

CITY OF BELLEVUE  
**EAST BELLEVUE COMMUNITY COUNCIL**  
COURTESY PUBLIC HEARING NOTICE

Rules of Procedure are available at the City Clerk's Office

The East Bellevue Community Council will hold a courtesy public hearing during its Regular Meeting on **Tuesday June 8, at 6:30 p.m.**, in the Lake Hills Clubhouse, 15230 Lake Hills Boulevard, to consider Land Use Code Amendments as applicable within their jurisdiction:

Land Use Code Amendment:

The proposal is to amend the Bellevue Land Use Code (LUC), Chapter 20.25H, Section IX for consistency with certain state and federally-required floodplain management regulations as required for the City's participation in FEMA's National Flood Insurance Program. The proposal includes changes to definitions, references to FEMA flood insurance rate maps, and general performance standards. FEMA's rules detailing the minimum requirements for floodplain management are codified at 40 C.F.R. Part 60. The Washington State Department of Ecology's floodplain management laws are codified at Chapter 86.16 RCW. .

- *File No. 10-106986-AD*

Written comments may be addressed to the East Bellevue Community Council in care of Michelle Murphy, Deputy City Clerk, P.O. Box 90012, Bellevue, WA 98009.

**Posting/Publication Date: May 26, 2011**



# MEMORANDUM

DATE: May 24, 2011

TO: Chair Kasner and Members of the East Bellevue Community Council

FROM: Catherine A. Drews, Legal Planner. 425-452-6134  
Development Services Department

SUBJECT: FEMA Consistency—Land Use Code Amendments

On June 7, 2011, the East Bellevue Community Council (EBCC) will consider the proposal to amend the Land Use Code (LUC) for consistency with the Federal Emergency Management Agency's (FEMA) floodplain management requirements for participation and maintenance of eligibility in FEMA's National Flood Insurance Program (NFIP). The NFIP provides flood insurance to all Bellevue residents for water damage related to surface water flooding. Participation in NFIP is required to obtain federally-backed loans for structures built in the floodplain, and is also required to receive federal aid from the Flood Mitigation Assistance and Hazard Mitigation Grant programs. Because Bellevue's floodplain management efforts exceed the minimum requirements established by FEMA, Bellevue's residents enjoy a discounted rate on their insurance premiums.

Staff first presented the proposed LUC amendment to the EBCC on May 4, 2010. Staff revised the proposed LUC amendment presented to the EBCC on May 4, 2010 in response to direction from the City Council and the Washington State Department of Ecology. The revised proposed ordinance is attached to this memorandum as Attachment A. A second public hearing in front of the Planning Commission on this item is scheduled for June 8, 2011, with City Council action likely July 2011.

Because the proposed amendments are components of the Critical Areas Overlay, the FEMA consistency amendments to the LUC were proposed to be consolidated with the Critical Areas Overlay provisions that will ultimately be amended as part of the Shoreline Master Program (SMP) update. However, the deadline to complete the consistency amendments to the City's floodplain regulations is July 2011, and the SMP update has taken longer than anticipated. To meet this deadline, staff is bringing the FEMA consistency amendments forward outside of the SMP update.

## **I. Background on the National Flood Insurance Program.**

The NFIP was created in 1968 to offer an alternative to disaster assistance for properties facing flood damage. The NFIP provides reasonably-priced flood insurance to residents in participating communities. In return, participating communities agree to regulate development in the floodplain consistent with criteria set forth in the NFIP.

Consistency with the NFIP minimum criteria is required to participate in the program and the NFIP Community Rating System recognizes community floodplain management that goes beyond the minimum requirements of the NFIP by reducing insurance premiums for the community's property owners. Bellevue residents benefit from the City's CRS rating by receiving lower insurance premiums.

The Washington State Department of Ecology (Ecology) is the designated State Coordinating Agency (SCA) for the NFIP. One of Ecology's responsibilities as the SCA is to review participating communities' floodplain management regulations to ensure they meet required minimum federal and state standards. In 2009, Utilities Department staff requested Ecology review the City's floodplain provisions to confirm they satisfy the NFIP minimum criteria and the State Floodplain Management Standards, Chapter 86.16 RCW. Ecology's review identified minor inconsistencies that the City must correct to maintain its standing in the NFIP program. Ecology also found that the City's floodplain program in many instances significantly improved on FEMA's minimum standards. This finding was subsequently confirmed during a Community Assistance Visit with Ecology on June 24, 2010. At the visit, however, Ecology identified three deficiencies that must be addressed and responsive clarifications are included in the revised code amendment proposal and discussed in section III of this memorandum.

The City of Bellevue has participated in the NFIP since 1978. (Ord. No. 2645, Oct. 30, 1978). Since 1978, FEMA data shows that 247 insurance policies have been issued in Bellevue, with a value exceeding \$56,436,000.<sup>1</sup> Of these 247 policies, only 88 were written for properties in the floodplain (35%), while 159 were written for properties out of the floodplain<sup>2</sup> (66%). Of the policies, 234 cover single-family residences, while 13 cover non-residential structures. The average premium for flood insurance in Bellevue is \$345 annually, reflecting the discount Bellevue residents receive from the City's CRS rating. The average coverage amount is \$245,089.

During the life of Bellevue's participation in the program, there have been 28 paid claims for a total of \$527,704 paid in benefits, with the paid claims averaging \$18,847. Two of these claims were substantial claims, meaning the claim exceeded 50% of the value of the home.

## **II. Procedural Background**

On April 14, 2010, staff sought, and received, concurrence from the Planning Commission to initiate code amendments to ensure consistency between the City's floodplain management regulations and FEMA and state floodplain management requirements. The Planning Commission held a public hearing on the proposed code amendment on May 26, 2010. A courtesy hearing was held with the East Bellevue Community Council at their regular meeting on May 4, 2010. No comments were submitted by either the public or the EBCC regarding the proposed amendments.

---

<sup>1</sup> Because of privacy issues, staff was unable to obtain a map showing the location of NFIP participants.

<sup>2</sup> Flood insurance covers flood damage associated with many types of surface water flooding, such as burst pipes. The policies do not cover flooding related to ground water seepage.

At the May 26 public hearing, the Planning Commission received testimony from one resident, asking that the proposed amendment be postponed until completion of the City's Shoreline Master Program. Staff also received one email inquiry seeking clarification on the significance of the proposed amendment. After the public hearing on June 7, 2010, the Planning Commission prepared a transmittal to the City Council unanimously recommending approval of the proposed code package

Before the Council study session on June 14, 2010, Ecology scheduled a Community Assistance Visit (CAV), on behalf of FEMA, to review the City's flood management regulations and program. To prepare for the CAV, staff from Utilities and DSD met with Ecology representatives on June 2, 2010. In response to Ecology feedback, LUC amendments beyond those recommended by the Planning Commission were added to the proposed ordinance presented to Council on June 14, 2010. Council directed staff to return to the Planning Commission and present the Ecology-directed amendments to the Commission. Specifically, as a result of the CAV, Ecology is directing the City to:

1. Include a reference to 44 C.F.R. 60.3(b)(5)(iii) for record inspection and retention related to floodplain management.
2. Amend the specific performance standards for new construction allowed through the reasonable use process to be consistent with the specific performance standards for modification of existing development and existing nonconforming development. This proposed amendment requires new residential construction to include openings, such as windows or doors, which allow the entry and exit of floodwaters.
3. Include federal and state requirements for the regulatory floodway. In Bellevue, the regulatory floodway applies only to Kelsey Creek. The floodway is located within the floodplain and is where water velocities would be the greatest and most destructive during a flood. See Attachment B. The floodway regulations were required when the City joined the NFIP in 1978 and were included in Ordinance No. 2645 when it was adopted, but they are no longer in the City's floodplain regulations and need to be reinstated to ensure consistency with federal and state floodplain requirements.

The amendments proposed to respond to Ecology feedback are included in Attachment A and together with the other proposed amendments will ensure that Bellevue citizens will continue to have access to flood insurance not only to protect existing structures, but also so property owners may obtain lending for projects occurring in the floodplain. The amendment also supports Bellevue's CRS rating that lowers insurance premiums.

### III. PROPOSAL

The proposed ordinance was prepared in response to Ecology's 2009 and 2010 review of the City's floodplain regulations, following review of Chapter 20.25H Part IX (Areas of Special Flood Hazards), and consultation with Utilities Department staff.

Staff recommends approval of the proposed code amendments to ensure consistency between the City's floodplain management regulations and federal and state requirements. Specifically, staff recommends the following LUC amendments:

#### LUC Part 20.25H, Areas of Special Flood Hazards

1. 20.25H.175.A.1. Amend reference to City engineering standards.
2. 20.25H.175.A.2. Update reference to Flood Insurance Study from December 1978 to April 19, 2005.
3. 20.25H.177 (Definitions). The following definitions must either be added or amended, and apply only to regulations for the area of special flood hazard:
  - Correct code reference in definition of "Lowest Floor."
  - Amend "Substantial Improvement" for consistency with NFIP by replacing "replacement value" with "market value."

New definitions include:

- "Development" means any man-made change to improved or unimproved real estate in the Regulatory Floodplain, including but not limited to building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.
- "Encroachment" means any alteration or development within the regulatory floodway that would result in any increase in the flood levels during the occurrence of the base flood discharge.
- "Floodway" means the channel of a river or stream and overbank areas adjacent to the channel. The floodway carries the bulk of floodwater downstream and is usually the area where water velocities and forces are the greatest and most destructive. The floodway and the adjacent land areas must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
- "Regulatory Floodway" means the floodway delineated on the flood insurance rate map (FIRM).
- "Substantial Damage" means damage of any origin sustained by a structure where the cost of restoring the structure to its before damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

4. 20.25H.180.C.1.c. Ensure consistency with requirements of the new regulated regulatory floodway provision in 20.25H.180.C.5.
5. 20.25H.180.C.2. The Executive Director of the Board of Registration for Professional Engineers and Land Surveyors has determined that only professionally licensed surveyors may complete elevation certificates. Therefore, the City must delete licensed engineers as persons who may complete elevation certificates.
6. 20.25H.180.C.2. Add record retention requirement consistent with 44 CFR 60.3(b)(5)(iii).
7. 20.25H.180.C.5. Add new provision that prohibits development in the regulatory floodway, unless a professional engineer certifies that the development will not cause a rise in the base flood elevation BFE. Limit allowable repair and reconstruction of residences located in the floodway to up to 50% of the market value of the structure. This provision also provides a mechanism for property owners to seek Ecology approval to reconstruct residential structures that are damaged beyond the 50% market value threshold.
8. 20.25H.180.D.7. Requires a reasonable use exception (LUC 20.25H.190) to comply with the regulatory floodway provisions in 20.25H.180.C.5.

#### **IV. Conclusion and Next Steps:**

Following the courtesy hearing, the Planning Commission requests any feedback or comments you have on the proposed ordinance. A public hearing is scheduled before the Planning Commission on June 8, 2011. It is anticipated the City Council will hold a study session in July with adoption to follow. If the City Council adopts the proposed ordinance, staff anticipates bringing the EBCC an approved ordinance in September for a final hearing.

Please contact me if you have any questions before the June 7, 2011 meeting.

Attachment A: Proposed Ordinance  
Attachment B: Illustration of Flooplain and Floodway

**Attachment A**  
Proposed Amendments to Floodplain Management  
LUC 20.25H Section IX  
Areas of Special Flood Hazard

**IX. AREAS OF SPECIAL FLOOD HAZARD**

**20.25H.175 Designation of critical area.**

**A. Designation of Critical Area.**

Areas of special flood hazard shall include:

1. ~~Land Subject to One-Hundred-Year Flood.~~ The land in the floodplain subject to the flood having a one percent chance or greater of being equaled or exceeded in any given year as determined by customary methods of statistical analysis defined in the City of Bellevue Storm and Surface Water Engineering Standards, January 2011, or as hereafter amended Utility Code, Chapter 24.06 BCC. Also referred to as the 100-year flood.

Comment [cd1]: Cross reference correction

2. ~~Areas Identified on the Flood Insurance Rate Map(s).~~ Those areas identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for ~~Bellevue~~King County" dated ~~December 1978~~April 19 2005, with an accompanying flood insurance map(s) and any revisions thereto. The Flood Insurance Study and accompanying map(s) are hereby adopted by reference, declared part of this part, and are available for public review at the City of Bellevue.

Comment [cd2]: Cross reference correction

....

**20.25H.177 Definitions.**

For purposes of the regulations for the area of special flood hazard, the following definitions apply:

"Base flood elevation (BFE)" means the flood having a one percent chance of being equaled or exceeded in any given year as determined by customary methods of statistical analysis defined in the Utility Code, Chapter 24.06 BCC. Also referred to as the 100-year flood.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Development" means any man-made change to improved or unimproved real estate in the Regulatory Floodplain, including but not limited to building or other structures.

Comment [cd3]: FEMA directed amendment for Bellevue residents to remain insurance eligible

mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

“Encroachment” means any alteration or development within the regulatory floodway that would result in any increase in the flood levels during the occurrence of the base flood discharge.

Comment [cd4]: FEMA directed amendment for Bellevue residents to remain insurance eligible

....

“Floodproofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate of improved real property, water and sanitary facilities, structures and their contents.

“Floodway” means the channel of a river or stream and overbank areas adjacent to the channel. The floodway carries the bulk of floodwater downstream and is usually the area where water velocities and forces are the greatest and most destructive. The floodway and the adjacent land areas must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Comment [cd5]: FEMA directed amendment for Bellevue residents to remain insurance eligible. WAC 173-15-070.

....

“Lowest floor” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this part found in LUC 20.25H.180.D.1.a

Comment [cd6]: Clarify cross reference

....

“Regulatory Floodway” means the floodway delineated on the flood insurance rate map (FIRM).

Comment [cd7]: FEMA directed amendment for Bellevue residents to remain insurance eligible

....

“Substantial Damage” means damage of any origin sustained by a structure where the cost of restoring the structure to its before damage condition would equal or exceed 50 percent of the market value of the structure before damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Comment [cd8]: Required for proposed condition 20.25H.180.C.5 that provides mechanism to determine if residential structures in floodway may be replaced

“Substantial improvement” includes the following: Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the replacement market value of the structure either (1) before the improvement or repair is started, or (2) if the structure has been damaged, and is being restored, before the damage occurred. For the purpose of this definition, “substantial improvement” is

Comment [cd9]: FEMA directed amendment for Bellevue residents to remain insurance eligible

considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or (2) any alteration of a structure listed on the National Register of Historic Places.

**20.25H.180 Development in the area of special flood hazard.**

No use, development or activity may occur in an area of special flood hazard except as specifically allowed by this part. All use, development or activity which is allowed is subject to the performance standards of this subsection and shall not result in a rise in the BFE. The requirements of this section may not be modified through a critical areas report.

....

**C. General Performance Standards.**

Where use or development is allowed pursuant to LUC 20.25H.055, the following general performance standards apply.

**1. Intrusion Over the Area of Special Flood Hazard Allowed.** Any structure may intrude over the area of special flood hazard if:

a. The intrusion is located above existing grade, and does not alter the configuration of the area of special flood hazard; and

b. The intrusion is at an elevation and orientation which maintains the existing vegetation of the area of special flood hazard in a healthy condition. Solar access to vegetation must be maintained at least 50 percent of daylight hours during the normal growing season; and

c. The intrusion does not encroach into the regulated floodway except in compliance with 20.25H.180.C.5.

Comment [cd10]: Consistency with FEMA-directed code amendments.

Development not meeting the requirements of this subsection C.1 may be allowed pursuant to LUC 20.25H.055 and only in accordance with the requirements set forth in the remainder of this section C.

**2. Elevation Certificate Following Construction.** Following construction of a structure within the area of special flood hazard, where the base flood elevation is provided, the applicant shall obtain an elevation certificate. The elevation certificate shall be completed by a surveyor ~~or engineer~~ licensed in the state of Washington and shall be submitted to City of Bellevue, Utilities Department. The Director of Planning and Community Development shall obtain and transmit to the Director of the Utilities Department the elevation in relation to City of Bellevue vertical datum (NAVD 88) of the

Comment [cd11]: Cross reference correction.

lowest floor, including basement, and attendant utilities of a new or substantially improved structure permitted by this part. All records shall be maintained for public inspection in accordance with 44 C.F.R. 60.3(b)(5)(iii) and the City of Bellevue record retention policy.

Comment [cd12]: FEMA directed amendment for Bellevue residents to remain insurance eligible. (40 C.F.R. 60.3(b)(5)(iii))

3. Construction Materials and Methods.

a. Site Design. All structures, utilities, and other improvements shall be located on the buildable portion of the site out of the area of special flood hazard unless there is no buildable site out of the area of special flood hazard. For sites with no buildable area out of the area of special flood hazard, structures, utilities, and other improvements shall be placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the stream and other critical areas as possible. Located in flood-fringe where flood flow velocities are less than three feet per second and flood depths are less than three feet. If the Director detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

b. Methods that Minimize Flood Damage. All new construction and substantial improvements shall be constructed using flood-resistant materials and using methods and practices that minimize flood damage.

c. Utility Protection. Electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

d. Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

4. No Rise in the Base Flood Elevation (BFE). Any allowed use or development shall not result in a rise in the BFE.

a. Post and Pile. Post and piling techniques are preferred and are presumed to produce no increase in the BFE. Demonstration of no net rise in the BFE through calculation is not required.

b. Compensatory Storage. Proposals using compensatory storage techniques to assure no rise in the BFE shall demonstrate no net rise in the BFE through the calculation by methods established in the Utilities Engineering Standards, Section D4-04.5, Flood Plain/Floodway Analysis.

5. Development in the Regulatory Floodway.

a. Encroachment into Regulatory Floodway Prohibited. Encroachments, including, but not limited to, fill, new construction, substantial improvements, and other

Comment [cd13]: FEMA directed amendment for Bellevue residents to remain insurance eligible. (44 C.F.R. 60.3(d)(3))

development is prohibited, unless a registered professional engineer certifies that the proposed encroachment into the regulatory floodway shall not result in any rise in the BFE using hydrological and hydraulic analysis performed in accordance with City of Bellevue Storm and Surface Water Engineering Standards, January 2011, or as hereafter amended. All new construction and substantial improvements shall comply with this section 20.25H.180.

b. Residential Structures. A residential structure located partially within the regulatory floodway will be considered as totally within the regulated floodplain and must comply with this paragraph C.5. This paragraph does not apply to structures identified as historical places. Construction or reconstruction of residential structures is prohibited within the regulatory floodway, except when:

**Comment [j14]:** FEMA directed amendment for Bellevue residents to remain insurance eligible. WAC 173-158-070.

- i. Repairs, reconstruction, or improvements to a structure that do not increase the footprint; and
- ii. Repairs, reconstruction, or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (1) before the repair, reconstruction, or improvement is begun, or (2) if the structure has been damaged, and is being restored, before the damage occurred. -Work done to comply with state or local health, sanitary, or safety codes identified by the Building Official and which are the minimum necessary to assure safe living conditions or any alteration of a structure listed on the National Register of Historic Places shall not be included in the 50 percent market value determination.

c. Substantially Damaged Residential Structures.

**Comment [cd15]:** Provided process to replace substantially damaged residential structures in the regulatory floodway. WAC 173-158-076.

- i. The Director may request the Washington State Department of Ecology assess the risk of harm to life and property posed by the specific conditions of the regulated floodway, and provide the City with a recommendation on repair or replacement of a substantially damaged residential structure consistent with WAC 173-158-056, now or as hereafter amended. Property owners shall be responsible for submitting to the City any information necessary to complete the assessment when such information is not otherwise available. No repair or replacement of a substantially damaged residential structure located in the regulatory floodway is allowed without a recommendation from the Department of Ecology.
- ii. Before the repair, replacement, or reconstruction is started, all requirements of this section 20.25H.180 must be satisfied. In addition, the following conditions shall be met:

(1) There is no potential safe building location for the replacement residential structure on the same property outside the regulatory floodway;

(2) A replacement residential structure is a residential structure built as a substitute for a previously existing residential structure of equivalent use and size;

(3) Repairs or reconstruction or replacement of a residential structure shall not increase the total square footage of floodway encroachment;

(4) The elevation of the lowest floor of the substantially damaged or replacement residential structure is a minimum of one foot higher than the base flood elevation;

(5) New and replacement water supply systems are designed to eliminate or minimize infiltration of flood water into the system;

(6) New and replacement sanitary sewerage systems are designed and located to eliminate or minimize infiltration of flood water into the system and discharge from the system into the flood waters; and

(7) All other utilities and connections to public utilities are designed, constructed, and located to eliminate or minimize flood damage.

56. Modification of Stream Channel. Alteration of open stream channels shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:

a. Modifications shall only be allowed in accordance with the habitat improvement projects.

b. Modification projects shall not result in blockage of side channels.

c. The City of Bellevue shall notify adjacent communities, the state departments of Ecology and Fish and Wildlife, and the Federal Insurance Administration about the proposed modification at least 30 days prior to permit issuance.

d. The applicant shall maintain the altered or relocated portion of the stream channel to ensure that the flood-carrying capacity is not diminished. Maintenance shall be bonded for a period of five years, and be in accordance with an approved maintenance program.

57. Compensatory Storage. Development proposals must not reduce the effective base flood storage volume of the area of special flood hazard. Grading or other activity that would reduce the effective storage volume must be mitigated by creating compensatory storage on the site. The compensatory storage must:

- a. Provide equivalent elevations to that being displaced;
- b. Be hydraulically connected to the source of flooding;
- c. Be provided in the same construction season and before the flood season begins on September 30th;
- d. Occur on-site or off-site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time;
- e. Be supported by a detailed hydraulic analysis that:
  - i. Is prepared by a licensed engineer;
  - ii. Demonstrates that the proposed compensatory storage does not adversely affect the BFE; and
- f. Meet all other critical areas rules subject to this part. If modification to a critical area or critical area buffer is required to complete the compensatory storage requirement, such modification shall be mitigated pursuant to an approved mitigation and restoration plan, LUC 20.25H.210.

**D. Specific Performance Standards**

.....

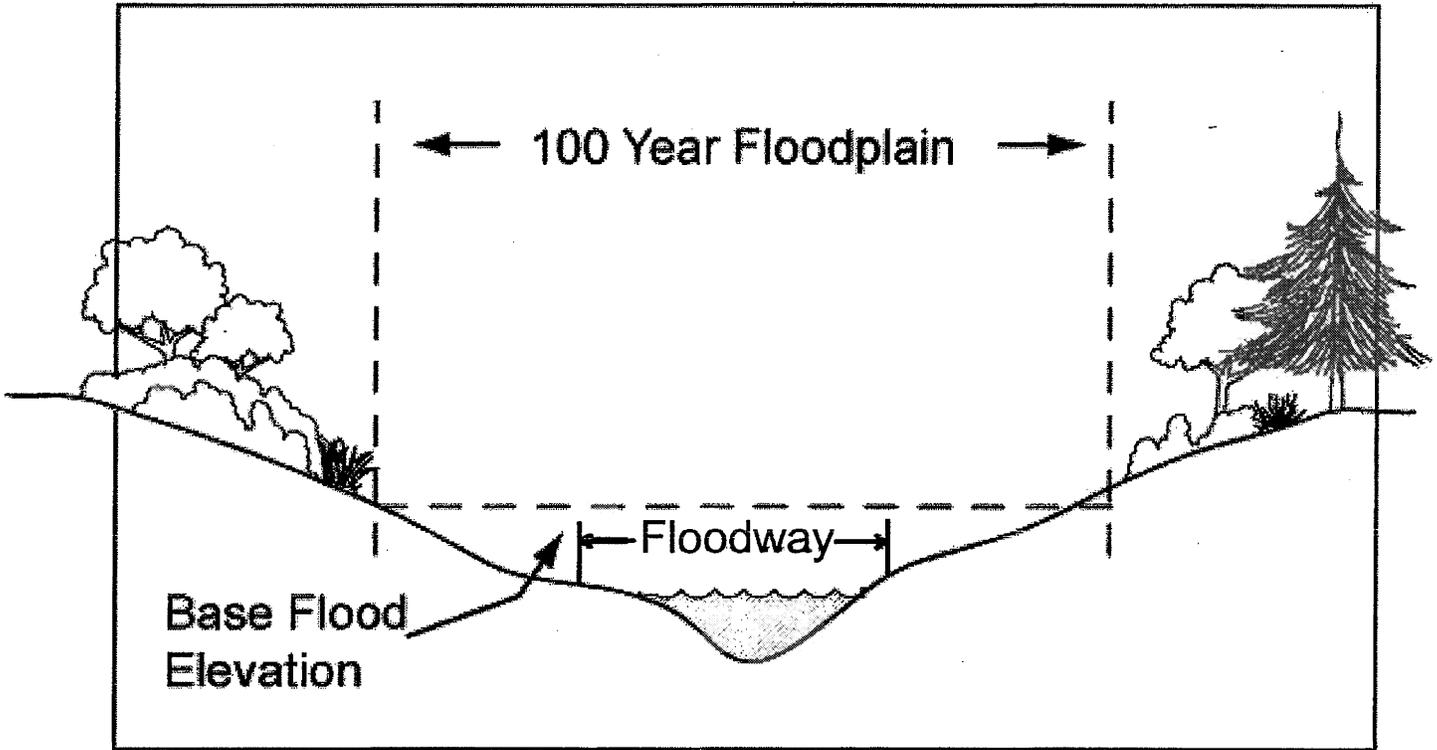
7. Reasonable Use Exception. Where a reasonable use exception is granted under LUC 20.25H.190, the following performance standards apply:

- a. Residential Construction (Single-Family and Multifamily Dwellings).
  - i. Must Be Above Base Flood Elevation. New construction of any residential structure shall have the lowest floor, including basement and attendant utilities, elevated one foot or more above the base flood elevation.
  - ii. Enclosed areas (including breakaway walls) below the BFE shall be no larger than 300 square feet.

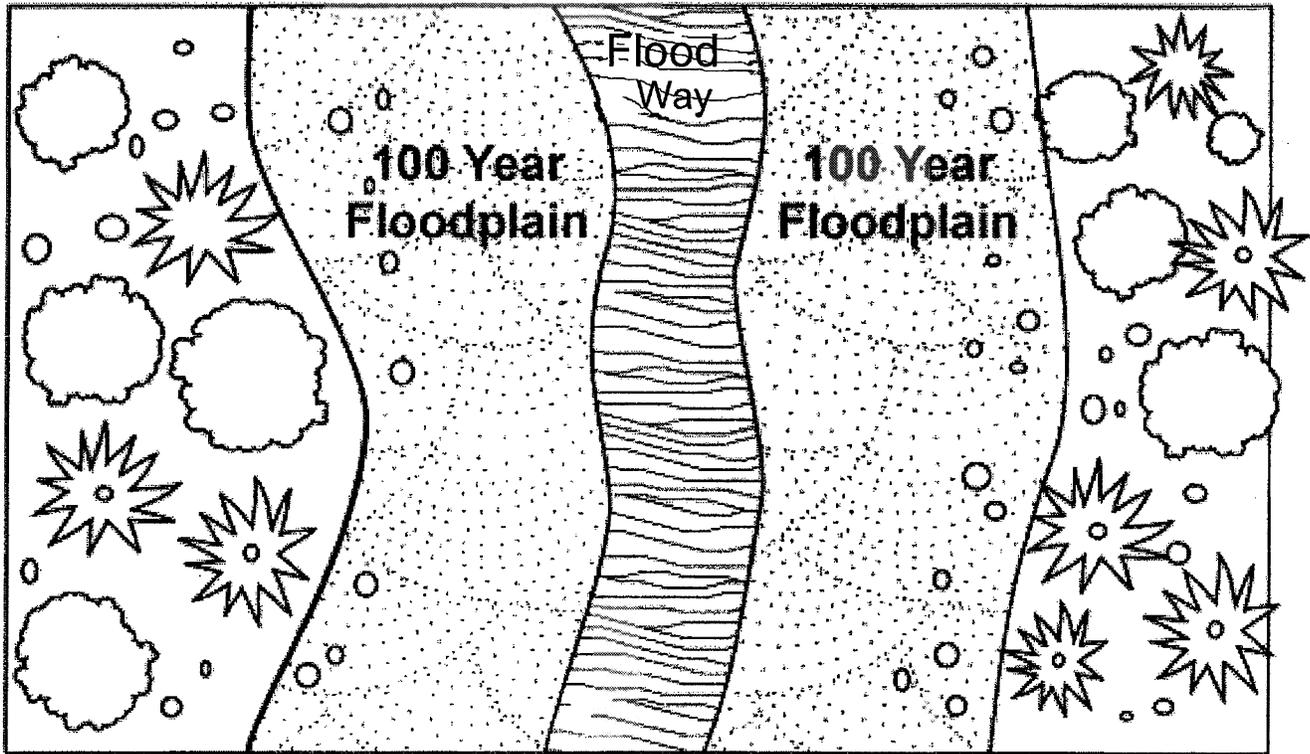
iii. Must comply with the requirements for openings set forth in LUC 20.25H.180.D.1.a.

**Comment [cd16]:** FEMA directed amendment for Bellevue residents to remain insurance eligible

ATTACHMENT C



Section View



Plan View