

National Flood Insurance Program

2021 Map and Code Update

1/12/2021 | PUBLIC MEETING

Department of Planning | Office of Sustainability



National Flood Insurance Program (NFIP): Overview

Voluntary program

→ Makes available federally-subsidized flood insurance to participating jurisdictions.

Jurisdictions must develop and enforce a floodplain Code \geq NFIP minimum threshold.

FEMA models the system and provides maps to NFIP jurisdictions = Regulatory Floodplain.

Baltimore has been in the NFIP since 1978.



NFIP

FEMA's Threshold

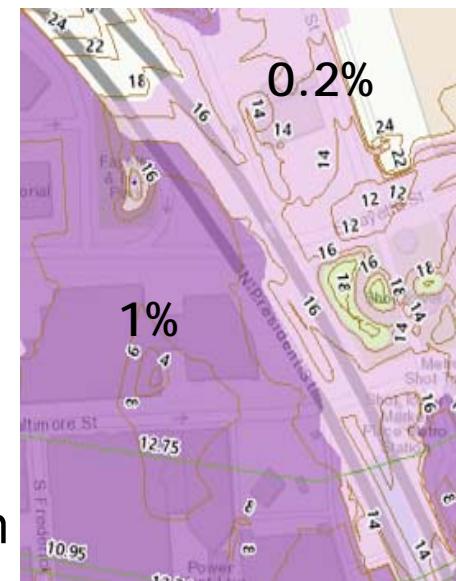
→ Regulate the 1% annual chance of flood areas and elevation of the 1% flood.

Baltimore's Higher Regulatory Standards

- 1% and 0.2% annual chance of flood areas
 - Geographic range
- Freeboard: additional 2 feet of protection

NFIP requirements are triggered with:

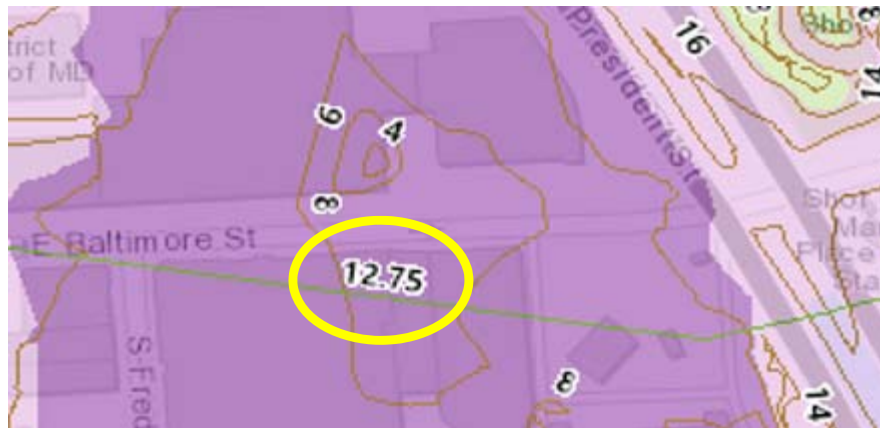
- Development in general
 - Substantial improvement and new construction
 - Less-than substantial improvement



Compliance

Compliance with requirements can be achieved by:

→ Elevating the first floor of a structure to the Flood Protection Elevation



- Elevating or water-proofing mechanical, electrical and plumbing (MEP) components
- Dry floodproofing
- Wet floodproofing
- Combination of the above



Purpose Statement: Map Adoption and Code Update

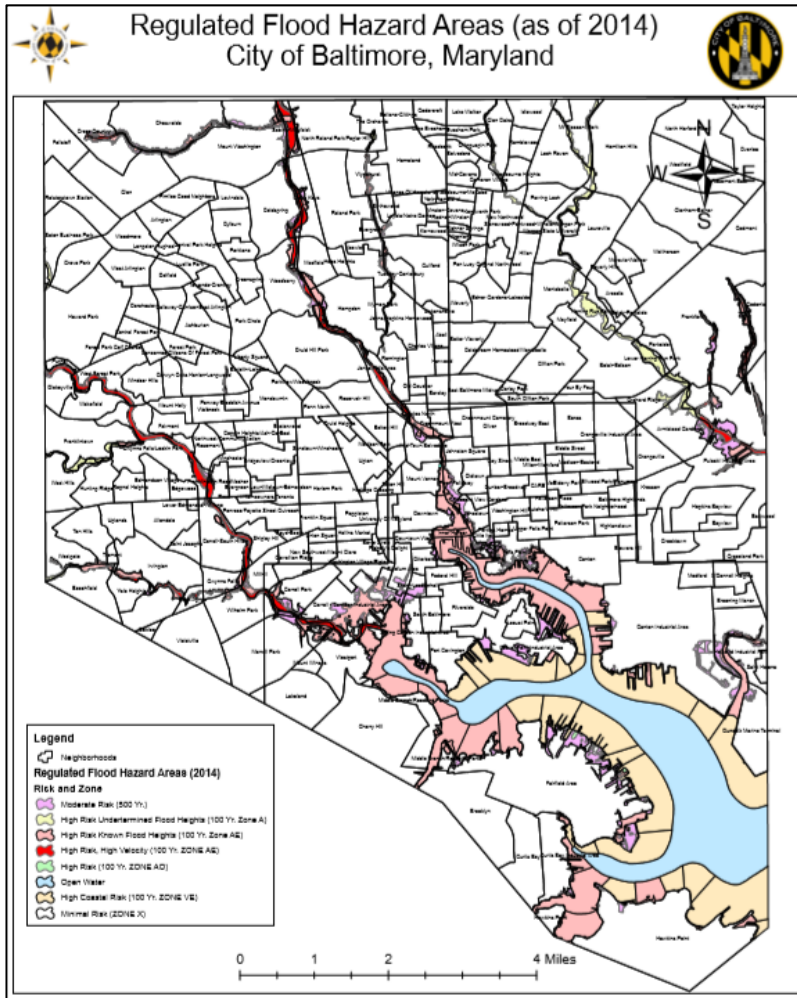
We are required to adopt the new Digital Flood Insurance Rate Map by June 16, 2021. As part of that approval process, we also plan to submit proposed updates to the floodplain policy (Article 7, Division 1 of the City Code) based on FEMA requirements and achieving the following objectives:

1. Ensuring that the policy is *transparent and clear* to the residents of the City of Baltimore
2. Ensuring that the policy includes any relevant sections as recommended by Maryland Department of the Environment and FEMA
3. Ensuring that the code is *implementable* in an older, developed city (e.g., historic properties)
4. *Clarifying certain requirements* that have been confusing to permit applicants
5. Incorporating *flexibility/exemptions* to allow for beneficial environmental outcomes based on science
6. Maintaining participation in the **NFIP** and City's current rating under Community Rating System program.

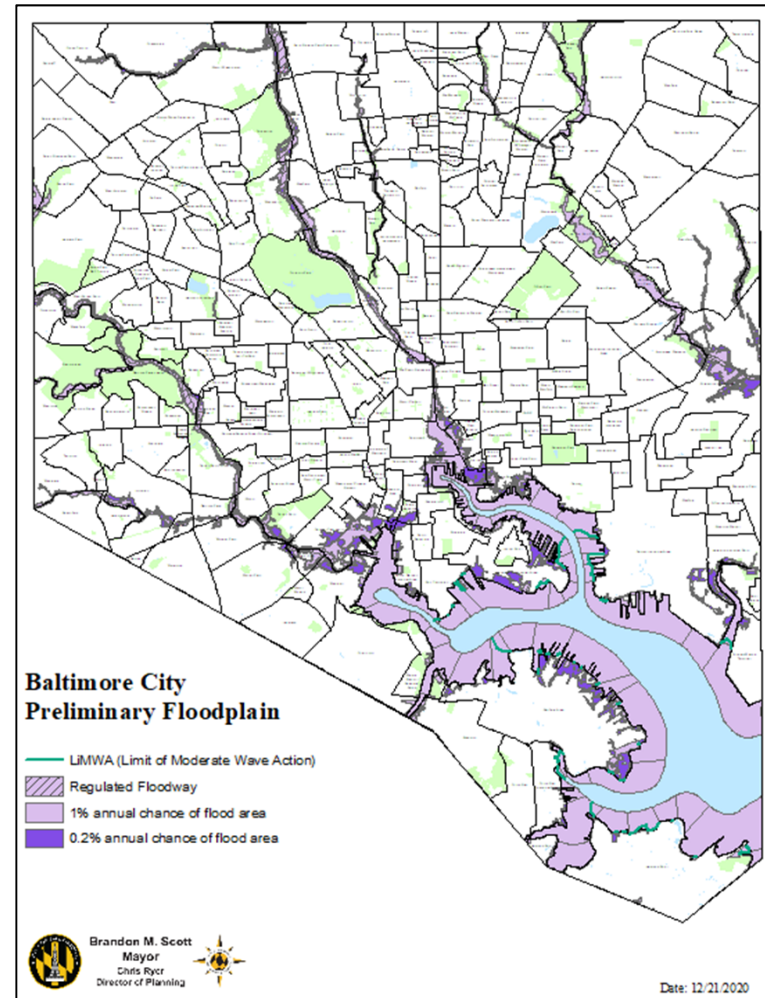


Baltimore City Regulated Floodplain

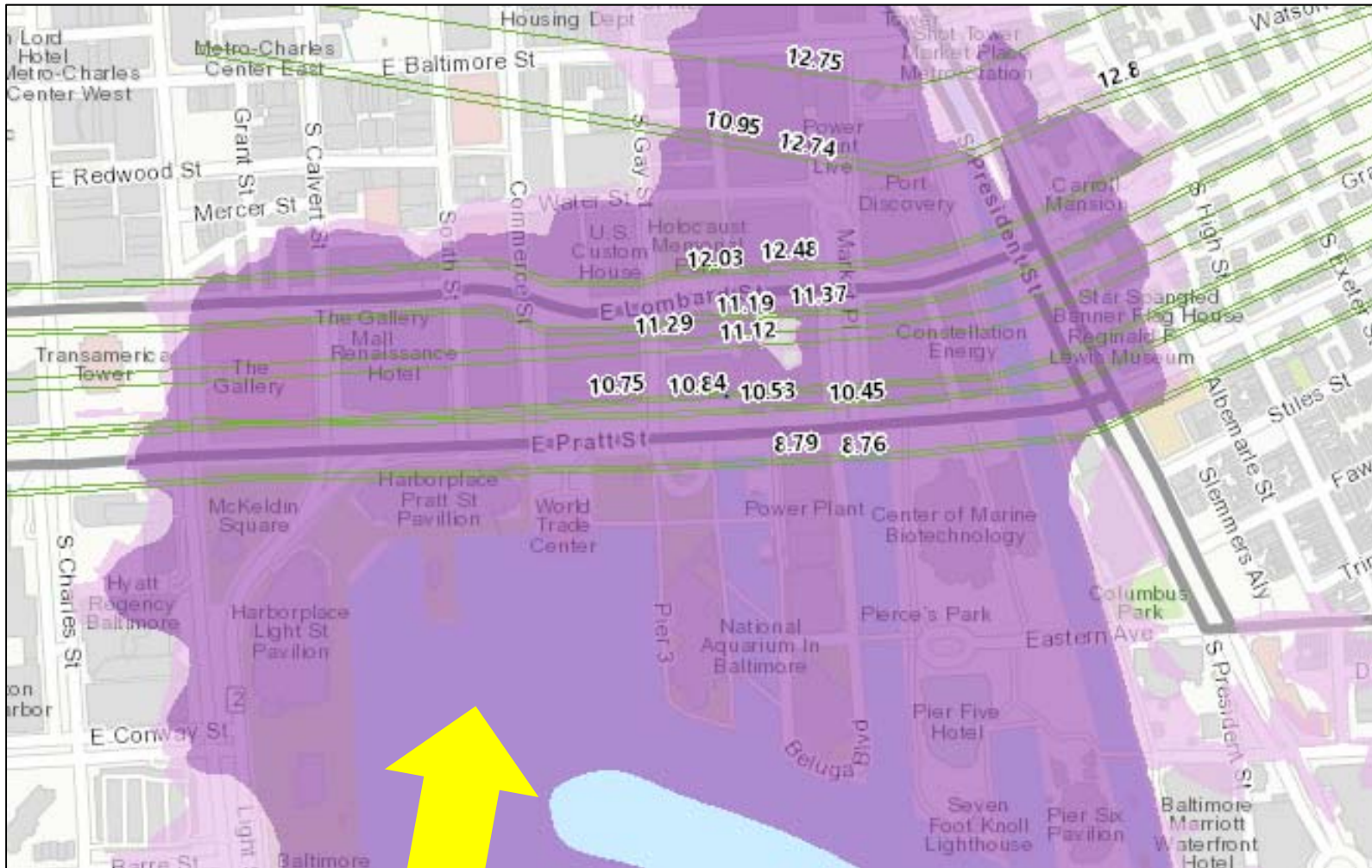
Effective/existing map



Preliminary/new map

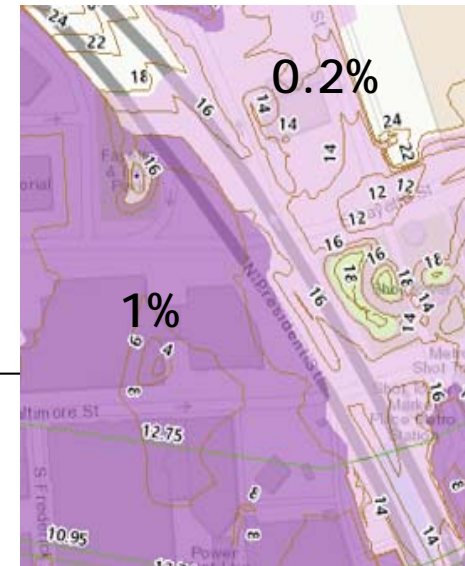


Baltimore City Regulated Floodplain



Code Update: Extent of Regulated Floodplain

- Extent of the 1% and 0.2% annual chance of flood area and elevation of the 0.2% flood in the tidal floodplain and 1% flood in the non-tidal floodplain.
- Clear in Code now.



§ 2-2. Subdistricts.

(a) In general.

The Floodplain District comprises the following subdistricts.

(1) In all floodplain subdistricts the flood protection elevation is calculated as follows:

(i) in the tidal floodplain areas, it is the height and geographic extent of the 0.2% annual chance flood in the tidal area plus freeboard

(ii) in the non-tidal floodplain areas, it is the extent of the 0.2% annual chance flood, and the height of the 1% annual chance flood plus freeboard



Code Update: Historic Structures

Historic Structures:

- Variance not required.
- Floodplain Manager works with CHAP staff to define the possible extent of floodproofing required.
 - Example: residential home in a historic district.

(3) Exclusions.

“Substantial improvement” does not include ~~either~~:

(i) an improvement of a structure that is required by a condemnation or violation notice, order, or citation to secure safe living conditions in compliance with State or City health, sanitary, or safety code specifications; or

(ii) ~~An alteration of a historic structure, if provided that the alteration will preclude the structure's continued designation as a historic structure as approved by the Executive Director of the Historic and Architectural Preservation.~~ ~~an alteration of an historic a structure, thereby as long as the~~ ~~its the structure's continued designation as an~~

SUBTITLE 5 FLOODPLAIN VARIANCES

§ 5-1. In general.

Applications for variances may be considered by the Planning Department, after a review by the City agencies responsible for stormwater management and erosion control, for the following:

- (1) functionally dependent uses;
- ~~(2) reconstruction, rehabilitation, or restoration of historic structures as provided in § 5-8 {"Historic structures"} of this subtitle;~~
- (3) all necessary City utilities in the Floodway or the Coastal High Hazard Area; and
- (4) substantial improvements to an existing structure in the Floodway. (City Code, 1976/83, art. 7, §7(a); 2000, art. 7, §5-1.) (Ord. 88-188; Ord. 92-134; Ord. 14-208.)



Code Update: MEP and less-than Substantial Improvement

- No elevation above the FPE: MEP systems and components under repair, maintenance and in-kind replacement.
- Required to be elevated to the maximum extent possible.
 - ❑ Example: water heater being replaced in the basement of a rowhouse.

§ 3-6 ~~Less-than~~ substantial improvement.

(a) In general.

If the construction, reconstruction, or modification of any structure constitutes ~~less-than~~ a substantial improvement:

- (1) the ~~replacement-installation~~ of any electric, plumbing, or mechanical systems must comply with § 3-10 {"Electric, plumbing, and mechanical systems"} of this subtitle; ~~and~~
- (2) those parts of the improvement below the flood-protection elevation must:
 - (i) be floodproofed; and
 - (ii) otherwise comply with the design and construction standards of ASCE 24.

(b) Exceptions.

(1) Routine maintenance; ~~and~~ repairs; and the in-kind replacement of mechanical, electrical and plumbing systems are ~~excepted~~exempted from the requirements of this section. For in-kind replacement, the systems must be elevated to the maximum extent possible to avoid or minimize flood damage. (City Code, 1976/83, art. 7, §5(a)(4); 2000, art. 7, §3-6.) (Ord. 88-188; Ord. 11-516; Ord. 14-208.)



Code Update: Variance for Fill

Fill volume limit exceedance (600 CY/acre)

- No Hydraulic and Hydrologic Analysis required for fill volume exceedance only in the tidal floodplain.
- Clarifying: net fill.

(h) Hydrologic and hydraulic analyses.

If structures on adjacent properties are known or determined to be subject to flooding under current conditions, the Floodplain Manager may require submission of hydrologic and hydraulic analyses to adequately demonstrate the effects of the proposed fill. A hydrologic and hydraulic analysis requirement does not apply to projects located in the Coastal Floodplain or tidal portion of the Flood Resilience Area. (City Code, 1976/83, art. 7, §5(a)(12); 2000, art. 7, §3-12.) (Ord. 88-188; Ord. 92-134; Ord. 14-208.)

(b) Maximum fill amount.

The placement of more than 600 cubic yards of net fill per acre in the floodplain is prohibited except by variance.



Code Update: Environmental Projects

No variance required on City owned property:

- Environmental projects intended to improve drainage, flow capacity and/or water quality.
- Must comply with other Code requirements (State and Federal permits, no increase in BFE...).
- Example: DPW's stream restoration projects.

§ 3-15. Watercourses.

(a) Variance required to alter.

In all floodplain zones or areas within 25 feet from a water course, any development that proposes to alter a watercourse must obtain a variance under Subtitle 5 {"Floodplain Variances"} of this Division I.

(1) Exclusion. Environmental projects taking place on public land that aim to improve drainage capacity, reduce bank erosion and sedimentation, and/or improve water quality; and that have attained all required State and Federal permits do not require a variance.

(b) Conditions for encroachment to be minimized.



Code Update: Storage

→ Clarifying the requirement for “storage” in the floodplain.

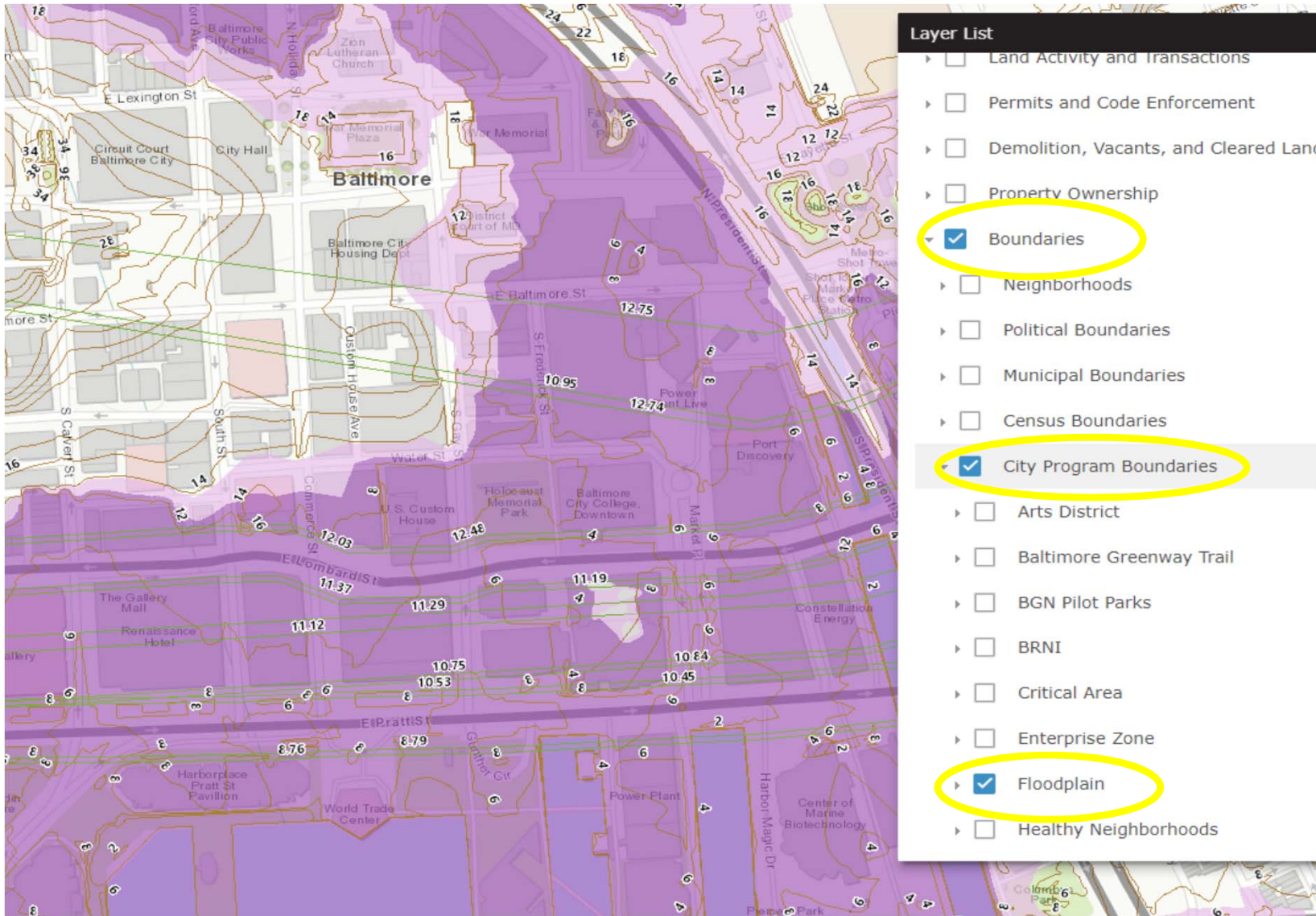
- ❑ Example: no storage lots and junk yards located in the floodplain below the FPE.

§ 3-11 Storage.

Materials and products that are buoyant, flammable, or explosive, or that in times of flooding could be injurious to human, animal, or plant life may not be stored below 2-feet above the design flood elevation~~the flood protection elevation~~. (City Code, 1976/83, art. 7, §5(a)(11); 2000, art. 7, §3-11.) (Ord. 88-188; Ord. 11-516; Ord. 14-208.)



CoDeMap



Additional Information

→ Link to CoDeMap

- ❑ <https://cels.baltimorehousing.org/codemapv2ext/>

→ Link to the public comment platform:

- ❑ <https://baltimoreplanning.konveio.com/article-7-natural-resources-division-i-floodplain-code-update>
- ❑ <https://www.baltimoresustainability.org/floodplain-management-program/>

→ Questions or comments about the process:

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- ❑ Kim Knox: Kimberley.Knox@baltimorecity.gov

Thank you!

