## Flood Protection Setback along Waterways – local technical code amendments CCR Title (Part 2 building, Appendix G) or local floodplain management ordinance amendments

Submit draft ordinances amending the flood provisions of the building code (in <track changes>) for review well in advance of first reading to DWR\_NFIP@water.ca.gov or FEMA-NFIP-R9@fema.dhs.gov. Please put community name in subject line.

**Before you start:** Review the General Instructions for Amending the California Building Standards Code (CCR Title 24) to Adopt Higher Standards for Buildings and Development Located in Flood Hazard Areas.

**NFIP Community Rating System Credits.** Adoption and enforcement of this higher standard may qualify for CRS points (credits). Communities should review the [*CRS Coordinators Manual*](https://www.fema.gov/media-library/assets/documents/8768)and consult with their CRS Resource Specialists. FEMA/ISO determines which provisions qualify for points.

**Description[[1]](#footnote-1):** In general, areas immediately adjacent to bodies of water tend to be where floodwater is deeper and where velocities and waves are likely to be higher than at locations farther away from the source of flooding. In addition, areas near bodies of water are more likely to include wetlands and often serve as corridors for movement of wildlife. For these and other reasons, many states and communities establish buffers or setbacks, typically by prohibiting all development or limiting development (e.g., prohibit grading and fill) within specified minimum distances from the body of water. Enforcing setback distances can guide development to locations outside of floodways and areas prone to flood-related erosion, and can help protect natural shorelines. Setbacks and wetlands buffers are used to minimize the effect of nonpoint sources of pollution caused by land development activities, timber harvesting, and agricultural activities. Setbacks help preserve the natural and beneficial functions of the floodplain.

**Benefits of Natural Floodplains.** FEMA describes some benefits of preserving natural floodplains on this webpage: [www.fema.gov/benefits-natural-floodplains](http://www.fema.gov/benefits-natural-floodplains).

Setbacks may take a number of forms, including specified distances that are:

* Measured from the centerline of a waterway, where the waterway under normal flow is less than a specified width
* Measured from the top of bank where the waterway under normal flow is wider than a specified width
* Equal to half the distance between the waterway and the SFHA boundary (where floodway not delineated)
* Landward of the floodway boundary (e.g., half the distance between the floodway and the SFHA boundary)
* Landward of the landward reach of mean high tide
* Landward of the coastal high hazard area (Zone V) boundary
* Landward of the 30- or 60-year erosion zone
* Landward of the area anticipated to be below predicted sea level rise

The NFIP and the California Building Standards Code, including Part 2 Appendix G, do not have specific requirements that govern the location of buildings with respect to bodies of water and flood hazard areas. Where floodways are designated, both the NFIP and the building codes require analyses of the effect of encroachments into floodways to ensure that flood heights are not increased more than a specified amount.

**Setback Proxies for Floodways.** With FEMA concurrence, communities can use setbacks as proxies for floodways along watercourses where FEMA has not determined BFEs or not determined floodways. This minimizes the need to have applicants prepare site-specific evaluations of the impacts of fill and development.

In riverine flood hazard areas where BFEs are provided by FEMA but floodways have not been designated, the NFIP specifies communities must not permit development “unless it is demonstrated that the cumulative effective of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood may than one foot at any point within the community." In effect, communities should require engineering analyses equivalent to FEMA’s floodway analyses.

**INSTRUCTIONS**

Setback requirements may be adopted in local zoning ordinances, stormwater regulations, or local floodplain management regulations. The language shown below may be useful when amending those regulations even though it is formatted as amendments to the DWR model ordinance and Part 2 Appendix G.

Each community must determine the appropriate way to define or describe the setback, given their objectives and the nature of their flood hazards and topography. This example is phrased to insert specific numbers [e.g., a common number for **{insert A}** is two, and common numbers for **{insert B}** are 50 (smaller waterways) to 100 or more (larger waterways)]. Modify the text to reflect the community’s objective (e.g., “a distance equal to one-half the width of the flood hazard area (measured from the center of the watercourse to the landward boundary of the flood hazard area)”).

**Modify Local Regulations.** Use this language adopt a watercourse setback requirement in local floodplain management regulations. Similar phasing could be used in related regulations.

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| **[Subdivisions] Sec. 302-1. - Minimum requirements.** Subdivision proposals in flood hazard areas, including proposals for manufactured home parks and subdivisions, shall be reviewed to determine that:1. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.
2. All public utilities and facilities, such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage in accordance with Section 303-2 and Section 303-3 of these regulations, as applicable, and appropriate codes.
3. All development, including fill, buildings, and structures, shall be set back from the top of bank a distance equal to **{insert A}** times the width of the watercourse (measured at the top of bank) or **{insert B}** feet from the top of the bank, whichever is greater, unless documentation is submitted that there are no alternative locations for the development and all other requirements of the code and this appendix are satisfied.
4. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from proposed structures.

**[Site Improvements, Utilities and Limitations] Sec. 303-1. - Minimum requirements.** All proposed development in flood hazard areas shall be reviewed to determine that:1. Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.
2. Where the proposed development has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations determined in accordance with Section 105-2(1) of these regulations.
3. All public utilities and facilities, such as sewer, gas, electric, communications, and water systems are located and constructed to minimize or eliminate flood damage.
4. All development, including fill, buildings, and structures, shall be set back from the top of bank a distance equal to **{insert A}** times the width of the watercourse (measured at the top of bank) or **{insert B}** feet from the top of the bank, whichever is greater, unless documentation is submitted that there are no alternative locations for the development and all other requirements of the code and this appendix are satisfied.
5. Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from proposed structures.
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**Modify Title 2 Appendix G.** Communities that elect to adopt Title 2 Appendix G should use this amendment adopt a watercourse setback requirement.

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| *CCR Title 24, Part 2 Appendix G Section G401 Site Improvement is hereby amended by adding a new Section G401.1 and renumbering subsequent sections as follows:***G401.1 Setback requirements on riverine watercourses.** All development, including fill, buildings, and structures, shall be set back from the top of bank a distance equal to **{insert A}** times the width of the watercourse (measured at the top of bank) or **{insert B}** feet from the top of the bank, whichever is greater, unless documentation is submitted that there are no alternative locations for the development and all other requirements of the code and this appendix are satisfied. |

1. Reference: [*Reducing Flood Losses Through the International Codes: Coordinating Building Codes and Floodplain Management Regulations*](http://www.fema.gov/media-library/assets/documents/96634)(5th Edition, 2019), International Code Council and FEMA. [↑](#footnote-ref-1)