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Technical Bulletin

Re: Proposed Updates to City of New Haven Flood Damage Prevention Ordinance

By: Anne Hartjen, Emma Zehner

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The City of New Haven's Flood Damage Prevention Ordinance aims to promote the health, safety, and general welfare of residents, and must comply with Federal Emergency Management Agency (FEMA) regulations and the Connecticut State Building Code. The Ordinance regulates the Special Flood Hazard Area (SFHA), which includes VE, Coastal AE, and AE zones. The Ordinance has not been updated to comply with the current State code. In addition to revising the ordinance to address non-compliance, the City will use this opportunity to proactively discourage hazardous uses in flood-prone areas, center environmental justice, and set an example for other SCRCOG towns. Connecticut expects to see 20 inches of sea level rise by 2050, and the updated Ordinance will help to plan for that future.

1. Require all construction to be at least two feet above Base Flood Elevation (BFE + 2) in SFHA

Current Ordinance: *All residential & non-residential construction & substantial improvements must be at least BFE + 1*

Minimum required by state: *Same*

The Connecticut Institute for Resilience and Adaptation (CIRCA) recommends a freeboard requirement of at least BFE + 2 for residential structures and higher requirements for facilities with longer lives.ⁱ New London already requires BFE + 2.ⁱⁱ Related costs to developers are minimal: adding two feet of freeboard would cost only 1-2% more than elevating to BFE.ⁱⁱⁱ

2. Update definition of “substantial improvement” and “substantial damage”

Current Ordinance: *“Substantial improvements” that cost more than 50% of a property’s market value are subject to the flood ordinance*

Minimum required by state: *Same*

The City’s current definitions of substantial improvement and substantial damage don’t specify how applicants should define the “market value” of their properties, which has resulted in applicants overvaluing their properties to avoid the 50% substantial improvement threshold. In both its definition of “substantial damage” and “substantial improvement,” the City updates the phrase “market value of the structure” to “appraised value of the structure by the City of New Haven.”

3. Add definition of “Critical Facilities” and prohibit new or expanded critical facilities in SFHA

Current Ordinance: *Ordinance doesn’t include a definition and doesn’t ban these facilities*

Minimum required by state: *Model ordinance doesn’t include a definition*

The City adds a “critical facilities” definition and prohibit new or expanded facilities in the SFHA. Facilities may be compromised during chronic or acute flooding and prevent access to key services.^{iv} The City includes the following facilities in its definition: schools, health care facilities, jails and prisons, police and fire stations,

permanent emergency operations centers, permanent emergency shelters, and critical records storage. Wastewater and stormwater facilities are exempt because they may need to expand to address safety or health concerns or comply with Connecticut Department Energy and Environmental Protection or Environmental Protection Agency regulations.^v

4. Require applicants to reference the 2022 CT Building Code when determining what quantities of potentially hazardous materials are allowed. Ban specific non-residential uses with hazardous materials.

Current Ordinance: Ordinance doesn't include a definition and doesn't ban these materials

Minimum required by state: Model ordinance doesn't include a definition

New Haven County faces “severe risk” related to hazardous sites and climate impacts, compared with other New England counties.^{vi} During a storm event, these materials could spread and impact human health and the environment. Further, many hazardous materials facilities are not “functionally dependent uses or facilities,” and could easily be moved from low-lying areas.^{vii} The City explicitly states that potentially hazardous materials must follow requirements and limits within the Connecticut State Building Code. The City will also prohibit specific non-residential uses with hazardous materials, including: gas or diesel fueled vehicle maintenance, recycling, storage, sales, or fueling; all uses outlined in Article V. Section 42 Use regulations for business and industrial districts Table 3 within “T. Industrial.”; Oil, fuel, or gas refining or storage; Laundry or dry cleaning; and any other facility that stores, produces, or utilizes hazardous materials.^{viii}

5. Ban new above ground storage tanks (ASTs) and underground storage tanks (USTs) in the SFHA

Current Ordinance: ASTs must be elevated above BFE on concrete pad or anchored; no UST regulations

Minimum Required by state: In all zones, USTs anchored; In VE and Coastal AE, ASTs shall be elevated BFE +1; In AE, ASTs shall be elevated BFE+1 or anchored to prevent movement

The City bans additional ASTs and USTs in the entire SFHA. ASTs and USTs can corrode over time, and during flood events, may spill petroleum. As property owners abandon sites to rising seas and oil is phased out, local governments may be left with cleanup costs. The City's SFHA already contains 166 closed USTs, 21 open USTs, and 21 sites that currently have or have had leaking USTs.^{ix}

6. Prohibit conversions of non-residential to residential units below BFE+2 regardless of whether a project meets the substantial improvement threshold

Current Ordinance: Only required if meets 50% threshold

Minimum Required by state: Only required if meets 50% threshold

To prevent renovation of existing first-floor non-residential space into residential uses, the Ordinance adds an item “Lowest Floor Renovations” that states, “Regardless of whether a project meets the ‘substantial improvement’ threshold, under no circumstances can a non-residential use below BFE+2 be converted into a residential use.”

7. Specify/Summarize List of “Prohibited Uses” in General Standards

Current Ordinance: No specific section.

Minimum required by state: N/A

The City adds a list of “Prohibited Uses” to summarize which uses are banned in the SFHA.

These uses include critical facilities, listed uses involving hazardous materials, and storage tanks. The City also includes the following on the list of “Prohibited Uses”: waste management and junk yards, and salt storage piles.

ⁱ *Floodplain Building Elevation Standards*, Connecticut Institute for Resilience and Adaptation, <https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf>

ⁱⁱ *Floodplain Building Elevation Standards*, Connecticut Institute for Resilience and Adaptation, <https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf>

ⁱⁱⁱ *Floodplain Building Elevation Standards*, Connecticut Institute for Resilience and Adaptation, <https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf>

^v Conversation with Tom Sgroi and Isabella Schroeder (Greater New Haven Water Pollution Control Authority), December 7, 2022

^{vi} “New England at Risk: Hazardous Sites and Climate Change,” Conservation Law Foundation, <https://storymaps.arcgis.com/stories/e8669a31f78a4473965c032536d025be>

^{vii} “Functionally Dependent Use,” Federal Emergency Management Agency, <https://www.fema.gov/glossary/functionally-dependent-use#:~:text=A%20use%20which%20cannot%20perform,in%20close%20proximity%20to%20water>.

^{viii} Same language used in Stamford and Middletown Ordinances

^{ix} “UST Finder Feature Layer 2021,” Environmental Protection Agency