



**Meeting of the Mashpee Planning Board
Wednesday, March 16, 2022
Waquoit Meeting Room
Mashpee Town Hall
16 Great Neck Road North
Mashpee, MA 02649
7:00 PM**

Broadcast Live on Local Channel 18

Streamed Live on the Town of Mashpee Website: <https://www.mashpeema.gov/channel-18>

Call Meeting to Order

- Pledge of Allegiance

Approval of Minutes

- Review of Meeting Minutes from March 2, 2022

Public Discussion

New Business

- Presentation from Nextgrid relative to potential solar energy system development
- LCP Update from Weston & Sampson
- Discussion relative to a potential Cottage Court/Pocket Neighborhood Zoning Bylaw proposal with Willowbend Country Club
- Request to withdraw without prejudice an application made by Longfellow Design Build to construct a retail grocery store at 9 Shellback Way / 647 Falmouth Road.

Chairman's Report

Town Planner Report

- Thank you to Planning Department Admin. Secretary Patty Maguffin
- LCP Update – Kick Off Event, Citizen Lab, Youth Engagement, Existing Conditions
- Update on Revival of the Open Space Committee
- Update on Popponessett Overlay District
- Floodplain Bylaw amendments
- Cape Cod Commission Stakeholder Working Group – Development Pressures on 'Perceived Open Space'

Board Member Committee Reports

- Cape Cod Commission, Community Preservation Committee, Design Review, Plan Review, Environmental Oversight Committee, Historic District Commission, Military Civilian Advisory Council.

MASHPEE TOWN CLERK

MAR 11 2022

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Town of Mashpee

16 Great Neck Road North
Mashpee, Massachusetts 02649

Correspondence

- Town of Falmouth Notices
- Town of Sandwich Notices
- Waterways Application – Jason M. Kaye – 196 Monomoscoy Road
- Waterways Application – John Lawrence – 59 Hooppole Road
- January 2022 Discharge Monitoring Report for South Cape Village – N=2.1
- December 2021 Discharge Monitoring Report for South Cape Village – N=1.32
- November 2021 Discharge Monitoring Report for South Cape Village – N=.71

Additional Topics (not reasonably anticipated by Chair)

Adjournment

MASHPEE TOWN CLERK

MAR 11 2022

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NextGrid

March 7, 2022

Mr. Evan Lehrer
Town Planner
Mashpee Town Hall
16 Great Neck Road North
Mashpee, MA 02649

Mr. Lehrer:

I would welcome the opportunity to briefly address the Mashpee Planning Board on March 16, 2022, to present NextGrid's proposal for a Solar Overlay District in Mashpee.

The NextGrid project, if approved, will create a low-impact and environmentally friendly ground-mounted solar facility on previously disturbed property (a sandpit). The project would also deliver significant revenue to the Town of Mashpee over a 20-year period.

I look forward to hearing from you.

Regards,

Daniel Serber
Director of Land Development
NextGrid, Inc.

Cottage Court/Pocket Neighborhood Zoning Bylaw Proposal

THIS IS A WORKING DRAFT FOR THE PURPOSES OF DISCUSSION WITH THE MASHPEE PLANNING BOARD. THIS DRAFT IS SUBJECT TO CHANGE AND WILL BE UPDATED PURSUANT TO THE RECOMMENDATIONS OF THE MASHPEE PLANNING BOARD. THIS IS NOT A FINAL DRAFT.

Description

Cottage Courts are an arrangement of single residential building types around a central common courtyard space to promote a greater density than otherwise allowed within the base zoning district and allow for an alternative lifestyle option. They consist of three elements; the building lot or lots on which the buildings are placed, the courtyard around which the building lots are arranged, and access areas which may or may not include driveways, parking lots, and pedestrian walkways.

Purpose and Intent

This Cottage Court bylaw was developed in consideration of the high housing costs of the region that, in part, results from lack of diversity in the overall housing stock. The intent of the Cottage Court is to provide ownership and rental opportunities utilizing design that accommodates a higher density of units on lots that meet the minimum lot area requirements of the base zoning district, promotes shared sustainable community living, are accessible to renters or property owners from the entire spectrum of age groups and family types, and are connected to either public or private wastewater treatment facilities. This bylaw is intended to make effective use of the limited number of available sites in the Town of Mashpee while maintaining consistency with the largely detached single family fabric of the majority of the Town's residential districts and to maintain harmony with the Town's open and greenspaces by situating smaller, higher density developments around shared open and green spaces.

Administration

A Special Permit authorizing a Cottage Court may be granted by the Planning Board if consistent with the following:

- A.) The subject lot's area meets the minimum criteria of the underlying zoning district – 40,000 s.f. in the R-3 zoning district, and 80,000 s.f. in the R5 zoning district.
- B.) As part of its Special Permit decision, the Planning Board may, at its sole discretion, set a unique schedule of lot coverage and setback dimensional regulations.
- B.) The subject lot is served by either a public or private wastewater treatment facility. No Cottage Court may be permitted unless this provision is met.
- C.) Cottages shall have a minimum gross floor area of 300 square feet and a maximum gross floor area of 1,500 s.f.
- D.) Cottages and accessory buildings within a particular cluster shall be designed within the same "family" of architectural styles. Examples include:
 - a. Similar building/roof form and pitch.

- b. Similar siding materials.
- c. Similar porch detailing.
- d. Similar window trim.

Diversity within the “family” of architectural styles should be achieved to the maximum extent practicable by considering variations in color, variations in façade details, and/or roof gables, and other design features that would enhance visual interest and character of the cottage court.

- E.) At a minimum, there shall be at least one (1) parking space provided per cottage but shall not exceed a ratio of 2:1.
- F.) The Cottage Court is configured in one (1) of the following three (3) ways:
 - a.) Corner Court – When cottages are built entirely on a corner lot with combined frontage on two (2) intersecting thoroughfares.
 - b.) Through-Court - When cottages are built on a through-lot or are assembled from lots with combined frontage on two non-intersecting streets.
 - c.) Interior Court – When cottages are built entirely on an interior lot or are assembled from lots with combined frontage on only one street.
- G.) The courtyard is constructed in accordance with a landscaping plan approved by the Planning Board and is consistent with plantings recommended by the Cape Cod Commission as suitable for low-impact design adopted on April 05, 2006.

Prohibitions

- 1.) Cottage Courts may not contain public or private streets.
- 2.) Pedestrian walkways and sidewalks providing access within a Cottage Court may not exceed a width of 10 feet.
- 3.) Any unit within a Cottage Court shall not be used for boarding and lodging, or other commercial use. A unit within a Cottage Court be rented for periods of at least 30 consecutive days at a time and are prohibited from any use as rental units on a weekly or daily basis. Property owners (for rentals) or unit owners or lessees who fail to comply with this requirement shall be subject to a three-hundred dollar (\$300) fine each day that this violation persists.

Mandatory Provision of Affordable Units

As a condition of approval for a Cottage Court Special Permit, the applicant shall contribute to the local stock of affordable unit in accordance with the following requirements:

- 1.) At least one (1) for each ten (10) cottages allowed as part of a Cottage Court shall be reserved for construction only of a permanently deed-restricted home meeting the low income affordability requirements of MGL C. 40B as it existed on October 18, 2010.

- 2.) Provision of a permanently deed-restricted unit may be provided on an alternate locus if providing such a unit within the Cottage Court is infeasible.
- 3.) An equivalent fees-in-lieu of payment may be made to the Mashpee Affordable Housing Trust for future affordable housing purposes.
- 4.) An applicant may offer, and the Planning Board may accept, donations of land in fee simple, on or off-site, that the Planning Board in its sole discretion determines are suitable for the construction of affordable housing units. The value of donated land shall be equal to or greater than the value of the construction or set-aside of the affordable units. The Planning Board may require, prior to accepting land as satisfaction of the requirements of this bylaw, that the applicant submit appraisals of the land in question, as well as other data relevant to the determination of equivalent value.

DRAFT



Kevin M. Kirrane
Brian F. Garner
Christopher J. Kirrane
Jessica C. Sommer

Patricia McGauley, *of Counsel*
Elizabeth A. McNichols, *of Counsel*
Michael A. Dunning, *of Counsel*

Nicole B. Norkevicius
Christopher A. Veara

March 9, 2022

Sent via e-mail:

planningboard@mashpeema.gov
elehrer@mashpeema.gov

Mr. Evan Lehrer
Mashpee Town Planner
16 Great Neck Road
Mashpee, MA 02649

RE: 9 Shellback Way
Mashpee, Massachusetts

Dear Mr. Lehrer:

It is requested that the applicants be permitted to withdraw their Application for a Special Permit without prejudice, at this time, as this property is the subject matter of a referral to the Cape Cod Commission.

Thank you in anticipation of your cooperation.

Very truly yours,



Christopher J. Kirrane

CJK:amb

cc: Lisa Dillon,
Cape Cod Commission
via facsimile (508) 362-3136 and
Kimberly A. Bielan, Esquire
via email: kbielan@lawmtm.com

First offense	Warning
Second offense	Fifty Dollars (\$50.00) per sign
Third and Subsequent offense	One Hundred Dollars (\$100.00) per sign

ARTICLE XI - Floodplain Zone Provisions

§174-58 General provisions

Permits for new construction, alteration of structures or other development (any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations), at or below the base flood elevation as specified within the A and V Zones (in unnumbered A Zones), in the absence of Flood Insurance Administration data, the base flood elevations shall be determined by obtaining, reviewing and reasonably utilizing any existing base flood elevation data from federal, state, local or other sources) as designated on special Flood Insurance Administration Flood Insurance Rate Maps dated July 16, 2014, and the Flood Insurance Study dated July 16, 2014, which are on file with the Town Clerk, Planning Board and Building Inspector, shall be approved subject to other laws and bylaws applicable thereto and to the following.

History: Amended 10-1-2001, ATM, Article 15, approved by Attorney General 12-6-2001

History: Amended 5-5-2014, ATM, Article 14, approved by Attorney General 6-11-2014

§174-59 New Construction or Substantial Improvement



New construction or substantial improvement* [repair, construction or alteration containing fifty percent (50%) or more of the market value of the structure before improvement or, if damaged, before the damage occurred] of residential structures shall have the lowest floor, including basement, elevated to not less than base flood elevations. New construction or substantial improvement of nonresidential structures shall either be similarly elevated or, together with attendant utility** and sanitary facilities, be floodproofed to not less than base elevations.

NOTES:

* **Substantial improvement will have been deemed to occur when the first alteration of any structural part of the building commences.**

****Utilities include electrical, heating, ventilation, plumbing, air-conditioning equipment and sanitary and other service facilities.**

§174-60 Certification of Floodproofing Methods



Where floodproofing is required in accordance with §174-59, a registered engineer or architect shall certify that the floodproofing methods are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood.

§174-61 Compliance with State Building Code

Any new construction or substantial improvement to be undertaken within said zones shall be in accordance with the Massachusetts Uniform Building Code, Section 744.0, as amended. The Building Inspector shall review all proposed development within the flood zones to assure that all necessary permits which are obtainable at such time have been received from those governmental agencies from which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Amendments of 1972, 33 U.S.C. § 1334, and obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state, local or other source as criteria for requiring that new construction, substantial improvements or other development in Zone AE meet floodplain zone provisions.

History: Amended 5-5-2014, ATM, Article 15, approved by Attorney General 6-11-2014

§174-62 Development within V Zones



No land within areas designed as V (velocity) Zones on the Federal Emergency Management Agency Flood Insurance Rate Maps shall be developed unless such development is demonstrated by the application to be located landward of the reach of the mean high tide. Notwithstanding the applicable provisions of the Massachusetts Uniform Building Code, all new construction and substantial improvement within the V Zones shall be elevated on adequately anchored pilings or columns and securely anchored to such piles or

columns so that the lowest portion of the structural members of the lowest floor, excluding the pilings or columns, is elevated to or above the base flood elevation, and certified by a registered professional engineer or architect that the structure is securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash. The following shall be prohibited within said V Zones:

- A. Any man-made alteration of sand dunes which might increase the potential for flood damage.
- B. Use of fill for structural support for new construction or substantial improvement of structures.
- C. Manufactured homes, except in existing manufactured home parks and existing manufactured home subdivisions.

History: Amended 5-5-2014, ATM, Article 14, approved by Attorney General 6-11-2014

§174-63 Variation of Restrictions



The Zoning Board of Appeals may vary the restrictions and requirements set forth in this Article in the case of new structures or where there is to be substantial improvement or other development on a lot of one-half (1/2) acre in size or less, contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, provided that the following are met:

- A. A showing of good and sufficient cause.
- B. A determination that failure to grant the Special Permit would result in exceptional hardship to the applicant.
- C. A determination that the granting of the Special Permit will not result in increased flood heights, additional threats to public safety, extraordinary public expense or any conflict with requirements in accordance with Chapter 40A of the Massachusetts General Laws.
- D. The Zoning Board of Appeals has notified the applicant for the Special Permit, in writing, that the actuarial rates will increase as the first-floor elevation level increases risks to life and property.

§174-64 Record and Report of Special Permits

Upon the granting of such Special Permits, the Zoning Board of Appeals shall require that the Town of Mashpee shall maintain a record of all Special Permit actions, including justification for their issuance, and report such Special Permits issued in its annual report to the Food Insurance Administrator in accordance with the Department of Housing and Urban Development guidelines.

§174-65 Manufactured Home Parks and Subdivisions

Notwithstanding the applicable provisions of the Massachusetts Uniform Building Code within Zones AE, for new manufactured home parks and manufactured home subdivisions and for exiting manufactured home parks and manufactured home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced, lots are to be elevated on compacted fill or on pilings so that the lowest floor of the manufactured home will be at or above the base flood level; adequate surface drainage and access for a hauler must be provided; and, in the instance of elevation on pilings, lots must be large enough to permit steps, piling foundations must be placed in stable soil no more than ten (10) feet apart and reinforcement must be provided for pilings more than six (6) feet above the ground level.

History: Amended 5-5-2014, ATM, Article 15, approved by Attorney General 6-11-2014



§174-66 Manufactured Homes not in Parks or Subdivisions

Notwithstanding the applicable provisions of the Massachusetts Uniform Building Code, in all manufactured homes to be placed within Zones AE but not into a manufactured home park or manufactured home subdivision:

History: Amended 5-5-2014, ATM, Article 14, approved by Attorney General 6-11-2014

- A. Manufactured Homes must be elevated on compacted fill or on pilings so that the lowest floor of the manufactured home will be at or above the base flood level.
- B. Adequate surface drainage and access for a hauler must be provided.
- C. In the instance of elevation on pilings, lots must be large enough to permit steps, piling foundations must be placed in stable soil no more than ten (10) feet apart and reinforcement must be provided for piers more than six (6) feet above ground level.

§174-67 Historic District Procedures



The Zoning Board of Appeals may grant a Special Permit for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in §174-62 above.

§174-67.1 Subdivisions

History: Added 5-5-2014 ATM, Article 14, approved by Attorney General 6-11-2014

All Subdivision proposals shall be designed to ensure that:

- A. All public utilities and facilities are located and constructed to minimize or eliminate flood damage; and
- B. Adequate drainage is provided to reduce exposure to flood hazards.

§174-67.2 Other Regulations

History: Added 5-5-2014 ATM, Article 14, approved by Attorney General 6-11-2014

In Zone AE, along watercourses that have not had a regulatory floodway designated, the best available Federal, State, local, or other floodway data shall be used to prohibit encroachments in floodways which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

§174-68 More Restrictive Regulations to Apply

Where these flood area provisions impose greater or lesser restrictions or requirements than those of other applicable bylaws or regulations, the more restrictive shall apply.

ARTICLE XII - Mashpee River and Quashnet River-Protective Districts

§174-69 Purpose

The purpose of this Article is the preservation of the Mashpee River and Quashnet River and the protection of wildlife resources.

§174-70 Designation of Areas

The area affected shall be the Mashpee River and Quashnet River marshes and uplands up to one hundred (100') horizontal feet from the natural bank of the Mashpee River and Quashnet River as delineated on the plan entitled "Mashpee River Protective Zoning Bylaw." All distances shall be measured in horizontal feet. In tidal areas, the area affected shall be measured from a line which is two and eight-tenths (2.8) feet above the National Geodetic Vertical Datum (formerly known as "mean sea level"). In freshwater wetland areas, this shall mean the landward edge of the freshwater marsh as defined in MGL C. 131, §40. The area subject to this Article shall be the source of the Mashpee River beginning at the northern point, thence running in a southerly direction along the natural bank to a depth of one hundred (100') feet on both sides of the Mashpee River terminating on the western bank of the river on the southern point of Parcel No 8 located on Assessor's Map 95, now or formerly of Herbert Stenberg, thence running southerly and terminating on the east side of the Mashpee River bounded by Parcel No. 24 located on Assessor's Map No. 90, also known as the northerly boundary of Pirate's Cove. The area known as Pirate's Cove and all areas south of Pirate's Cove shall be excluded from the provisions of the Article. The following area shall

Massachusetts 2020 Model Floodplain Bylaws

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Section 1.	Introduction
Section 2.	Local Required Bylaws
Section 3.	Required Definitions
Section 4.	Explanations

Section 1. Introduction

After years of devastation from flooding across the nation, Congress created the National Flood Insurance Act of 1968 in an attempt to offer flood disaster relief in the form of insurance. This insurance would be available to residents of communities that voluntarily adopt and enforce floodplain management ordinances that meet at least minimum National Flood Insurance Program (NFIP or the Program) requirements.

According to FEMA's Community Status Book, the first Massachusetts community to officially participate in the NFIP was the Town of Wareham, who joined the NFIP on May 28, 1971. Most other MA communities quickly followed suit in the 1970s and early 1980s. The State NFIP Coordinating Office was created by Executive Order of the Governor in 1978 and is housed under the Water Resources Commission in the Department of Conservation & Recreation's Flood Hazard Management Program.

This document has been prepared in order to assist NFIP communities in Massachusetts to understand the minimum requirements of the NFIP, and to assure that their local bylaws or ordinances contain the necessary and proper language for compliance with the Program.

The local floodplain overlay district is established as an overlay to all other districts. In Massachusetts, the floodplain overlay district bylaw or ordinance is part of a federal requirement for communities that choose to participate in the NFIP. However, the state already administers regulations that take care of many floodplain management requirements and concerns. Referencing existing regulations is important to ensure that projects have been reviewed under the appropriate state regulations and that variances to the conditions of the bylaw do not erroneously allow variances to state requirements.

All development in the floodplain overlay district, including structural and non-structural activities, whether permitted by right or by special permit must be in compliance with the following:

- 780 CMR- Massachusetts Statewide Building Code
- 310 CMR- Department of Environmental Protection Regulations

For those NFIP requirements that are not found in the above state regulations, the community must adopt these requirements in their bylaws (towns) or ordinances (cities.) The following section contains all NFIP requirements that must be adopted as local regulations, since they are not found in the above listed regulations.

Section 3 contains floodplain management definitions that FEMA Region I feels are critical for inclusion in local codes.

Section 4 of this document offers explanations to support local understanding of these requirements.

Section 2. Required Local Bylaws

For those National Flood Insurance Program minimum requirements that are not found in existing state law, the following articles must be adopted by the community as a part of their local bylaws or ordinances, if these are not already adopted. The suggested language in this section is compliant with the federal requirements.

1. Stated local purpose for flood resistant standards

The purpose of the Floodplain Overlay District is to:

- 1) Ensure public safety through reducing the threats to life and personal injury
- 2) Eliminate new hazards to emergency response officials
- 3) Prevent the occurrence of public emergencies resulting from water quality, contamination, and pollution due to flooding
- 4) Avoid the loss of utility services which if damaged by flooding would disrupt or shut down the utility network and impact regions of the community beyond the site of flooding
- 5) Eliminate costs associated with the response and cleanup of flooding conditions
- 6) Reduce damage to public and private property resulting from flooding waters

2. Use of FEMA maps and supporting studies

A community must select the appropriate option as follows:

A. Bylaw text for communities with “Community-Based” FIRMs, FBFM and FIS

The Floodplain District is herein established as an overlay district. The District includes all special flood hazard areas designated on the [Town or City]’s Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency for the administration of the National Flood Insurance Program, dated [effective map dates on FIRM] and on the Flood Boundary & Floodway Map (if applicable) dated [FBFM effective date.] These maps indicate the 1%-chance regulatory floodplain. The exact boundaries of the District shall be defined by the 1%-chance base flood elevations shown on the FIRM and further defined by the Flood Insurance Study (FIS) report dated [FIS date.] The effective FIRM, FBFM, and FIS report are incorporated herein by reference and are on file with the Town Clerk, Planning Board, Building Official, Conservation Commission and [other.]

OR

B. Bylaw text for communities with “Countywide” FIRMs and FIS

The Floodplain District is herein established as an overlay district. The District includes all special flood hazard areas within [Community Name] designated as Zone A, AE, AH, AO, A99, V, or VE on the [County Name] Flood Insurance Rate Map (FIRM) dated [FIRM date] issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program. The exact boundaries of the District shall be defined by the 1%-chance base flood elevations shown on the FIRM and further defined by the [County Name] Flood Insurance Study (FIS) report dated [FIS date]. The FIRM and FIS report are incorporated herein by reference and are on file with the Town Clerk, Planning Board, Building Official, Conservation Commission and [other].

3. Abrogation and greater restriction section

The floodplain management regulations found in this Floodplain Overlay District section shall take precedence over any less restrictive conflicting local laws, ordinances or codes.

4. Disclaimer of liability

The degree of flood protection required by this bylaw [ordinance] is considered reasonable but does not imply total flood protection.

5. Severability section

If any section, provision or portion of this bylaw [ordinance] is deemed to be unconstitutional or invalid by a court, the remainder of the ordinance shall be effective.

6. Designation of community Floodplain Administrator

The Town/City of _____ hereby designates the position of _____ to be the official floodplain administrator for the Town/City.

7. Requirement to submit new technical data

If the Town/City acquires data that changes the base flood elevation in the FEMA mapped Special Flood Hazard Areas, the Town/City will, within 6 months, notify FEMA of these changes by submitting the technical or scientific data that supports the change(s.) Notification shall be submitted to:

FEMA Region I Risk Analysis Branch Chief
99 High St., 6th floor, Boston, MA 02110

And copy of notification to:

Massachusetts NFIP State Coordinator
MA Dept. of Conservation & Recreation, 251 Causeway Street, Boston, MA 02114

8. Variances to building code floodplain standards

CHOOSE THE APPROPRIATE OPTION:

A. If the State issues variances to the flood-resistant standards as found in the state building code, the community will use this text for local adoption:

The Town/City will request from the State Building Code Appeals Board a written and/or audible copy of the portion of the hearing related to the variance, and will maintain this record in the community's files.

The Town/City shall also issue a letter to the property owner regarding potential impacts to the annual premiums for the flood insurance policy covering that property, in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property.

Such notification shall be maintained with the record of all variance actions for the referenced development in the floodplain overlay district.

B. Certain communities have the authority to issue variances to the state building code. If your community has this authority from the BBRS, you will use this text for local adoption:

Variations to floodplain development regulations shall only be issued upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

A written justification for the variance will be maintained in the Town's/City's building permit files, delineating the technical reason for the variance, and stating that the variance is the minimum necessary (considering the flood hazard) to afford relief.

The Town/City shall also issue a letter to the property owner regarding potential impacts to the annual premiums for the flood insurance policy covering that property, in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property.

Such notification shall be maintained with the record of all variance actions for the referenced development in the floodplain overlay district.

[9. Variations to local Zoning Bylaws related to community compliance with the National Flood Insurance Program \(NFIP\)](#)

A variance from these floodplain bylaws must meet the requirements set out by State law, and may only be granted if: 1) Good and sufficient cause and exceptional non-financial hardship exist; 2) the variance will not result in additional threats to public safety, extraordinary public expense, or fraud or victimization of the public; and 3) the variance is the minimum action necessary to afford relief.

[10. Permits are required for all proposed development in the Floodplain Overlay District](#)

The Town/City of _____ requires a permit for all proposed construction or other development in the floodplain overlay district, including new construction or changes to existing buildings, placement of manufactured homes, placement of agricultural facilities, fences, sheds, storage facilities or drilling, mining, paving and

any other development that might increase flooding or adversely impact flood risks to other properties.

11. Assure that all necessary permits are obtained

(Town/City)_____’s permit review process includes the use of a checklist of all local, state and federal permits that will be necessary in order to carry out the proposed development in the floodplain overlay district. The proponent must acquire all necessary permits, and must submit the completed checklist demonstrating that all necessary permits have been acquired.

12. Subdivision proposals

All subdivision proposals and development proposals in the floodplain overlay district shall be reviewed to assure that:

- (a) Such proposals minimize flood damage.
- (b) Public utilities and facilities are located & constructed so as to minimize flood damage.
- (c) Adequate drainage is provided.

13. Base flood elevation data for subdivision proposals

When proposing subdivisions or other developments greater than 50 lots or 5 acres (whichever is less), the proponent must provide technical data to determine base flood elevations for each developable parcel shown on the design plans.

14. Unnumbered A Zones

In A Zones, in the absence of FEMA BFE data and floodway data, the building department will obtain, review and reasonably utilize base flood elevation and floodway data available from a Federal, State, or other source as criteria for requiring new construction, substantial improvements, or other development in Zone A as the basis for elevating residential structures to or above base flood level, for floodproofing or elevating nonresidential structures to or above base flood level, and for prohibiting encroachments in floodways.

15. Floodway encroachment

In Zones A, A1-30, and AE, along watercourses that have not had a regulatory floodway designated, the best available Federal, State, local, or other floodway data shall be used to prohibit encroachments in floodways which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

In Zones A1-30 and AE, along watercourses that have a regulatory floodway designated on the Town's/City's FIRM or Flood Boundary & Floodway Map (choose map which delineates floodways for your community) encroachments are prohibited in the regulatory floodway which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

16. Watercourse alterations or relocations in riverine areas

In a riverine situation, the _____ (appropriate official in community) shall notify the following of any alteration or relocation of a watercourse:

- Adjacent Communities, especially upstream and downstream
- Bordering States, if affected
- NFIP State Coordinator
Massachusetts Department of Conservation and Recreation
251 Causeway Street, 8th floor
Boston, MA 02114
- NFIP Program Specialist
Federal Emergency Management Agency, Region I
99 High Street, 6th Floor
Boston, MA 02110

17. AO and AH zones drainage requirements

Within Zones AO and AH on the FIRM, adequate drainage paths must be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

18. Recreational vehicles

In A1-30, AH, AE Zones, V1-30, VE, and V Zones, all recreational vehicles to be placed on a site must be elevated and anchored in accordance with the zone's regulations for

foundation and elevation requirements or be on the site for less than 180 consecutive days or be fully licensed and highway ready.

19. Protection of dunes

Alteration of sand dunes is prohibited when the alteration would increase potential flood damage.

20. Local Enforcement

This is not sample bylaw text, but rather an instruction:

Please read the explanation in Section 4 about the importance of being able to point to specific local enforcement procedures for non-compliant floodplain development.

Section 3. Definitions not found in the State Building Code

National Flood Insurance Program (NFIP) definitions are found in Title 44 of the Code of Federal Regulations, section 59.1. The definitions below refer to their source; if the definition is from the MA building code, it is from the 9th Edition, which meets the minimum standards of the NFIP.

In order for the bylaw or ordinance to be clearly understood, it is necessary to define technical terms or key words. An understanding of these terms is a prerequisite to effective administration of the floodplain management bylaw or ordinance.

Per FEMA Region I, these additional definitions must be included in local bylaws or ordinances.

DEVELOPMENT means any man-made change to improved or unimproved real estate, including but not limited to building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials. [US Code of Federal Regulations, Title 44, Part 59]

FLOOD BOUNDARY AND FLOODWAY MAP means an official map of a community issued by FEMA that depicts, based on detailed analyses, the boundaries of the 100-year and 500-year floods and the 100-year floodway. (For maps done in 1987 and later, the floodway designation is included on the FIRM.)

FLOOD HAZARD BOUNDARY MAP (FHBM.) An official map of a community issued by the Federal Insurance Administrator, where the boundaries of the flood and related erosion areas having special hazards have been designated as Zone A or E. [US Code of Federal Regulations, Title 44, Part 59]

FLOODWAY. The channel of the river, creek or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. [Base Code, Chapter 2, Section 202]

FUNCTIONALLY DEPENDENT USE means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities. [US Code of Federal Regulations, Title 44, Part 59] Also [Referenced Standard ASCE 24-14]

HIGHEST ADJACENT GRADE means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure. [US Code of Federal Regulations, Title 44, Part 59]

HISTORIC STRUCTURE means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

- (1) By an approved state program as determined by the Secretary of the Interior or

- (2) Directly by the Secretary of the Interior in states without approved programs.

[US Code of Federal Regulations, Title 44, Part 59]

NEW CONSTRUCTION. Structures for which the start of construction commenced on or after the effective date of the first floodplain management code, regulation, ordinance, or standard adopted by the authority having jurisdiction, including any subsequent improvements to such structures. *New construction includes work determined to be substantial improvement.* [Referenced Standard ASCE 24-14]

RECREATIONAL VEHICLE means a vehicle which is:

- (a) Built on a single chassis;

- (b) 400 square feet or less when measured at the largest horizontal projection;

- (c) Designed to be self-propelled or permanently towable by a light duty truck; and

- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

[US Code of Federal Regulations, Title 44, Part 59]

REGULATORY FLOODWAY - see FLOODWAY.

SPECIAL FLOOD HAZARD AREA. The land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE or V1-30. [Base Code, Chapter 2, Section 202]

START OF CONSTRUCTION. The date of issuance for new construction and substantial improvements to existing structures, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a basement, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling

units or not part of the main building. For a substantial improvement, the actual “start of construction” means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building. [Base Code, Chapter 2, Section 202]

STRUCTURE means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. [US Code of Federal Regulations, Title 44, Part 59]

SUBSTANTIAL REPAIR OF A FOUNDATION. When work to repair or replace a foundation results in the repair or replacement of a portion of the foundation with a perimeter along the base of the foundation that equals or exceeds 50% of the perimeter of the base of the foundation measured in linear feet, or repair or replacement of 50% of the piles, columns or piers of a pile, column or pier supported foundation, the building official shall determine it to be substantial repair of a foundation. Applications determined by the building official to constitute substantial repair of a foundation shall require all existing portions of the entire building or structure to meet the requirements of 780 CMR. [As amended by MA in 9th Edition BC]

VARIANCE means a grant of relief by a community from the terms of a flood plain management regulation. [US Code of Federal Regulations, Title 44, Part 59]

VIOLATION means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in §60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided. [US Code of Federal Regulations, Title 44, Part 59]

ZONES, FLOOD – *These definitions do not need to be included in local bylaws.*

Definitions of Flood Zones

The community shall use the pertinent definitions for flood zones delineated within the community. All of these terms are defined in the US Code of Federal Regulations, Title 44, Part 64.3.

ZONE A means an area of special flood hazard without water surface elevations determined

ZONE A1-30 and ZONE AE means area of special flood hazard with water surface elevations determined

ZONE AH means areas of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) feet, and with water surface elevations determined

ZONE AO means area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft. (*Velocity flow may be evident; such flooding is characterized by ponding or sheet flow.*)

ZONE A99 means area of special flood hazard where enough progress has been made on a protective system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. (Flood elevations may not be determined.)

ZONES B, C, AND X means areas of minimal or moderate flood hazards or areas of future-conditions flood hazard. (*Zone X replaces Zones B and C on new and revised maps.*)

ZONE V means area of special flood hazards without water surface elevations determined, and with velocity, that is inundated by tidal floods (coastal high hazard area)

ZONE V1-30 and ZONE VE (*for new and revised maps*) means area of special flood hazards, with water surface elevations determined and with velocity, that is inundated by tidal floods (coastal high hazard area)

Section 4. Explanations

The requirements of the NFIP can be found in the US Code of Federal Regulations, Title 44 Emergency Management, generally in sections 59 through 75, although the requirements that most specifically address development in the floodplain are found in section 60.3. The highlighted bold italic type below states the requirement as found in the federal code and is followed by the code citation.

1. Stated local purpose for flood resistant standards

To justify the community's reasoning behind local floodplain overlay district zoning bylaws, the NFIP requires:

A purpose section citing health, safety, and welfare reasons for adoption [44 CFR 59.22(a)(1)]

The statement of purpose should set forth the goals and objectives to be achieved through the bylaw or ordinance. In other words, the statement of purpose enumerates what the community intends to accomplish by enacting regulations. The underlying purpose of the floodplain management regulations is to protect the public health, safety, and general welfare and to minimize the harmful impacts of flooding upon the community

These stated purposes will be ever more critical as community liabilities increase due to climate changes and increased flooding/ flood damages. The community is responsible to assure that all development is implemented in a safe, healthy, and socially/economically acceptable manner.

2. Use of FEMA maps and supporting studies

For local adoption of current effective FEMA flood maps and Flood Insurance Studies (FIS), the NFIP requirements state:

Adopt or reference correct Flood Insurance Rate Map (and where applicable, Flood Boundary Floodway Map) and date. [44CFR 60.2(h)]

and

Adopt or reference correct Flood Insurance Study and date. [44CFR 60.2(h)]

FEMA guidance (publication #495) states:

“The basis of your community’s floodplain management regulations is the flood hazard data FEMA provides. In support of the NFIP, FEMA identifies flood hazards nationwide and publishes and periodically updates flood hazard data. These data are provided to communities in the form of a Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report...”

and *“Each time FEMA provides your community with new or revised flood hazard data, you must either adopt new floodplain management regulations to incorporate the data into your ordinance or amend the existing ones to reference the new FIRM and FIS report.”*

Communities that fail to enact the necessary floodplain management regulations will be suspended from participation in the NFIP and subject to the prohibitions contained in Section 202(a) of the 1973 Act as amended. (Text from actual FEMA Letter of Final Determination.)

3. Abrogation and greater restriction section

The community must provide that floodplain management regulations take precedence over any less restrictive conflicting local laws, ordinances or codes. [44CFR 60.1(b)]

This is a legal provision that specifies that the floodplain management bylaw, ordinance, regulations, and building codes take precedence over less restrictive requirements.

4. Disclaimer of liability

The community must state that the degree of flood protection required by the ordinance is considered reasonable but does not imply total flood protection.

5. Severability section

If any section, provision or portion of the ordinance is deemed unconstitutional or invalid by a court, the remainder of the ordinance shall still be effective.

6. Designation of community Floodplain Administrator

Designate the official responsible to submit a report to the Federal Insurance Administrator concerning the community participation in the Program, including, but not limited to the development and implementation of floodplain management regulations. [44CFR 59.22 (b)]

The community must designate by title one person to act as the community's floodplain administrator (sometimes referred to as the FPA.). This is so that FEMA can use this information in their local contacts database, and so that this person can act on behalf of the community when implementing certain tasks under the National Flood Insurance Program. For example, the local FPA would sign the Community Acknowledgement Form when a property owner wishes to file for a Letter of Map Revision (LOMR).

The designation refers to a local staff position and can be anyone with the local authority to assure that the community is meeting its obligations as a participant in the National Flood Insurance Program. The FPA does not need to be someone who is directly involved in local development, but it should be someone who has at least a general concept of NFIP requirements and of the community's obligations under the Program. Typically, across the nation the FPA can be a building commissioner, town manager, town engineer, director of planning, environmental planner, etc.

Typical duties of an FPA include but are not limited to:

- a) Understanding the regulations for development in the floodplain overlay district
- b) Ensuring that permits are applied for when development of any kind is proposed in the floodplain overlay district
- c) Involvement with the permit process and/or permit application review for development in the floodplain overlay district
- d) Coordinating with other local departments such as public works, stormwater/engineering, planning & zoning, conservation commission, or housing
- e) Notifying adjacent communities prior to alteration of a watercourse
- f) Dealing with compliance issues and enforcement actions such as correcting violations, or working with the appropriate local staff to correct violations
- g) Maintaining records of floodplain development, and keeping FEMA current and historic maps available for public inspection

7. Requirement to submit new technical data

Within 6 months, notify FEMA of changes in the base flood elevation by submitting technical or scientific data so insurance & floodplain management can be based on current data. [44CFR 65.3]

Many development changes to the floodplain will trigger the requirement to file a Letter of Map Revision or other type of Letter of Map Change. When the development does not trigger the LOMC requirement but impacts the heights or extents of the base flood (usually to lower the risk), FEMA should be notified that a change was made so that in future map studies/updates this can be adequately addressed.

8. Variances to building code floodplain standards

44CFR 60.6(a)(3-6):

(3) Variances shall only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

(5) A community shall notify the applicant in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a)(6) of this section.

(6) A community shall (i) maintain a record of all variance actions, including justification for their issuance

Because a variance can lead to an increased risk to life and property, variances from flood elevation requirements or other floodplain management requirements should be granted only rarely. Variances for floodplain development regulations must show that:

- Good and sufficient cause and exceptional hardship exist;
- The variance will not result in additional threats to public safety, extraordinary public expense, or fraud or victimization of the public; and
- The variance is the minimum action necessary to afford relief.

In Massachusetts, typically the State Building Code Appeals Board issues a variance to the state building code, unless your community is one of those approved by BBRS for local variance authority. When a local building official's interpretation of the flood-resistant standards under the building code are contested through the appeal process, the community must keep written documentation of both:

- a. the justification for local decision to deny the permit, and
- b. the results of the state's appeal/variance hearing (either in agreement with the local community, or having granted the variance through appeal.)

The community must also send a letter to the property owner stating that the implications of this variance may adversely impact the cost of the flood insurance policy covering the structure.

A FEMA suggestion for language to be used in such a letter is as follows:

“The granting of this variance may result in increased flood insurance premium rates, up to \$25 per \$100 of coverage, and such construction below the base flood level increases risks to life and property.”

The justification for the variance (or the denial of the variance) and the community letter must be maintained as documentation that these actions were taken.

[9. Variances to local Zoning Bylaws related to community compliance with the National Flood Insurance Program \(NFIP\)](#)

Please note: This section addresses local Zoning Board variances only, and applies only when other variance procedures (such as those under the state building code) do not cover the variance request.

§60.6 Variances and exceptions. Excerpts:

(a) The Federal Insurance Administrator does not set forth absolute criteria for granting variances from the criteria set forth in §§60.3, 60.4, and 60.5. The issuance of a variance is for flood plain management purposes only.

The community, after examining the applicant's hardships, shall approve or disapprove a request.

The Federal Insurance Administrator may review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound flood plain management, the Federal Insurance Administrator may take appropriate action under §59.24(b) of this subchapter.

Procedures for the granting of variances by a community are as follows:

(1) Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result;

(3) Variances shall only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

(5) A community shall notify the applicant in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a)(6) of this section; and

(6) A community shall (i) maintain a record of all variance actions, including justification for their issuance, and (ii) report such variances issued in its annual or biennial report submitted to the Federal Insurance Administrator.

(7) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria of paragraphs (a)(1) through (a)(4) of this section are met, and (ii) the structure or other development is protected by methods that minimize

flood damages during the base flood and create no additional threats to public safety.

For further information, see FEMA publication P-993, “Variances & the National Flood Insurance Program.”

From the State NFIP Coordinating Office: For all variances to floodplain development regulations, the community must maintain documentation that includes the variance request; determinations made by the entity granting the request that the three criterium listed above have been met; a copy of the letter to the property owner regarding possible insurance premium impacts; and that all appropriate flood protection and hazard mitigation measures were taken where applicable and possible, as specifically described in the variance file.

10. Permits are required for all proposed development in the Floodplain Overlay District

Require permits for all proposed construction and other developments including the placement of manufactured homes [44CFR 60.3(b)(1)]

NFIP requirements are focused on “development” in the floodplain. The NFIP definition of development is “*any manmade change to improved or unimproved real estate, including but not limited to building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.*” [44CFR 59.1]

Most Massachusetts communities have long used building permits to review construction in their floodplain overlay district, and conservation commissions use several documents for review of other types of development, but the regulation of all development in a floodplain is essential so that flood risks are not increased either on the site or to adjacent or upstream/downstream properties.

Some communities use a ‘Floodplain Development Review Form’ in addition to the traditional building permit, so they can document the review of all activities in the floodplain such as filling and grading; excavation, mining and drilling, storage of materials or equipment, placement of recreational vehicles or temporary stream crossings, and the review of activities conducted by other agencies such as roads or bridges built by state or federal government.

In Massachusetts, the local conservation commission reviews many of the above-listed activities, but use of a floodplain development review form for all floodplain overlay district proposals ensures that nothing slips through the cracks. This NFIP permitting

requirement is not prescriptive, but the documentation of some kind of permit or review process is mandatory for all floodplain development.

An additional benefit of documenting all floodplain development is that when a violation is discovered, the community can demonstrate that they did not approve the development as constructed, or that the developer did not come in for a full review of the development activity.

11. Assure that all necessary permits are obtained

Assure that all other State and Federal permits are obtained [44CFR 60.3(a)(2)]

While the community does not have to participate in the acquisition or review of all necessary state and federal permits for floodplain development, the community is obligated to assure that all necessary permits have been obtained by the proponent. The use of a checklist facilitates awareness for the proponent of which other permits must be obtained, generally prior to beginning the development project.

12. Subdivision proposals

Review subdivision proposals and development proposals to assure that:

(a) Such proposals minimize flood damage.

(b) Public utilities and facilities are located & constructed so as to minimize flood damage.

(c) Adequate drainage is provided.

[44CFR 60.3(a)(4) (I thru iii)]

13. Base flood elevation data for subdivision proposals

Require base flood elevation data for subdivision proposals or other developments greater than 50 lots or 5 acres. [44CFR 60.3(b)(3)]

If a subdivision fitting this size description is proposed in the floodplain overlay district where there are not already base flood elevations (BFEs) for each parcel, then the developer must provide BFEs for each parcel so that flood-resistant standards can be appropriately applied. The developer is responsible for providing the necessary technical data to support the base flood elevations shown on his/her design drawings.

14. Unnumbered A Zones

In A Zones, in the absence of FEMA BFE data and floodway data, obtain, review and reasonably utilize base flood elevation and floodway data available from available from a Federal, State, or other source as criteria for requiring new construction, substantial improvements, or other development in Zone A as the basis for elevating residential structures to or above base flood level, for floodproofing or elevating nonresidential structures to or above base flood level, and for prohibiting encroachments in floodways. [44CFR 60.3(b)(4)]

If the community has the engineering resources required to determine the base flood elevation in an unnumbered A zone, these resources can be used to meet this requirement. For those communities that do not have these resources, and even in communities that do, the permitting office can require that the proponent pay for resources to determine the base flood elevation when a development is being proposed. Historical records can be used, as well as any other data that reasonably indicates the 1% chance flood event. Two notes about this requirement:

- a) FEMA does allow a “defacto” elevation of two (2) feet above the highest adjacent grade in cases where the BFE cannot be reasonably determined, but the 9th Edition of the Massachusetts building code requires an additional foot of freeboard. This means that the top of the lowest floor would have to be three (3) feet above the highest adjacent grade.
- b) The 9th Edition of the MA building code allows communities to use preliminary FEMA maps once the Letter of Final Determination has been issued. These maps may indicate a BFE where none existed before, by virtue of the map update process.

15. Floodway encroachment

310 CMR 10.57(4) General Performance Standards.

(a) Bordering Land Subject to Flooding.

1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.

Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.

2. Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.

This standard is found in the Wetlands Protection Act (WPA), and essentially means that there is no rise allowed in the elevation of the base flood anywhere in the entire floodplain. While an official certification is not required in floodways that are not regulated (shown on the FEMA map), for the intent of the WPA to be fulfilled the community must be sure that there will be no rise in the base flood elevation. If the area is located in an unnumbered A zone, a BFE must be determined before the development is designed, so that the “no rise” standard can be demonstrated.

Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge. [44CFR 60.3(b)(6)]

Under federal NFIP requirements, the community must require certification from a registered professional that shows there will be no rise in the base flood elevation when development takes place in the regulated floodway. This cannot be accomplished by showing compensatory alone; the documentation must include a hydrologic and hydraulic (H&H) analysis.

16. Watercourse alterations or relocations in riverine areas

In riverine areas, notify neighboring communities of watercourse alterations or relocations. [44CFR 60.3(b)(6)]

Neighboring communities (and possibly a neighboring state) need to know in advance if the alteration or relocation of a watercourse might change their floodplain or flood risk. Send plans for this development to the CEOs of those communities, as well as to the Massachusetts NFIP State Coordinator and to the FEMA Regional Office.

17. AO and AH zones drainage requirements

In Zones AO and AH, require drainage paths around structures on slopes to guide water away from structures. [44CFR 60.3(c)(11)]

Guiding water away from the structure must also consider adjacent properties, where drainage cannot impact those lots or structures.

18. Recreational vehicles

In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must be elevated and anchored or be on the site for less than 180 consecutive days or be fully licensed and highway ready. [44CFR 60.3(c)(14)]

In V1-30, VE, and V Zones, all recreational vehicles to be placed on a site must be elevated and anchored or be on the site for less than 180 consecutive days or be fully licensed & highway ready. [44CFR 60.3(e)(9)]

“Fully licensed and highway ready” means that wheels must be inflated; the vehicle must be self-propelled or towable by a light-duty truck; have no attached deck, porch or shed; and have quick-disconnect sewage, water and electrical connections. In other words, the vehicle must be ready to relocate immediately upon notification of the possibility of flooding in the area.

19. Protection of dunes

Prohibit alteration of sand dunes which would increase potential flood damage. [44CFR 60.3(e)(7)]

20. Local Enforcement

The NFIP requires that the floodplain management ordinance be legally enforceable and enforced uniformly throughout the community. [44 CFR 60.1(b)]

Sample bylaw language has not been offered regarding local enforcement of flood-resistant and flood reduction standards because enforcement is typically already addressed elsewhere in codes that are locally enforced.

As a part of implementing the NFIP in a local community, however, FEMA will need to know how the community enforces these regulations and standards. Each NFIP community should be prepared to answer the following questions:

1. How do you enforce the building code in your community? What specific actions are taken, and how are these actions documented? What penalties are specified? *[Definitions and regulations related to building code enforcement are found in CMR 780 Chapter 1 Sections 114 and 115, which refer to M.G.L. c. 143, c. 148, and M.G.L. c. 148A, and specifically M.G.L. c. 143, section 94(a.)]*
2. How do you enforce the Wetlands Protection Act? What actions and documentation exist to prove that enforcement was implemented? *[Enforcement regulations related to the Wetlands Protection Act are found in 310 CMR section 10.08.]*
3. How are other NFIP floodplain development requirements enforced, such as fencing that increases flood risk, the placement of recreational vehicles in the floodplain, re-grading of large commercial properties, construction of agricultural structures, placement of tanks, pools, temporary construction offices, etc.?

FEMA will expect to hear about a rigorous enforcement program that includes specific actions taken by the community for non-compliant floodplain development. Enforcement provisions establish the responsibilities of persons, enforcement authority, what makes a violation, notice of violation, stop work and other orders, and citation and penalties for violations. These penalties may include fines and/or jail sentences.

Explanations for Definitions found in Section 3

Development. FEMA’s minimum standards for the NFIP require review of, and possibly permitting for all activities defined as development within the Special Flood Hazard Area (SFHA.) Some of these activities might not normally require permitting under existing state or local regulations, and not all of these activities might be reviewed by the building department in a community.

Flood Boundary & Floodway Map. Some communities with older mapping (typically 1987 and prior) have two sets of flood maps, the familiar Flood Insurance Rate Map (FIRM) and the Flood Boundary & Floodway Map (FBFM). The floodway is delineated only on the FBFM. Communities with a FBFM must include it in the district definition in order to enforce floodway standards.

Flood Hazard Boundary Map. Communities with very old mapping (usually prior to 1980) might have a Flood Hazard Boundary Map (FHBM). This map must be referenced in the community’s floodplain district definition. In most cases the FHBM has been converted to a FIRM by letter but the map will still say “Flood Hazard Boundary Map.”

Floodway, Regulatory Floodway. The floodway, or regulatory floodway, is established by regulation and through hydraulic analysis. It is not a natural, physical feature of the watercourse. It is part of the 100-year floodplain but has specific requirements that exceed those in the floodplain fringe (the rest of the floodplain). The NFIP standards for floodway encroachments (for example including no-rise analysis) are not in state regulations.

Functionally dependent use. This term is used in the evaluation of variances to floodplain management standards. Sometimes variances can be issued for functionally dependent uses.

Highest adjacent grade. In an AO zone, the base flood elevation is determined by adding the depth indicated on the FIRM to the highest adjacent grade, or two feet if no depth is indicated (and if no alternative floodplain analysis is conducted and applied.)

Historic structure. NFIP standards for substantial improvement include an exception for structures that are identified as historic structures. Only those structures meeting this definition are eligible for this exception.

New construction. NFIP minimum standards apply to all new construction, which includes improvements to structures defined as new construction. as follows: (1) new

construction, including subsequent work to such structures, and (2) work classified as substantial improvement of an existing structure that is not an historic structure. [ASCE 24-14]

Recreational vehicle. NFIP elevation standards can sometimes apply to these vehicles when they are placed in the SFHA.

Special Flood Hazard Area (SFHA). The flood-prone areas on the FEMA maps (and subsequently adopted in a community's Floodplain Overlay District) where NFIP minimum standards apply. within special flood hazard areas.

Start of construction. Knowing the start of construction, as defined, can sometimes determine which version of a FIRM or regulation is used in situations where the FIRM or the regulation has been or is being updated.

Structure. NFIP minimum standards apply to all structures meeting this definition.

Substantial Repair of a Foundation. This is a Massachusetts unique definition included in the 9th Edition Building Code. It is important to be familiar with this definition as Building Code standards will apply.

Variance. It is important to understand the term in order to properly administer, consider and potentially issue variances. Note that variances are not the same as (and shouldn't be confused with) similar terms and/or processes such as special permits, exceptions or exemptions. Variances to standards enforced under state regulations must be administered through the proper state authority.

Violation. Violations can affect the community's standing in the NFIP and will likely result in higher flood insurance premiums. Violations can also prevent a community from entering participating in the Community Rating System.

2020 MA Model Floodplain Bylaw **Frequently Asked Questions**

These questions were posed during the 2020 Model Bylaw training sessions offered by the state and FEMA in early October 2020. To access the Model and the presentation, go to:

<https://www.mass.gov/guides/floodplain-management>

Adoption deadline

By what date will these bylaws need to be adopted?

If your community will be receiving new maps, then the 2020 Model will be used to review your bylaws (or ordinances) as a part of your map adoption process by the effective date of the new maps.

If the state or FEMA conducts a monitoring visit or interview with your community, the 2020 Model will be used in reviewing your bylaws, and you will need to provide a date by which you will adopt them.

If neither of the above applies to your community within the next year, then we will expect that you will adopt the 2020 Model bylaws at your next earliest town meeting, or at least by the spring of 2022.

Location of bylaws in local codes

In what part of the local code should a community place these floodplain bylaws?

This decision is up to the community, but the bylaws need to reside in an adopted and enforceable part of your codes (bylaws or ordinances.) You may gather them together under your Floodplain Overlay District section of your zoning bylaws, put them together in your wetlands bylaws, or other reasonable location where citizens and floodplain developers can find them. Some of these pertain to subdivisions, and may go in that section. Wherever the bylaws reside, we will need you to cite them for us when we review your code if we cannot find them.

What about towns that don't have wetlands bylaws?

Many communities put these bylaws in their zoning regulations, typically under a Floodplain Overlay District section.

If we address subdivisions and flood elevations in the Subdivisions Rules & Regulations, do we also need to include the subdivision language in our Floodplain Overlay District zoning bylaw?

The bylaws do not need to be duplicated in different parts of your local codes, but you will need to enforce them throughout your floodplains, so it would be best to put them where developers can find them for proposed projects.

Map references

How do we know whether to use the community or county map references section?

On your community's flood maps, the name of the community (town, city, or county) is shown on the title panel at the lower right corner. If you need assistance in making this determination, you can contact Eric Carlson at eric.carlson@mass.gov.

Do we still need to insert all the panel numbers and dates as we did before?

FEMA is no longer requiring that each map panel be separately referenced. The date of the Index (of maps) and the Flood Insurance Study must each be referenced. Using the provided bylaw text should make this easy.

Legal purpose bylaws

What if we have these (abrogation/ greater restriction, disclaimer of liability, severability) in a different part of our local codes? Do we have to move or add them to the Floodplain Overlay District section?

No. As long as you can cite them from an enforceable part of your adopted code, they can stay right where they are. No need to add to another section.

Floodplain Administrator (FPA)

Can a Floodplain Administrator be designated as more than one position?

No. The purpose of designating an FPA is so that both FEMA and the state will have one contact for the community for communication regarding NFIP and floodplain matters. While we understand that best practice floodplain management means that an integrated team of people will review and enforce floodplain development, we will still need the position (and thereby the name, title, and contact information) of your designated FPA.

For FPA, is it acceptable for a community to designate an entire board or committee?

No, it's not acceptable for an entire board or committee to be the FPA. You may, however, designate the head of that group as the FPA, or perhaps the staff contact for the group.

Does the floodplain administrator need to be a Certified Floodplain Manager (CFM)?

No, but that's a worthy goal as this certification indicates both the person's and the community's desire to put forth the best floodplain management possible. Also, there may be additional points for a CRS community that requires certified staff.

Can you define the role of the Administrator more specifically?

The role of the FPA is more fully explained in the 2020 Model Bylaw, section 4.

Variations

Which communities have the authority to issue a variance to the state building code? How do we know if we are one of them?

There are very few. These communities have local Building Code Appeals Boards (in contrast to a Zoning Code Appeals Board.) If you aren't sure, you're probably not one of them. To find out, contact the staff at the Board of Building Regulations and Standards: Dan Walsh, Chief of Inspections, 617-826-5236 or dan.p.walsh@mass.gov

If building code variations are issued by the state, why is the town held responsible?

The community is not held responsible for actions by the state. The variance sections found in the 2020 Model Bylaw are there to assure that 1) the community is aware of the request for a variance from floodplain regulations; 2) if the variance is granted, that the community notify the applicant in writing that there may be increased flood risk associated with the variance, and an increase in annual flood insurance premiums; and 3) the community documents the variance and notification in their permit files for future reference.

Would allowing a variance disqualify a community from the Community Rating System?

The allowance of a variance does not disqualify a community from the Community Rating System (CRS.) A pattern of allowing frequent or unjustified variations may impact a community's standing in the NFIP, however, and may be investigated in order to find a way to reduce this practice. If the state is approving the variations, the state will be involved in such an inquiry.

Is a variance also required from the ordinance/bylaw itself?

Yes, if the variance is to the floodplain development regulations found in your local code. See the explanation for bylaw #9 in the Model, section 4.

Permit for all development

The suggested bylaw states that the community will require "a permit for all proposed construction or other development in the floodplain..." Does this mean that we have to institute a new permit form and fees for things other than the building code?

Not necessarily. Different communities use different methods to assure that all floodplain development is reviewed. The intention here is to assure that all development in the floodplain is reviewed by the community, using whatever tools the community deems best for this practice. For example, some communities use an integrated online review tool for every activity in their floodplains. Others use a checklist showing that pertinent departments and boards have signed off on the development as proposed. You may develop or use a form if that best fits your needs—whatever assures that appropriate review is being conducted for all development in the floodplain. Please see the NFIP definition of "development" in the Model to understand the reach of this bylaw.

Can things like fences and driveways be permitted through a building permit, rather than a special permit?

Your local building official knows which things can be permitted through the building code. Paving is generally covered under local bylaws; some communities put these in their zoning regulations and some in their stormwater management plans. If the pavement is to be placed where it will impact a resource area, the conservation commission will most likely need to review the proposal to determine its impact on area resources including the floodplain. However your community reviews these development types, the review needs to be documented.

Do solar arrays need to be permitted?

If the development (e.g. proposed solar arrays) is in the floodplain, then yes—it needs to be fully reviewed using some kind of documentable process such as described above.

All permits must be acquired

How do we know what other permits would apply to a particular development?

There is currently no complete checklist for permits required, but relevant state and federal agencies can help you determine what permits might be required. Here are a few suggestions:

MA Office of Coastal Zone Management (CZM) can assist with understanding coastal permits: <https://www.mass.gov/orgs/massachusetts-office-of-coastal-zone-management>

MA Dept. of Environmental Protection regional coordinators can advise on soil, water and air quality permits: <https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection> DEP can also advise for mining, dredging and drilling operations, as well as federal permits required by the EPA.

The US Army Corps of Engineers has permits for some work in waterways and tidal wetlands: <https://www.usace.army.mil/> CZM will often know about these, too.

Who is responsible to get these permits?

The applicant is responsible to get the permits, but this bylaw states that the community will assure that the necessary permits are obtained for all development in the floodplain.

More restrictive codes—comp storage vs. H&H study-- Floodway Encroachments

Is the NFIP requirement more restrictive than the MA Wetlands Protection Act for compensatory storage in the floodplain?

Possibly. The Wetlands Protection Act requires that *“Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding...”* [310 CMR 10.57(4)(a)]

The NFIP requires that the developer prove that a) in floodplains without a regulatory floodway, the development will cause no more than one foot of rise in the base flood, or b) in regulatory floodways the development will cause absolutely no rise in the base flood. This certification needs to be demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice. For more information, see the Model, section 4, item 15, or contact the state or FEMA references at the bottom of this document.

Submitting technical data & watercourse alteration notifications

What's the difference between these two bylaws? (See bylaws #7 and #16 in the Model)

Bylaw #7 regards the submission of new technical data that the community may have about the floodplain maps. This needs to go to FEMA for their files. Bylaw #16 regards changes in a watercourse (if this is allowed to happen in a community)—this information needs to be shared with adjacent communities and FEMA for their awareness. In both cases, the information should be copied to the state NFIP coordinator. See section 4 of the model for further explanation.

How do you define watercourse alteration?

A watercourse is any natural channel conveying water such as a river, stream, or creek. The alteration of this might include such practices as channelization, culverting, diversion or even daylighting a stream that was previously channeled underground.

Does changing a water course in land subject to coastal storm flowage apply?

Yes, if there is a watercourse in this resource area, the same notification would be required.

Does this only apply to watercourses within the mapped flood zones?

Good question! Most watercourses will be found in the mapped floodplain, but yes, in any case the alteration of a watercourse must be notified as written in the bylaw requirement.

Local Enforcement

Is there model language for bylaws item #20 on local enforcement?

No. A community can describe their process of local enforcement, but many of those “pieces” are found in existing codes such as the building code. Please see the explanation for this in section 4 in the Model.

What about towns that don't have non-criminal disposition to be able to issue fines?

Even if your community has not adopted the provisions of Mass General Law chapter 40, section 21D (non-criminal disposition), you must still be able to levy some type of penalty for non-compliant floodplain development. The NFIP community should work with their attorney to assure that non-compliant floodplain development will be addressed through

both violation notifications and penalties. *“The NFIP requires that the floodplain management ordinance be legally enforceable and enforced uniformly throughout the community.”* [44 CFR 60.1(b)]

Recreational Vehicles

Is recreational vehicle defined? Would it apply to food trucks?

Yes, the definition for a recreational vehicle is found in section 3 of the Model. Since part of the definition includes *“designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use,”* a food truck may or may not be considered a recreational vehicle.

Is there a difference between a recreational vehicle and a park model?

Typically a park model is treated like a manufactured home, and would need to be installed on a permanent foundation. The primary concern with a park model is that to fit under the definition of recreational vehicle, it must be self-propelled or towable by a “light-duty truck.” A light-duty truck is a United States designation for trucks and vehicles that have a gross vehicle weight of up to 8500 pounds and payload capacities of up to 4000 pounds.

[<https://www.epa.gov/moves/how-does-moves-define-light-duty-trucks>]

Is there a grandfather clause for recreational vehicles?

No. All RVs must be either installed on a permanent foundation (as would a manufactured home), or be highway ready.

What about an RV sales operation?

Great question. In most cases the RV dealership will have temporary tags so they can move the RVs (hopefully all in good operating order!) out of the floodplain should a flood alert be issued.

Protection of dunes

If we don't have dunes do we have to include the #19 bylaw about dunes?

No.

Definitions

Since these definitions seem to come primarily from the federal code, could we simply reference that code instead of adopting in local bylaw/ordinance?

No. The definitions have been in the federal code for more than four decades, but there have been many instances where local folks don't seem to be aware of them. Many other states require a much longer list of definitions (e.g. Florida), but we've slimmed down the list to those that are critical to compliant floodplain management.

The definition of structure does not appear to include decks or carports because they don't have walls and roofs. Correct?

Correct, although if a deck or carport is attached to a structure then it would be a part of the structure. A self-standing deck or carport would not necessarily be a structure, per this definition.

If we do not have the Flood Boundary & Floodway Map (FHBM) or the Flood Hazard Boundary Map (FHBM), do we have to include these definitions?

If you do not have these types of map as your current effective maps, then you do not need to include these terms in your list of definitions.

Subdivisions

Please provide some guidance in the FAQ regarding Approval Not Required (ANR) plans, as we have limited control and some can be over 5 acres. Right now we cannot treat these as a subdivision.

Even though you do not treat ANR dispositions as subdivisions, if the structure or other development in the ANR is sited in a regulated floodplain you will need to apply all of the requirements for flood resistant construction and drainage, just as you would for any other development in the floodplain.



Nashville-Davidson-Murfreesboro-Franklin in Tennessee is a top rising middle-class housing market. PHOTOS BY GETTY IMAGES

Middle-class housing dips yet some wealth is gained

Study details decade of markets in metro areas

Swapna Venugopal Ramaswamy
USA TODAY

Middle-income households saw the most dramatic slip in homeownership rates in the past decade, falling from 78% in 2010 to 70% in 2020, a new report has found.

During the same decade, the rate for low-income households declined from 49% to 47%, while the rate for high-income households slipped from 91% to 87%, according to a study by the National Association of Realtors. NAR defines "middle-income" households as those with incomes of over 80% to 200% of the area median income.

Among homeowners, both low-income and middle-income earners lost ground, made up a smaller fraction of the homeownership pie in 2020 compared with 2010. Meanwhile, a much larger chunk of high-income earners became homeowners in the same decade.

Of the homeowners, only 27% were low-income earners in 2020 compared with 38% in 2010. Middle-income homeowners composed 43% of homeowners in 2020 versus 45% in 2010. Conversely, high-income earners made up 30% of the homeowners, up from 16% in 2010.

"The study showed that it was the upper-income earners who benefited the most during this decade," says Gay Cororator, the report's lead author and the director of Housing & Commercial Research at NAR told USA TODAY. "This was a decade following the Great Recession where you saw a lot of homes being foreclosed, and it took nearly 10 years for the unemployment rate to get back from the pre-Great Recession period."

The study, Housing Wealth Gains for the Rising Middle-Class Markets, examines the distribution of housing wealth between 2010 and 2020 across income groups and in 917 metropolitan or micropolitan areas. Rising middle-income class housing markets are identified by the NAR as those that had the largest increase in the number of

Top 20 rising middle-class housing markets

Change in middle-income homeowner households in 2010-2020

Phoenix-Mesa-Scottsdale Arizona	103,690
Austin-Round Rock Texas	61,323
Nashville-Davidson-Murfreesboro-Franklin Tennessee	55,252
Dallas-Fort Worth-Arlington Texas	53,421
Houston-The Woodlands-Sugar Land Texas	52,716
Atlanta-Sandy Springs-Roswell Georgia	48,819
Orlando-Kissimmee-Sanford Florida	35,063
Portland-Vancouver-Hillsboro Oregon-Washington	34,373
Seattle-Tacoma-Bellevue Washington	31,284
Tampa-St. Petersburg-Clearwater Florida	28,979
Minneapolis-St. Paul-Bloomington Minnesota-Wisconsin	28,034
Myrtle Beach-Conway-North Myrtle Beach S. Carolina-N. Carolina	27,921
North Port-Sarasota-Bradenton Florida	27,051
Denver-Aurora-Lakewood Colorado	26,998
Cape Coral-Fort Myers Florida	26,652
Las Vegas-Henderson-Paradise Nevada	25,060
New Orleans-Metairie Louisiana	23,095
Raleigh North Carolina	22,611
Riverside-San Bernardino-Ontario California	20,193
Provo-Orem Utah	20,140



Middle-income households in growing markets have seen some big gains.

middle-class owner-occupied housing units in 2020 compared with 2010.

While housing wealth grew among all income groups, low- and middle-income households ultimately received a smaller share of the gains. The study found that of the \$8.2 trillion amassed in housing wealth from 2010 through 2020, high-income homeowners claimed roughly 71% of all wealth accumulation.

Among middle-income homeowners, total housing wealth jumped by \$2.1 trillion, or 26% of the housing wealth gains, with nearly 980,000 addi-

tional middle-income homeowner households. Among low-income homeowners, housing wealth rose by \$296 billion, or 4% of the housing-wealth gain.

"Owning a home continues to be a proven method for building long-term wealth," says Lawrence Yun, NAR chief economist. "Home values generally grow over time, so homeowners begin the wealth-building process as soon as they make a down payment and move to pay down their mortgage."

From 2010 through 2020, 58% of metropolitan and micropolitan areas gained middle-income homeowners.

The top 10 rising middle-income housing markets, with at least 50,000 more middle-income homeowner households, were: Phoenix-Mesa-Scottsdale (103,690), Austin-Round Rock (61,323), Nashville-Davidson-Murfreesboro-Franklin (55,252), Dallas-Fort Worth-Arlington (53,421), Houston-The Woodlands-Sugarland (52,716), Atlanta-Sandy Springs-

See HOUSING, Page 2B

Housing

Continued from Page 1B

Roswell (48,819), Orlando-Kissimmee-Sanford (35,063), Portland-Vancouver-Hillsboro (34,373), Seattle-Tacoma-Bellevue (31,284) and Tampa-St. Petersburg-Clearwater (28,979).

Middle-income households in these growing markets have seen big gains in price appreciation.

For instance, as of the fourth quarter of 2021, the largest price gains (as a percent of the purchase price) over the preceding decade were in Phoenix-Mesa-Scottsdale (275%), Atlanta-

Sandy Springs-Roswell (275%), Las Vegas-Henderson-Paradise (252%), Cape Coral-Fort Myers (234%) and Riverside-San Bernardino-Ontario (208%).

Nationally, a homeowner who purchased a typical single-family existing home 10 years ago at the median sales price of \$162,600 is likely to have accumulated \$229,400 in housing wealth. Of this wealth gain, 86% can be attributed to price appreciation, with the median single-family existing-home sales price rising at an annual pace of 8.3% from the fourth quarter of 2011 through the fourth quarter of 2021, the study says.

Metro markets that recorded a decrease in middle-income homeowner households over the past decade in-

clude New York-Newark-Jersey City (-100,214), Los Angeles-Long Beach-Anaheim (-73,839), Chicago-Naper-ville-Elgin (-34,420), Boston-Cambridge-Newton (-28,953), Detroit-Warren-Dearborn (-25,405) and Philadelphia-Camden-Wilmington (-22,129).

Escalating home values in metro areas such as New York and Los Angeles in the last decade made affordability a big issue for middle-income wage earners, pricing them out of the home-buying process.

“Either the middle-income earners could not afford to buy a home or they migrated into other more affordable areas,” Cororaton says. “We certainly saw a lot of out-migration in New York.”

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERWAYS REGULATION PROGRAM**

**Project Statement for Local Planning Board on Certification Application pursuant
to 310 CMR 9.29 General License Certification
22-WW-PRE-0029-APP**

Applicant Name: John Lawrence

Project Site Address: 59 Hooppole Road Mashpee, MA 02649 Barnstable County.
John's Pond, Mashpee, 02649, Barnstable County.

Project Description:

Installation of a prefabricated aluminum Dock for seasonal use to be remove and store outside of the conservation regulated areas during the off season.

The overall size of the dock is 40' long by 4' wide (4 modules 10' long by 4' wide)

The proposed Dock is light weight and does not require any tools for the Installation and removal. all connections will be pinned, clamped in place and quick connects to fit as applicable.

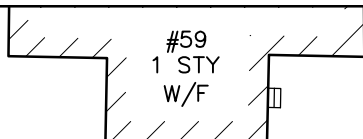
GENERAL LICENSE CERTIFICATION NO.

APPROVED BY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DATE:

FOR REGISTRY USE ONLY

PLAN VIEW



PARCEL ID:
57-44A-0
AREA: 1.70 Acres ±

PUBLIC ACCESS
ALONG SHORELINE

84'

28'

OHW
(ORDINARY
HIGH WATER)

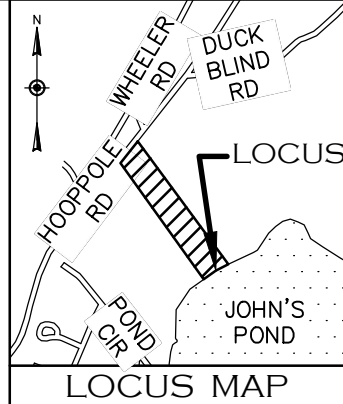
40'

OHW

JOHN'S POND

40'x10' DOCK

4" DIAMETER PILES



LOCUS MAP



SCALE 1"=30'

PROFILE VIEW

PUBLIC ACCESS
ALONG SHORELINE

40'

4.9'
2.5'

OHW

4" DIAMETER
PILES

EXISTING
BOTTOM

1. HORIZONTAL DATUM IS BASED UPON MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83), IN US SURVEY FEET.
2. VERTICAL DATUM IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), IN US SURVEY FEET.



SCALE 1"=10'

THIS PLAN CONFORMS TO THE REQUIREMENT OF THE DEED INDEX STANDARDS FOR THE COMMONWEALTH OF MASSACHUSETTS

JANUARY 1, 2008, SECTION 6:4 PLANS AS ATTACHED TO OTHER DOCUMENTS

PLAN ACCOMPANYING

PETITION OF :

JOHN LAWRENCE

59 HOOPPOLE ROAD

MASHPEE, MA 02649

PROJECT DESCRIPTION SEASONAL DOCK

IN: JOHN'S POND

AT: 59 HOOPPOLE ROAD, MASHPEE

COUNTY OF: BARNSTABLE

SHEET 1 OF 1 DATE: 03.03.22



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

Waterways Pre-Application for WW06 and WW24

Application Submitter Information

Name: JOSE DAVID PICHARDO
Phone: (508) 360-9458
Address: 114, STATE ROAD
SAGAMORE BEACH, MA 02562

General Information

Is the structure either for non-commercial use accessory to a residential property or a non-commercial community docking structure?	Yes
Is the combined area of all structures/fill that are part of the project to be authorized less than 600 square feet?	Yes
Will the structures extend a maximum of 1/4 of the width of the waterbody?	Yes

Structure Information

How many structures and/or fill areas at the project site will be included in this Chapter 91 application?	1
--	---

Ww24 Information-1

Is the structure for water-dependent use?	Yes
Is the structure limited to pile-supported structure and associated ramps and floats?	Yes
Does the fixed pile-supported structure measure a maximum width of 4 feet?	Yes
Is there safe berthing depth?	Yes

Ww24 Information-2

Does the project involves dredging or filling?	No
Is the project site in a DPA?	No
Is the project site in an ACEC?	No
Does the project include any roof structure or any superstructures?	No
Is the project a community docking structure?	No

Ww24 Information-3

Is the project site in a non-tidal waterway?	Yes
Is the structure limited to 300 Sq. ft?	Yes
Is this for seasonal use (removed annually)?	Yes
Is the structure set back at least 15 feet from both abutting property lines?	Yes

Application Status

Application Status Message

You are eligible for WW24.
Please continue to submit the application, you will receive an email from the system of your next steps.

The Commonwealth of Massachusetts



SMALL DOCK AND PIER GENERAL LICENSE FOR INLAND STRUCTURES

1. GENERAL

The Department hereby authorizes eligible structures, exclusively limited to noncommercial, small-scale, water-dependent docks, piers and similar structures that are accessory to residential use, in accordance with the provisions of M.G.L. c. 91, § 18C, and 310 CMR 9.29. The following standards shall apply:

(A). Eligible projects shall:

- a) Be limited exclusively to noncommercial, water-dependent uses accessory to residential property;
- b) Be limited to pile-supported structures and associated ramps and floats;
- c) Not be located in a Designated Port Area (DPA);
- d) Not be located in an Area of Critical Environmental Concern (ACEC);
- e) Include no associated dredging or filling;
- f) Be the only structure authorized by M.G.L. c. 91, § 18C, and 310 CMR 9.29 on said parcel;
- g) Include no roofed structures or other superstructures on any portion of the approved structure; and
- h) Preserve all rights held by the Commonwealth in trust for the public to use Great Ponds and navigable rivers and streams for lawful purposes

(B) Eligible projects shall not:

- a) Include commercial marinas or large-scale docks, piers, or similar structures;
- b) Exceed the minimum size necessary to achieve the intended water-dependent use;
- c) Extend beyond the length required to achieve safe berthing;
- d) Impair the lines of sight necessary for navigation;
- e) Interfere with access to adjoining areas by extending substantially beyond the projection of existing structures adjacent to the site;
- f) Interfere with access or public rights associated with a public landing, easement, or other public access to water;
- g) Generate water-borne traffic that would substantially interfere with other vessels; and

- h) Impair in any other substantial manner the ability of the public to swim or float freely upon the waterways.

(C) Applicability. This General License authorizes structures certified under the procedures established in 310 CMR 9.29. An affirmed Certification from the Department, once recorded by the recipient ("Certificate holder") in the appropriate Registry of Deeds, shall have the effect of making this General License applicable to a particular structure.

2. LOCATIONS

This General License authorizes placement of an eligible structure for which a Certification has been submitted and affirmed pursuant to 310 CMR 9.29 on:

Great Ponds whereby the Certificate holder shall not restrict the public's right to use and to pass freely upon lands lying below the ordinary high water mark for any lawful purpose. A list of Great Ponds is available on the MassDEP website at: <http://www.mass.gov/eea/agencies/massdep/water/watersheds/massachusetts-great-ponds-list.html>; and/or

Navigable Rivers or Streams pursuant to 310 CMR 9.04(1)(e), whereby the Certificate holder shall not restrict the public's right to use and pass freely for any lawful purpose in the waterway.

3. CONDITIONS

1. Access

- a) In accordance with any License condition, easement, or other public right of lateral passage that exists in the area of the subject property lying within a Great Pond the Certificate holder shall allow the public in the exercise of such rights to pass freely over, under or around all structures within such area. Accordingly, the Certificate holder shall place and maintain, in good repair, a public access sign on the easterly/westerly or northerly/southerly sides of the pier, dock or similar structure authorized herein, or at each property line, adjacent to the high water shoreline. Said signs shall comply with the Department's signage guidelines and shall be posted immediately upon completion of construction. Nothing in this condition shall be construed as preventing the Certificate holder from excluding the public from portions of said structure(s) or property not intended for lateral passage.
- b) In partial compensation for the private use of structures on Great Ponds or navigable rivers and streams, which interfere with the rights of the public to use such lands, the Certificate holder shall allow the public to pass on foot, for any purpose and from dawn to dusk, within the area of the subject property lying, within 5 feet of the ordinary high water mark. This condition shall not be construed to prevent the Certificate holder from taking reasonable measures to discourage unlawful activity by users of the area intended for public passage, including but not limited to trespassing on adjacent private areas and deposit of refuse of any kind or nature in the water or on the shore. Further, the exercise by the public of free on-foot passage in accordance with this condition shall be considered a permitted use to which the limited liability provisions of M.G.L. c.

21, § 17C, shall apply.

2. Eligible structures located in Great Ponds and navigable rivers and streams shall:

- a) Be for seasonal use (i.e., the structure shall be removed on an annual basis);
- b) Be no larger than a combined size of 300 square feet below the ordinary high water mark;
- c) Not exceed a maximum width of 4 feet for the pile-supported portion of the structure;
- d) Otherwise comply with the applicable provisions of this General License.

3. Unless otherwise expressly provided by this General License, the Certificate holder shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon. No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this General License.

4. Any change in use or any structural alteration of any structure by a Certificate holder shall require approved recertification in accordance with the provisions and procedures established in M.G.L. c. 91, § 18C. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure authorized herein shall render the affirmed Certification void.

5. An affirmed Certification for a structure under this General License may be revoked by the Department for noncompliance with the terms and conditions set forth herein. The affirmed Certification may be revoked after the Department has given written notice of the alleged noncompliance to the Certificate holder and those persons who have filed a written request for such notice with the Department, and afforded a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render the affirmed Certification void. The Commonwealth may then proceed to remove or cause removal of said structure at the expense of the Certificate holder, its successors and assigns as an unauthorized and unlawful structure.

6. All structures certified under this General License shall be maintained in good repair and in accordance with the terms and conditions stated herein.

7. Nothing in this General License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Certificate holder, except with the written consent of the owner(s) thereof.

8. This Waterways General License, and all affirmed Certifications of coverage thereunder are granted subject to all applicable federal, state, county, and municipal laws, ordinances and regulations, including but not limited to a valid final Order of Conditions issued pursuant to M.G.L. c. 131, § 40, the Wetlands Protection Act.

9. CONSTRUCTION CONDITIONS

9a. The project shall not significantly interfere with littoral or riparian property owners' rights to access and egress their property from the waterway. Wherever feasible, all structures shall be placed perpendicular to the shoreline. Structures located in Great Ponds and navigable rivers and streams shall be setback wherever feasible at least 25 feet from abutting property lines. In no event shall a structure on fresh water be placed closer than 15 feet to an abutting property line.

9b. Structures shall not extend beyond the length required to achieve Safe Berthing. Safe Berthing is defined herein as assuring minimum water depths of 18 inches. In areas with documented shellfish resources, said minimum Safe Berthing depth shall be no less than 30 inches. In no case shall the structure's length extend more than one fourth of the way across a water body. The structure shall otherwise conform to all other dimensional requirements stated herein.

9c. When removed, all seasonal structures shall be stored outside of wetland resources as defined in 310 CMR 10.00, except for bordering land subject to flooding in accordance with 310 CMR 10.57 and land coastal storm flowage in accordance with 310 CMR 10.04. Said storage shall be in conformance with any applicable local, state or federal requirements.

9d. All work authorized by an affirmed Certification under this General License shall be completed within 5 years of the date of the Department's affirmation. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department, 30 days prior to the expiration of said construction period, a written request to extend the period and provides an adequate justification for said extension.

9e. In order to maintain lateral public access at least a 10-foot section of the fixed pier at mean high water shall be elevated between pilings to provide a minimum clearance of 5 feet as measured from the ground to the bottom of the lowest stringer. In the alternative, stairs may be provided on either side of the pier at mean high water for public access up and over the structure. Any cross-bracing of piles shall be set parallel to the mean high water mark to maintain lateral public access in at least a 10-foot section at mean high water.

4. COMPLIANCE

4.1 This General License shall be void unless it is recorded by the Department in every Registry of Deeds in the Commonwealth upon issuance, indexed under "Commonwealth of Massachusetts" as the Grantor. An affirmed Certification issued under this General License shall be void unless it and its accompanying plans are recorded within 60 days from the date of the Department's acknowledgement, in the Registry of Deeds for the County where the structure is located. The Certificate holder shall provide notification to the Department within 30 days of the recording in accordance with 310 CMR 9.18(2). Work or change in use shall not commence until the affirmed Certification is recorded and the Department has received notification of the recordation.

4.2 Submission of a Certification under the provisions of 310 CMR 9.29 to be covered by this General License and recording of an affirmed Certificate in the Registry of Deeds shall constitute an agreement by the Certificate holder to conform with all terms and

conditions stated herein. All affirmed Certifications are issued with the express condition that any and all other applicable authorizations required shall be secured by the Certificate holder prior to the commencement of any activity or use authorized pursuant to this General License.

4.3 The enforcement provisions of 310 CMR 9.08 shall apply to any structure eligible for certification or Certified under the General License pursuant to 310 CMR 9.29. The Department shall perform annual audits to monitor compliance with the General License standards and conditions in accordance with M.G.L. c. 91 § 18C. Consistent with the provisions of 310 CMR 9.26, the Department may revoke a Certification for non-compliance with the standards and conditions set forth in the General License or individual Certification.

5. FEES

No Certificate under this General License shall be affirmed by the Department unless and until all applicable fees have been paid.

6. LICENSE TERM

This General License for projects located in Great Ponds and navigable rivers and streams shall have a term of 15 years from [DATE OF ISSUANCE]. The length of term for an individual Certification will vary depending on the date the Certification is affirmed by the Department. All Certifications affirmed under this General License shall expire on [EXPIRATION DATE], unless a shorter term is specified by the Department in its affirmation of the Certification, and may be recertified in accordance with 310 CMR 9.29(7).

IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this 13th day of April in the year 2015

Section Chief Bueh

Division Director [Signature]

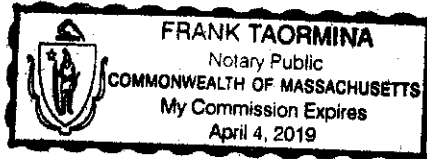
Commissioner [Signature]

Department of Environmental Protection

Commonwealth of Massachusetts

Barnstable, ss.

On this 13th of April, 2015 before me, the undersigned notary public, personally appeared Martin Suuberg, Lealdon Langley, and Ben Lynch, proved to me through satisfactory evidence of identification, which were personally known, to be the person(s) whose names are signed on the preceding or attached document in my presence.



[Signature]
Frank Taormina, Notary Public
My Commission Expires April 4, 2019

THE COMMONWEALTH OF MASSACHUSETTS

This license is approved in consideration of the payment into the treasury of the Commonwealth ----- the tidewater displacement and occupation fee -----

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON,

Approved by the Governor.

[Signature]

Governor

PUBLIC NOTICE

**DEPARTMENT OF ENVIRONMENTAL
PROTECTION
WATERWAYS REGULATION
PROGRAM**

**Notice of General License Certification
Application pursuant to 310 CMR 9.29
22-WW-PRE-0029-APP**

NOTIFICATION DATE: March 11,2022

Public notice is hereby given of the application for Certification to the General License by John Lawrence to construct/maintain a seasonal dock in the waters of Johns Pond at 59 Hooppole Road, Mashpee, Barnstable County.

The Town of Mashpee Planning Board will consider all written comments on this Waterways application received within 30 days of the "Notification Date".

Project plans and documents for this application are on file with the Town of Mashpee Planning Board. Written comments must be addressed to: The Town of Mashpee Planning Board. Please send comments to: 16 Great Neck Road North, Mashpee, MA 02649