m) below;
2. The enclosed area is a garage that meets the requirements of (n) below; or
3. The enclosed area is open to floodwaters as described at (o) below.

(m) The Department shall issue an individual permit for a habitable building with a crawl space below the flood hazard area design flood elevation as described at (l)1 above only if the Department determines that the crawl space meets the following requirements:

1. The floor elevation of the crawl space is at or above the adjoining exterior grade along at least one entire exterior wall;

2. In order to prevent habitation of the crawl space, the vertical distance from the crawl space floor to the finished elevation of the first floor of the building is six feet or less. If this distance is greater than six feet, the area beneath the finished first floor is not considered a crawl space;
3. Two or more permanent flood vents that meet the requirements of (p) below are constructed in the outer walls of the crawl space; and
4. The deed of the property is modified to state that habitation of the crawl space is prohibited. The modified deed shall be filed with the local county clerk, a copy of which shall be provided to the Department within 90 calendar days of the issuance of the individual permit.

(n) The Department shall issue an individual permit for a garage with a floor below the flood hazard area design flood elevation as described at (l)2 above, whether attached to or below a private residence or freestanding, only if the garage meets the following requirements:

1. The floor elevation of the garage is at or above the adjoining exterior grade along at least one entire exterior wall;
2. The garage serves only one private residence, which is not being constructed as part of a larger residential subdivision;
3. The garage has a footprint of no more than 625 square feet;
4. Two or more permanent flood vents that meet the requirements of (p) below are constructed in the outer walls of the garage; and
5. The deed of the property is modified to disclose (n)5i through iv below. The modified

deed shall be filed with the local county clerk, a copy of which shall be provided to the Department within 90 calendar days of the issuance of the individual permit:

i. That habitation of the garage is prohibited;

ii. That the garage and driveway are likely to be inundated by floodwaters, which may result in damage and/or inconvenience;

iii. The minimum frequency storm at which the garage and driveway will be inundated; and

iv. The depth of flooding during the flood hazard area design flood.

(o) The Department shall issue an individual permit for a habitable building with an enclosed area below the flood hazard area design flood elevation, which is not a crawl space or garage as described at (m) and (n) above, respectively, only if the enclosed area meets the following requirements:

1. The floor elevation of the enclosed area is at or above the adjoining exterior grade along at least one entire exterior wall;
2. At least 25 percent of the surface area of the outer wall of the enclosed area is left permanently open so that floodwaters can freely enter the building to balance hydrostatic pressure during a flood;
3. At least one permanent opening in the outer wall extends down to the floor elevation of the enclosed area; and
4. The deed of the property is modified to state that habitation of the enclosed area is prohibited. The modified deed shall be filed with the local county clerk, a copy of

which shall be provided to the Department within 90 calendar days of the issuance of the individual permit.

(p) A flood vent constructed in the outer wall of a building shall meet the following requirements (unless otherwise required under the New Jersey Uniform Construction Code at N.J.A.C. 5:23):

1. The invert of each flood vent shall be no more than 12 inches above the adjoining exterior grade;
2. The invert of at least half of the flood vents shall be no more than 12 inches above the floor of the building;
3. The combined effective open area of the flood vents shall be at least one square inch per square foot of the area of the footprint of the building, unless a smaller FEMA-approved device with an equivalent effective area is utilized; and
4. The flood vents shall not be blocked at any time, but shall permanently remain open so that floodwaters can freely enter the building to balance hydrostatic pressure during a flood.

(q) A building that is to be dry flood-proofed to meet a requirement of this chapter shall be designed and constructed to be waterproof up to the flood hazard area design flood elevation so that floodwaters cannot enter the structure during a flood. Specifically, the building's foundation, floor slab and walls shall be designed to resist hydrostatic pressure up to the flood hazard area design flood elevation. In addition, any exterior wall opening below the flood hazard area design flood elevation, such as a door or window, shall be equipped with waterproof seals and/or panels

and shall also be designed to resist hydrostatic pressure up to the flood hazard area design flood elevation. An application for an individual permit for a dry flood-proofed building shall include the information listed at N.J.A.C. 7:13-9.2(e).]

**(g) The Department shall issue an individual permit to construct a new habitable building only if the following requirements are satisfied:**

1. **The lowest floor of a private residence is set at least one foot above the flood hazard area design flood elevation;**
2. **The lowest floor of a public building is set at least one foot above the flood hazard area design flood elevation;**
3. **The lowest floor of a multi-residence building is set at least one foot above the flood hazard area design flood elevation, unless all of the following are satisfied:**
   - i. **The building is used for both residential and non-residential purposes;**
   - ii. **The lowest floor of any residential portion of the building, including any common area, such as a lobby or other portion of the building that is used for both residential and non-residential purposes, is set at least one foot above the flood hazard area design flood elevation;**
   - iii. **The applicant demonstrates that it is not feasible to set the lowest floor of any or all of the non-residential portions of the building at least one foot above the flood hazard area design flood elevation;**
   - iv. **The lowest floor of the non-residential portions of the building identified in (g)3iii above is set as close as feasible to one foot above the flood hazard area**

**design flood elevation; and**

**v. An architect or engineer certifies that the non-residential portions of the building identified in (g)3iii above will be constructed in accordance with the flood-proofing requirements at (q) below; and**

**4. The lowest floor of any habitable building not identified in (g)1, 2 or 3 above, such as a commercial business, house of worship, office complex or shopping center, is set at least one foot above the flood hazard area design flood elevation, unless all of the following are satisfied:**

**i. The applicant demonstrates that it is not feasible to construct the lowest floor of any or all portions of the building at least one foot above the flood hazard area design flood elevation;**

**ii. The lowest floor of the portions of the building identified in (g)4i above is constructed as close as feasible to one foot above the flood hazard area design flood elevation; and**

**iii. An architect or engineer certifies that the portions of the building identified in (g)4i above will be constructed in accordance with the flood-proofing requirements at (q) below.**

**(h) The Department shall issue an individual permit to undertake the substantial improvement of a lawfully existing habitable building that has been damaged by fire, flooding or other natural disaster only if the following requirements are satisfied:**

**1. The lowest floor of the entire building is constructed or modified where necessary**

**to meet the requirements of (g) above to the extent feasible. In no case shall the lowest floor be set below the FEMA 100-year flood elevation, except as provided in (g)3 and 4 above; and**

**2. Any enclosed area beneath the lowest floor of the entire building is modified as necessary to meet the requirements of (n), (o) and (p) below, as appropriate.**

**(i) The Department shall issue an individual permit to undertake the substantial improvement of a lawfully existing building that has not been damaged by fire, flooding or other natural disaster only if the following requirements are satisfied:**

**1. The lowest floor of any constructed, elevated, enlarged or modified portion of the building meets the requirements of (g) above;**

**2. The lowest floor of the remainder of the building is modified where necessary to meet the requirements of (g) above to the extent feasible. In no case shall the lowest floor of this portion of the building be set below the FEMA 100-year flood elevation, except as provided in (g)3 and 4 above; and**

**3. Any enclosed area beneath the lowest floor of the entire building is modified as necessary to meet the requirements of (n), (o) and (p) below, as appropriate.**

**(j) The Department shall issue an individual permit to elevate, enlarge or otherwise modify all or a portion of a lawfully existing building, which does not result in a substantial improvement, only if the following requirements are satisfied:**

**1. The lowest floor of the elevated, enlarged or modified portion of the building meets the requirements of (g) above.**

**i. Where only a portion of a building is elevated, enlarged or modified, the lowest floor of the remainder of the building is not required to be elevated or otherwise modified to meet the requirements of (g) above; and**

**2. Any enclosed area beneath the lowest floor of the elevated, enlarged or modified portion of the building is modified as necessary to meet the requirements of (n), (o) and (p) below, as appropriate.**

**(k) The Department shall issue an individual permit to reconstruct, elevate, enlarge, or otherwise modify a habitable building that was constructed in violation of this chapter only if the existing building is modified as necessary to meet the requirements of (g) through (j) above, as applicable.**

**(l) The Department shall issue an individual permit to convert an existing building from a non-residential use to a residential use only if the lowest floor of the converted building is modified as necessary to meet the requirements of (g) above.**

**(m) The Department shall issue an individual permit to construct a public building or multi-residence building, or to convert an existing building to one of these uses, only if the following requirements are met:**

**1. If the building is located in a fluvial flood hazard area, the applicant demonstrates that the building is served by at least one existing or proposed roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation; and**

**2. If the building is located in a tidal flood hazard area, the applicant demonstrates**

**either that the building is served by at least one existing or proposed roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation, or that such access is not feasible.**

**(n) The Department shall issue an individual permit to enclose an area that lies below the lowest floor of a habitable building only if the following requirements are satisfied:**

1. **The enclosure is used solely for parking of vehicles, building access or storage;**
2. **The floor of the enclosure is situated at or above the adjoining exterior grade along at least one entire exterior wall, in order to provide positive drainage of the enclosed area; and**
3. **The enclosure is constructed with permanent flood openings that meet the requirements of the Uniform Construction Code at N.J.A.C. 5:23.**

**(o) The Department shall issue an individual permit for an enclosure that lies below the flood hazard area design flood elevation and that is intended to be used as a garage for one private residence, whether the enclosure is attached to or below a private residence or is freestanding, only if the following requirements are satisfied:**

1. **The garage meets the requirements for an enclosure under (n)1, 2 and 3 above;**
2. **The garage is not being constructed as part of a residential subdivision or multi-unit development;**
3. **The lot on which the garage is being constructed did not receive preliminary or final subdivision approval after November 5, 2007.**

**(p) The Department shall issue an individual permit for an enclosure under (n) above that**

**is greater than six feet in height, or for a garage under (o) above, only if:**

1. **The deed for the lot on which the enclosure or garage is constructed is modified to:**
   i. **Explain that the enclosure or garage is likely to be inundated by floodwaters, which may result in damage and/or inconvenience.**
   ii. **Disclose the depth of flooding that the enclosure or garage would experience during the FEMA 100-year flood and flood hazard area design flood, if either elevation is known;**
   iii. **Prohibit habitation of the enclosure or garage; and**
   iv. **Explain that converting the enclosure or garage into a habitable area may subject the property owner to enforcement under this chapter;**
2. **Within 90 calendar days of the issuance of the individual permit for the enclosure or garage, a copy of the modified deed as filed with the local county clerk is provided to the Department at the address set forth at N.J.A.C. 7:13-1.1(f).**

**(q) The Department shall issue an individual permit for a building that is flood-proofed only if one of the following requirements is satisfied:**

1. **The applicant dry flood-proofs the building in accordance with (r) below; or**
2. **The applicant demonstrates that it is not feasible to dry flood-proof the building in accordance with (r) below and instead wet flood-proofs the building in accordance with (s) below.**

**(r) The Department shall issue an individual permit to dry flood-proof a building only if the building is designed and constructed with measures to prevent floodwaters from**

**entering the building during a flood depth of at least one foot above the flood hazard area design flood elevation.**

**(s) The Department shall issue an individual permit to wet flood-proof a building only if the building is designed and constructed to be flood-resistant during a flood depth of at least one foot above the flood hazard area design flood elevation, so that floodwaters can enter the building though permanent openings, while not damaging the structural integrity of the building.**

**(t) The Department shall not issue an individual permit to flood-proof a new private residence, a new public building, or any residential portions of a new multi-residence building.**

7:13-11.6 Requirements for a railroad, roadway or parking area

(a) – (c) (No change)

(d) The Department shall issue an individual permit to construct or reconstruct a private roadway that serves a public building **or multi-residence building** only if one of the following requirements is satisfied:

1. (No change.)
2. For a new private roadway in a fluvial flood hazard area, the applicant demonstrates that the public building **or multi-residence building** is already served by one or more roadways having a travel surface at least one foot above the flood hazard area design flood elevation, which is of adequate size and capacity to serve the [public] building,

and instead constructs the travel surface of the roadway as close to this elevation as feasible; or

3. (No change.)

(e) The Department shall issue an individual permit to construct or reconstruct a parking area that serves a public building **or multi-residence building** only if one of the following requirements is satisfied:

1. – 2. (No change.)

(f) – (g) (No change)

## APPENDIX 2: LIST OF DEPARTMENT DELINEATED WATERS

The following table lists the waters for which the Department has [adopted] **promulgated** a delineation of the flood hazard area. This list is organized by county and municipality. In most cases the delineation includes both the flood hazard area design flood elevation and the floodway limit. To determine which mapping is available for a particular water, or to obtain copies of maps or other information regarding the use or revision of these studies, contact the Department as described at N.J.A.C. 7:13-3.3. **An asterisk indicates that the Department delineation for that studied water was promulgated on or after {effective date of emergency adopted amendments}.**

…

| Hunterdon County | | |
|---|---|---|
| Municipality | Name of Studied Water | Section Studied |
| Alexandria Township | Delaware River***** | Entire reach |
| | Harihokake Creek | Downstream of a point located 3,170 feet |

| | | |
|---|---|---|
| | | upstream of County Route 519 |

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| | | |
|---|---|---|
| Delaware Township | Alexauken Creek | Entire reach |
| | Brookville Creek | Upstream 3752 feet from the Delaware River |
| | Delaware River* | Entire reach |
| | Third Neshanic River | Downstream of County Route 523 |
| | Wickecheoke Creek | Downstream of County Route 604 |

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| | | |
|---|---|---|
| Frenchtown Borough | Delaware River* | Entire reach |
| | Little Nishisakawick Creek | Entire reach |
| | Nishisakawick Creek | Entire reach |

…

| | | |
|---|---|---|
| Holland Township | Delaware River* | Entire reach [to confluence with Musconetcong River] |
| | Delaware River Tributary 1 | Downstream of Phillips Road |
| | Milford Creek | Downstream of Spring Garden Road |
| | Milford Creek Tributary 1 | Downstream of Spring Garden Road |
| | Musconetcong River | Entire reach |
| Kingwood Township | Delaware River* | Entire reach |
| | Lockatong Creek | Downstream of a point located 5,908 feet upstream of State Highway 12 |
| | Lockatong Creek Tributary 1 | Downstream of County Route 519 |
| | Lockatong Creek Tributary 2 | Downstream of a point located 150 feet upstream of Oak Grove Road |
| | Muddy Run | Downstream of Fitzer Road |
| Lambertville City | Alexauken Creek | Entire reach |
| | Delaware River* | Entire reach |
| | Swan Creek | Entire reach |
| | Swan Creek Tributary 1 | Entire reach |

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| | | |
|---|---|---|
| Milford Borough | Delaware River* | Entire reach |
| | Milford Creek | Entire reach |
| | Milford Creek Tributary 1 | Entire reach |
| | Quequacommisacong Creek | Entire reach |

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| | | |
|---|---|---|
| Stockton Borough | Brookville Creek | Entire reach |
| | Delaware River* | Entire reach |
| | Wickecheoke Creek | Entire reach |

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| | | |
|---|---|---|
| West Amwell Township | Alexauken Creek | Downstream of State Highway 179 |
| | Delaware River***** | Entire reach |

| Sussex County | | |
|---|---|---|
| Municipality | Name of Studied Water | Section Studied |
| … | | |
| Montague Township | [None] **Delaware River*** | [N/A] **Entire reach** |
| … | | |
| Sandyston Township | [None] **Delaware River*** | [N/A] **Entire reach** |
| … | | |
| Walpack Township | [None] **Delaware River*** | [N/A] **Entire reach** |
| … | | |
| Warren County | | |
| Municipality | Name of Studied Water | Section Studied |
| … | | |
| Belvidere Town | **Delaware River*** | **Entire reach** |
| | Pequest River | Entire reach |
| … | | |
| Hardwick Township | [None] **Delaware River*** | [N/A] **Entire reach** |
| Harmony Township | Buckhorn Creek | Entire reach |
| | Buckhorn Creek Tributary 1 | Downstream of a point located 1,700 feet upstream of County Route 519 |
| | Delaware River***** | Entire reach |
| | Lopatcong Creek | Downstream of a point located 250 feet upstream of Allen Mills Road |
| … | | |
| Knowlton Township | [None] **Delaware River*** | [N/A] **Entire reach** |
| … | | |
| Lopatcong Township | Delaware River***** | Entire reach |
| | Dry Run | Downstream of a point located 650 feet upstream of Powder Horn Road |
| | Lopatcong Creek | Entire reach |
| … | | |
| Phillipsburg Town | Delaware River***** | Entire reach |
| | Lopatcong Creek | Entire reach |
| Pohatcong Township | Delaware River***** | Entire reach |
| | Lopatcong Creek | Entire reach |
| | Musconetcong River | Entire reach |
| | Pohatcong Creek | Entire reach |
| | Pohatcong Creek Tributary 1 | Downstream of a point located 800 feet upstream of Conrail Railroad |

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| | | |
|---|---|---|
| White Township | Beaver Brook | Entire reach |
| | **Delaware River*** | **Entire reach** |
| | Pequest River | Entire reach |