

BEFORE THE BOARD OF COUNTY COMMISSIONERS  
FOR MULTNOMAH COUNTY, OREGON

**ORDINANCE NO. 1174**

Amending County Land Use Code, Plans and Maps to Adopt Portland's Recent Code Revision related to the updated Federal Emergency Management Agency Flood Insurance Rate Map and Declaring an Emergency

The Multnomah County Board of Commissioners Finds:

- a. The Board of County Commissioners (Board) adopted Resolution A in 1983 which directed the County services towards rural services rather than urban.
- b. In 1996, Metro adopted the Functional Plan for the region, mandating that jurisdictions comply with the goals and policies adopted by the Metro Council.
- c. In 1998, the County and the City of Portland (City) amended the Urban Planning Area Agreement to include an agreement that the City would provide planning services to achieve compliance with the Functional Plan for those areas outside the City limits, but within the Urban Growth Boundary and Portland's Urban Services Boundary.
- d. It is impracticable to have the County Planning Commission conduct hearings and make recommendations on land use legislative actions pursuant to MCC 37.0710, within unincorporated areas inside the Urban Growth Boundary for which the City provides urban planning and permitting services. The Board intends to exempt these areas from the requirements of MCC 37.0710, and will instead consider the recommendations of the Portland Planning Commission and City Council when legislative matters for these areas are brought before the Board for action as required by intergovernmental agreement (County Contract #4600002792) (IGA).
- e. On November 18, 2010, the Board amended County land use codes, plans and maps to adopt the City's land use codes, plans and map amendments in compliance with Metro's Functional Plan by Ordinance 1173.
- f. Since the adoption of Ordinance 1173, the City's Planning Commission recommended land use code, plan and map amendments to the City Council through duly noticed public hearings.
- g. The City notified affected County property owners as required by the IGA.
- h. The City Council adopted the land use code, plan and map amendments set out in Section 1 below and attached as Exhibits 1 through 3. The IGA requires that the County adopt these amendments for the City planning and zoning administration within the affected areas.

**Multnomah County Ordains as follows:**

**Section 1.** The County Comprehensive Framework Plan, community plans, rural area plans, sectional zoning maps and land use code chapters are amended to include the City land use code, plan and map amendments, attached as Exhibits 1 through 3, effective on the same date as the respective Portland ordinance:

Exhibit No.	Description	Date
1	Ordinance to Update the Federal Emergency Management Agency Flood Insurance Rate Map. ( <b>PDX Ord. #184235</b> )	11/10/2010
2	Exhibit A: Federal Emergency Management Agency Flood Map Update Project Recommended Draft	10/27/2010
3	Exhibit B: Portland Special Flood Hazard Areas as of November 26, 2010	11/10/2010

**Section 2.** In accordance with ORS 215.427(3), the changes resulting from Section 1 of this ordinance shall not apply to any decision on an application that is submitted before the applicable effective date of this ordinance and that is made complete prior to the applicable effective date of this ordinance or within 180 days of the initial submission of the application.

**Section 3.** In accordance with ORS 92.040(2), for any subdivisions for which the initial application is submitted before the applicable effective date of this ordinance, the subdivision application and any subsequent application for construction shall be governed by the County's land use regulations in effect as of the date the subdivision application is first submitted.

**Section 4.** Any future amendments to the legislative matters listed in Section 1 above, are exempt from the requirements of MCC 37.0710. The Board acknowledges, authorizes and agrees that the Portland Planning Commission will act instead of the Multnomah Planning Commission in the subject unincorporated areas using the City's own procedures, to include notice to and participation by County citizens. The Board will consider the recommendations of the Portland Planning Commission when legislative matters for County unincorporated areas are before the Board for action.

**Section 5.** An emergency is declared in that it is necessary for the health, safety and general welfare of the people of Multnomah County for this ordinance to take effect concurrent with the City code, plan and map amendments. Under section 5.50 of the Charter of Multnomah County, this ordinance will take effect in accordance with Section 1.

FIRST READING AND ADOPTION: December 16, 2010



BOARD OF COUNTY COMMISSIONERS,  
FOR MULTNOMAH COUNTY, OREGON

Jeff Cogen, Chair

REVIEWED:

HENRY H. LAZENBY JR, COUNTY ATTORNEY  
FOR MULTNOMAH COUNTY, OREGON

By Jed Tomkins  
Jed Tomkins, Assistant County Attorney

SUBMITTED BY:  
M. Cecilia Johnson, Director, Department of Community Services

### **EXHIBIT LIST FOR ORDINANCE**

1. Ordinance to Update the Federal Emergency Management Agency Flood Insurance Rate Map. (**PDX Ord. #184235**)
2. Exhibit A: Federal Emergency Management Agency Flood Map Update Project Recommended Draft
3. Exhibit B: Portland Special Flood Hazard Areas as of November 26, 2010

Prior to adoption, this information is available electronically or for viewing at the Multnomah County Board of Commissioners and Agenda website ([www.co.multnomah.or.us/cc/WeeklyAgendaPacket/](http://www.co.multnomah.or.us/cc/WeeklyAgendaPacket/)). To obtain the adopted ordinance and exhibits electronically, please contact the Board Clerk at 503-988-3277. These documents may also be purchased on CD-Rom from the Land Use and Transportation Program. Contact the Planning Program at 503-988-3043 for further information.

# ORDINANCE No.

184235

\* Adopt updated Federal Emergency Management Agency Flood Insurance Rate Map and ensure regulations are consistent (Ordinance; amend Titles 24 and 33, Special Flood Hazard Map)

The City of Portland Ordains:

Section 1. The Council finds:

## General Findings

1. The Federal Emergency Management Agency (FEMA) maintains maps of areas around the country that are prone to flooding. They update these maps periodically. The current maps were last updated in 2004 and were adopted by the City of Portland.
2. The maps maintained by FEMA are called the Flood Insurance Rate Maps (FIRMs). One of the elements shown on the maps are the special flood hazard areas.
3. The FEMA maps show the land area covered by the floodwaters of the base flood. The base flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood."
4. After conducting a public process, including notice as required in 44 CFR 9.8, FEMA has revised and updated nine of the 26 FIRM Panels that cover the City of Portland. The revised and updated panels affect special flood hazard areas in the North Reach of the Willamette River, Columbia River, Columbia Slough, Peninsula Drainage Districts No. 1 and 2, and Multnomah Drainage District No. 1.
5. FEMA has issued a Letter of Final Determination and requires the revised FIRMs to be adopted by municipalities and become effective by November 26, 2010.
6. The changes to FEMA's maps are to incorporate better information: FEMA was able to map contours and potential flood areas using recent and more accurate technology called LiDAR (Light Detection and Ranging). The maps indicate which properties—or portions of properties—are in or out of the special flood hazard areas. These areas are often called the "100-year floodplain."
7. Some areas of Portland are subject to periodic flooding. This flooding can cause the loss of life, health and property; disrupt commerce and the provision of governmental services, and require extraordinary public expenditures for flood protection and relief. Flooding losses harm the public health, safety, and general welfare of the city.
8. When communities adopt flood hazard regulations that apply within the areas mapped by FEMA, communities in those areas are eligible to participate in the National Flood Insurance Program (NFIP). The regulations limit the kinds of development allowed in the areas likely to flood, and specify building regulations that limit damage when there is a flood. The regulations also require balanced cut and fill when development takes place to reduce the cumulative impact of development on flood risk. The NFIP makes flood insurance available to homeowners, renters, and business owners at a lower rate than private insurance companies would be able to provide.
9. The City's flood program and regulations are in City Code Chapter 24.50 and in several chapters of Title 33, Planning and Zoning.
10. Portland participates in the NFIP. However, to maintain compliance with federal programs—and maintain the ability for community members to obtain flood insurance in Portland—Portland must update the maps of flood-prone areas in the city to reflect the changes made by the November 26,

2010 FEMA map update. Portland's maps must exactly match FEMA's maps, without variation. The City also has to update some references in City Code by that date.

11. Meeting the requirements necessary to participate in the NFIP is in the public interest. It is also in the public interest to adopt the updated maps and make minor, concurrent amendments to City Titles. The adoption of the maps and amendments to code strengthen the regulations that protect human life and health; minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public, minimize prolonged business interruptions, and minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, and sewer lines, streets, and bridges. These benefits from the regulations are achieved through such measures as prohibiting buildings in the floodway, generally requiring that buildings in the special flood hazard area be raised above the base flood and requiring balanced cut-and-fill. While many of these regulations are currently part of City Code, adoption of the map helps the City apply the regulations more accurately, and the amendments to City Code refine the regulations to better provide the benefits listed above.
12. On May 26, 2010, the Department of Land Conservation and Development (DLCD) notified the City of Portland that the 2010 FEMA maps were considered "new hazard inventory information" requiring a response under Statewide Planning Goal 7. Although Goal 7 provides local governments three years to complete the required response, the City must adopt the new maps by November 26, 2010 to preserve Portland's eligibility under the NFIP program.
13. On September 8, 2010, notice of the proposed action was mailed to the Department of Land Conservation and Development in compliance with the post-acknowledgement review process required by OAR 660-18-020.
14. On September 24, 2010 notice of the proposal was sent to 538 people and organizations on the Bureau of Planning and Sustainability's Legislative Mailing List. This includes all neighborhood and business associations. The notice also informed them of the hearing to be held before the Planning and Sustainability Commission.
15. On October 1, 2010 supplemental notice of the proposed action was mailed to the Department of Land Conservation and Development, along with specific proposed amendments to the Portland City Code.
16. On October 5, 2010 notice of the proposal as required by ORS 227.186 was sent to approximately 225 property owners potentially affected by proposed changes. This notice is also known as a "Measure 56 notice." The notice was sent to the owners of property where no portion of the property is now within the special flood hazard area, but some or all of the property will be in the special flood hazard area under the proposed changes.
17. The boundaries of the special flood hazard area are changing on 641 properties where some portion of the property is now within the special flood hazard area, and some or all of the property will be in the special flood hazard area under the proposed changes. The "Measure 56" notice was not sent to the owners of these properties because the regulations that affect their use of the property are not changing in a way that will impose additional limitations or restrictions on the use of these properties.

The FEMA maps show the special flood hazard area, which is the land area covered by the floodwaters of the base flood. The base flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood."

FEMA has predicted how deep the water will be—the elevation to which it will rise—at various locations during the 100-year flood. Their maps show the 100-year flood elevations and the areas of Portland that are predicted to be inundated by floodwater during a 100-year flood. However, the maps are not exact: they are drawn with a somewhat broad brush, and are based on the best data

available, which might be of limited accuracy.

When any portion of a property is shown to be in the special flood hazard area, the City's regulations require additional information—through a survey—to establish up-to-date, site-specific, and accurate elevation information. The results of the survey determine the location of the actual flood elevation and will determine what regulations apply to the property. So, the requirements affecting properties identified in current FEMA special flood hazard areas will not change with adoption of the November 26, 2010 maps.

18. On October 5, 2010, the *FEMA Flood Map Update Project: Proposed Draft* was published. The report was available to City bureaus and the public, and mailed to all those requesting a copy. An electronic copy was posted to the Bureau of Planning and Sustainability's website.
19. On October 26, 2010, the Planning and Sustainability Commission held a public hearing on the *FEMA Flood Map Update Project: Proposed Draft*. The Commission heard testimony, and recommended that City Council adopt the proposed changes to City Code and maps.
20. On October 26, 2010, notice of the City Council hearing on this proposal was given to all those who testified in person at the hearing of the Planning and Sustainability Commission. No letters or emails were received in advance of the hearing.
21. On October 28, 2010, the *FEMA Flood Map Update Project: Recommended Draft* was published. The report was available to City bureaus and the public, and mailed to all those requesting a copy. An electronic copy was posted to the Bureau's website.
22. On November 10, 2010, City Council held a public hearing on the *FEMA Flood Map Update Project: Recommended Draft*. They heard testimony, and voted to amend the City Code and maps as shown in the Recommended Draft.
23. On \_\_\_\_\_, notice of the adoption was mailed to the Department of Land Conservation and Development in compliance with the post-acknowledgement review process required by OAR 660-18-020.

## Findings on Statewide Planning Goals

24. State planning statutes require cities to adopt and amend comprehensive plans and land use regulations in compliance with state land use goals. Only the state goals addressed below apply.
25. **Goal 1, Citizen Involvement**, requires provision of opportunities for citizens to be involved in all phases of the planning process. The preparation of these amendments has provided numerous opportunities for public involvement, including:
  - On September 8, 2010, notice of the proposed action was mailed to the Department of Land Conservation and Development in compliance with the post-acknowledgement review process required by OAR 660-18-020.
  - On September 24, 2010 notice of the proposal was sent to 538 people and organizations on the Bureau of Planning and Sustainability's Legislative Mailing List. This includes all neighborhood and business associations. The notice also informed them of the hearing to be held before the Planning and Sustainability Commission.
  - On October 1, 2010 supplemental notice of the proposed action was mailed to the Department of Land Conservation and Development, along with specific proposed amendments to the Portland City Code.
  - On October 5, 2010 notice of the proposal as required by ORS 227.186 was sent to approximately 225 property owners potentially affected by proposed changes. This notice is also known as a



"Measure 56 notice." The notice was sent to the owners of property where no portion of the property is now within the special flood hazard area, but some or all of the property will be in the special flood hazard area under the proposed changes.

- On October 5, 2010, the FEMA Flood Map Update Project: Proposed Draft was published. The report was available to City bureaus and the public, and mailed to all those requesting a copy. An electronic copy was posted to the Bureau of Planning and Sustainability's website.
  - On October 26, 2010, the Planning and Sustainability Commission held a public hearing on the FEMA Flood Map Update Project: Proposed Draft. They heard testimony.
  - On October 26, 2010, notice of the City Council hearing on this proposal was given to all those who testified in person at the hearing of the Planning and Sustainability Commission. No letters or emails were received in advance of the hearing.
  - On October 28, 2010, the FEMA Flood Map Update Project: Recommended Draft was published. The report was available to City bureaus and the public, and mailed to all those requesting a copy. An electronic copy was posted to the Bureau's website.
  - On November 10, 2010, City Council held a public hearing on the FEMA Flood Map Update Project: Recommended Draft. They heard testimony.
  - Staff of the Bureau of Development Services and the Bureau of Planning and Sustainability engaged in telephone and email exchanges with property owners and other interested parties in regards to project provisions.
  - The Bureau of Planning and Sustainability maintained and updated, as needed, a project web site that included basic project information, announcements of public events, project documents and staff contact information.
26. **Goal 5, Natural Resources, Scenic and Historic Areas, and Open Spaces**, addresses the conservation of open space and the protection of natural and scenic resources. The amendments are consistent with and support this goal. Floodplains provide important watershed functions including nutrient transfer, off-channel fish and wildlife habitat, and groundwater recharge, along with conveyance and storage of flood waters. The values and functions of floodplains, and maps of flood areas, are identified in City and Metro natural resource inventories that have been adopted and found in compliance with Goal 5. Mapped flood areas include a combination of the FEMA special flood hazard maps and areas inundated during the 1996 floods. The amendments will improve the accuracy of information regarding where flooding is likely to occur, which in turn will inform the maintenance and update of the City's programs to comply with Goal 5, including but not limited to the City's environmental overlay zones.
27. **Goal 6, Air, Water, and Land Resource Quality**, requires the maintenance and improvement of the quality of air, water, and land resources. The amendments support this goal. Adoption of the updated FEMA maps will improve the accuracy of information about areas prone to flooding in the City. This information will inform future planning and management decisions about how the City's floodplain areas are managed, including approaches that will help maintain water quality and prevent water pollution from occurring during flood events.
28. **Goal 7, Areas Subject to Natural Disasters and Hazards**, requires the protection of people and property from natural hazards. The amendments support this goal. Adopting the updated FEMA maps and appropriate code references will improve the accuracy of information used to implement existing City flood regulations. These regulations protect people and property from flooding by limiting the kinds of development allowed in the areas likely to flood, and specify building regulations that limit damage when there is a flood. The regulations also require balanced cut and fill when development takes place to reduce the cumulative impact of development on flood risk. . Adoption of the maps is also needed to maintain Portland's eligibility to participate in the NFIS

program.

The amendments to the City Code are clarifications of terminology, and also bring the City into conformance with recent court cases; the court cases clarify that the City must refer to the maps by their specific adoption dates rather than simply "the current maps." There are no substantive changes to the City Code.

The changes to the maps are based on update maps produced by FEMA. Portland has in place the maps FEMA updated in 2004. The FEMA maps show the land area covered by the floodwaters of the base flood. The base flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood."

FEMA has updated maps for parts of Portland; the new maps take effect on November 26, 2010. It is these 2010 maps that Portland is adopting. These also amend the City's inventory of natural hazards. The changes to FEMA's maps are primarily because of better information: FEMA was able to map contours and potential flood areas using recent and more accurate technology called LIDAR. The maps indicate which properties—or portions of properties—are in or out of the special flood hazard areas. These areas are often called the "100-year floodplain."

Adoption of special flood hazard area maps that are more accurate will increase Portland's ability to protect people and property from flooding. Therefore, this goal is met.

29. **Goal 12, Transportation**, requires provision of a safe, convenient, and economic transportation system. The Oregon Transportation Planning Rule (TPR) was adopted in 1991 and amended in 1996 and 2005 to implement State Goal 12. The TPR requires certain findings if the proposed Comprehensive Plan Map amendment, Zone Change, or regulation will significantly affect an existing or planned transportation facility. This proposal will have no effect on existing or planned transportation facilities. The proposed map and code amendments update maps of the special flood hazard areas, but do not change what uses are allowed, the amounts of uses allowed, or the amount of development allowed.
30. **Goal 15, Willamette River Greenway**, requires protection, conservation, enhancement and maintenance of the natural, scenic, historic, agricultural, economic, and recreational qualities of lands along the Willamette River. Under this Goal, any "intensification" of land use after December 6, 1975 requires an examination against the requirements of the Goal. Because adoption of the updated FEMA maps does not intensify land use, this goal is met.

## Findings on Metro Urban Growth Management Functional Plan

31. **Title 1, Requirements for Housing and Employment Accommodation**, requires that each jurisdiction contribute its fair share to increasing the development capacity of land within the Urban Growth Boundary. This requirement is to be generally implemented through citywide analysis based on calculated capacities from land use designations. The amendments are consistent with this title because they do not increase the development capacity of the city.
32. **Title 2, Regional Parking Policy**, regulates the amount of parking permitted by use for jurisdictions in the region. The amendments are consistent with this title because they do not affect the parking regulations.
33. **Title 3, Water Quality, Flood Management and Fish and Wildlife Conservation**, establishes requirements that Metro-area cities and counties must meet to reduce flood and landslide hazards, control soil erosion and protect water quality. Title 3 specifically implements the Statewide Land Use Goals 6, Air, Water and Land Resource Quality and 7,



Areas Subject to Natural Hazards. The findings for Statewide Land Use Goals 6 and 7 provided in this ordinance support this finding that the amendments are consistent with Title 3.

34. **Title 4, Industrial and Other Employment Areas**, limits retail and office development in Employment and Industrial areas to those that are most likely to serve the needs of the area and not draw customers from a larger market area. The amendments are consistent with this title because they do not affect the development capacity of industrial or employment areas.
35. **Title 7, Affordable Housing**, ensures opportunities for affordable housing at all income levels, and calls for a choice of housing types. The amendments are consistent with this title because they do not affect the development capacity of residential areas.
36. **Title 13, Nature in Neighborhoods**, is a program to conserve, protect, and restore a continuous ecologically viable streamside corridor system, from the streams' headwaters to their confluence with other streams and rivers, and with their floodplains in a manner that is integrated with upland wildlife habitat and with the surrounding urban landscape. This Title is also intended to foster control and prevent water pollution for the protection of the public health and safety, and to maintain and improve water quality throughout the region. The amendments are consistent with and support this Title. The City will use the updated FEMA maps to update the City's Natural Resource Inventory (NRI). Using the updated FEMA maps will improve NRI information and maps showing where floodplain functions occur in different parts of the city. The City NRI provides a technical basis for evaluating and modifying City programs to comply with Title 13, including but not limited to the environmental and greenway overlay zones.

## Findings on Portland's Comprehensive Plan Goals

37. Only the Comprehensive Plan goals addressed below apply.
38. **Policy 1.4, Intergovernmental Coordination**, requires continuous participation in intergovernmental affairs with public agencies to coordinate metropolitan planning and project development and maximize the efficient use of public funds. The amendments support this policy because a number of other government agencies were notified of this proposal and given the opportunity to comment. These agencies include the Oregon Department of Land Conservation and Development, Metro, TriMet, and Multnomah County.
39. **Goal 8, Environment**, calls for the maintenance and improvement of the quality of Portland's air, water, and land resources, as well as the protection of neighborhoods and business centers from noise pollution. **Policy 8.12, National Flood Insurance Program**, calls for the City to retain qualification in the National Flood Insurance Program (NFIS) through implementation of a full range of floodplain management measures. Adopting the FEMA maps that take effect on November 26, 2010, along with the amendments to the City Code to accurately refer to those maps is required by FEMA if the City is to remain eligible for the NFIS program. **Policy 8.13, Natural Hazards**, calls for controlling the density of development in areas of natural hazards consistent with the provisions of the City's Building Code, Chapter 70, the Floodplain Ordinance and the Subdivision Ordinance. This policy is met because the proposed amendments to City Codes and maps will not change the effect the City's regulations have on controlling the density of development in areas prone to flooding.
40. **Goal 9, Citizen Involvement**, calls for improved methods and ongoing opportunities for citizen involvement in the land use decision-making process, and the implementation, review, and amendment of the Comprehensive Plan. This project followed the process and requirements specified in Chapter 33.740, Legislative Procedure. The amendments support this goal for the reasons found in the findings for Statewide Planning Goal 1, Citizen Involvement.
41. **Goal 10, Plan Review and Administration**, calls for periodic review of the Comprehensive Plan, for implementation of the Plan, and addresses amendments to the Plan, to the Plan Map, and to the Zoning Code and Zoning Map. **Policy 10.10, Amendments to the Zoning and Subdivision Regulations**, requires amendments to the zoning and subdivision regulations to be clear, concise, and applicable to the broad range of development situations faced by a growing, urban city. The amendments support this policy by being both clear and concise, and are applicable to all properties within the FEMA-defined special flood hazard areas.

NOW, THEREFORE, the Council directs:

- a. Adopt Exhibit A, the *FEMA Flood Map Update Project: Recommended Draft*, dated October 27, 2010.
- b. Amend Title 24, Building Regulations, as shown in Exhibit A, the *FEMA Flood Map Update Project: Recommended Draft*, dated October 27, 2010.
- c. Amend Title 33, Planning and Zoning, as shown in Exhibit A, the *FEMA Flood Map Update Project: Recommended Draft*, dated October 27, 2010.
- d. Adopt the commentary in Exhibit A, the *FEMA Flood Map Update Project: Recommended Draft*, dated October 27, 2010, as legislative intent and as further findings.
- e. Adopt the special flood hazard areas information on the FEMA Flood Insurance Rate Map (FIRM) as shown in Exhibit B, *FEMA Special Flood Hazard Areas (effective 11/26/2010)*.
- f. Update the City's inventory of natural hazards to conform to the map shown in Exhibit B *FEMA Special Flood Hazard Areas (effective 11/26/2010)*.

Section 2. If any section, subsection, sentence, clause, phrase, diagram, designation, or drawing contained in this Ordinance, or the plan, map or code it adopts or amends, is held to be deficient, invalid or unconstitutional, that shall not affect the validity of the remaining portions. The Council declares that it would have adopted the plan, map, or code and each section, subsection, sentence, clause, phrase, diagram, designation, and drawing thereof, regardless of the fact that any one or more sections, subsections, sentences, clauses, phrases, diagrams, designations, or drawings contained in this Ordinance, may be found to be deficient, invalid or unconstitutional.


Section 3. The Council declares that an emergency exists because the maps and code amendments must be adopted by November 26, 2010 to maintain Portland's eligibility to participate in FEMA's National Flood Insurance Program; therefore, this ordinance will be effective on November 26, 2010.

Passed by the Council: NOV 10 2010

Mayor Adams  
Prepared by: J. Richman  
Date Prepared: October 27, 2010

LaVonne Griffin-Valade  
Auditor of the City of Portland

By

  
Deputy

Agenda No.  
ORDINANCE NO.

184235

Title

\* Adopt updated FEMA Flood Insurance Rate Map (FIRM) and ensure regulations are consistent (Ordinance; amend Titles 24 and 33, Special Flood Hazard Map)

<p>INTRODUCED BY Commissioner/Auditor: <b>Mayor Sam Adams</b></p>	<p>CLERK USE: DATE FILED <u>NOV 05 2010</u></p>
<p>COMMISSIONER APPROVAL</p> <p>Mayor—Finance and Administration - Adams</p> <p>Position 1/Utilities - Fritz</p> <p>Position 2/Works - Fish</p> <p>Position 3/Affairs - Saltzman</p> <p>Position 4/Safety - Leonard</p>	<p>LaVonne Griffin-Valade Auditor of the City of Portland</p> <p>By: <u>[Signature]</u> Deputy</p>
<p>BUREAU APPROVAL</p> <p>Bureau: Planning and Sustainability Bureau Head: Susan Anderson <u>Susan Anderson</u></p> <p>Prepared by: Jessica Richman Date Prepared: Oct. 27, 2010</p> <p>Financial Impact Statement Completed <input type="checkbox"/> Amends Budget <input type="checkbox"/> Not Required <input checked="" type="checkbox"/></p> <p>Portland Policy Document If "Yes" requires City Policy paragraph stated in document. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Council Meeting Date November 10, 2010</p>	<p>ACTION TAKEN:</p>
<p>City Attorney Approval <u>KS Beaumont</u></p>	

<p>AGENDA</p> <p>TIME CERTAIN <input checked="" type="checkbox"/> Start time: <u>2pm</u></p> <p>Total amount of time needed: <u>30</u> (for presentation, testimony and discussion)</p> <p>CONSENT <input type="checkbox"/></p> <p>REGULAR <input checked="" type="checkbox"/> Total amount of time needed: <u>5 min.</u> (for presentation, testimony and discussion)</p>
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FOUR-FIFTHS AGENDA	COMMISSIONERS VOTED AS FOLLOWS:	
	YEAS	NAYS
1. Fritz	<input checked="" type="checkbox"/>	
2. Fish	<input checked="" type="checkbox"/>	
3. Saltzman	<input checked="" type="checkbox"/>	
4. Leonard	<input checked="" type="checkbox"/>	
Adams	<input checked="" type="checkbox"/>	



184235

City of Portland  
Bureau of  
**Planning and  
Sustainability**

Sam Adams, Mayor  
Susan Anderson, Director

**Portland  
Planning and  
Sustainability  
Commission**

Don Hanson, Chair  
Michelle Rudd, Vice Chair  
Howard Shapiro, Vice Chair

André Baugh  
Karen Gray  
Mike Houck

Lai-Lani Ovals  
Gary Oxman  
Jill Sherman  
Chris Smith  
Irma Valdez

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November 2, 2010

Portland City Council  
City Hall  
1221 SW Fourth Avenue  
Portland, OR 97204

Dear Commissioners:

On October 26, 2010, the Portland Planning and Sustainability Commission held a hearing on the proposed FEMA Flood Map Update project. This project updates the City's floodplain maps and regulations to maintain Portland's eligibility to participate in the National Flood Insurance Program.

Deputy City Attorney Terence Thatcher gave a helpful overview of recent litigation and the settlement reached between the Portland Audubon Society and FEMA. We heard testimony from Bob Sallinger regarding this case. Mr. Thatcher assured us that this settlement has no effect on this project, but will likely result in amendments needed in future years.

The Planning and Sustainability Commission unanimously recommends that City Council:

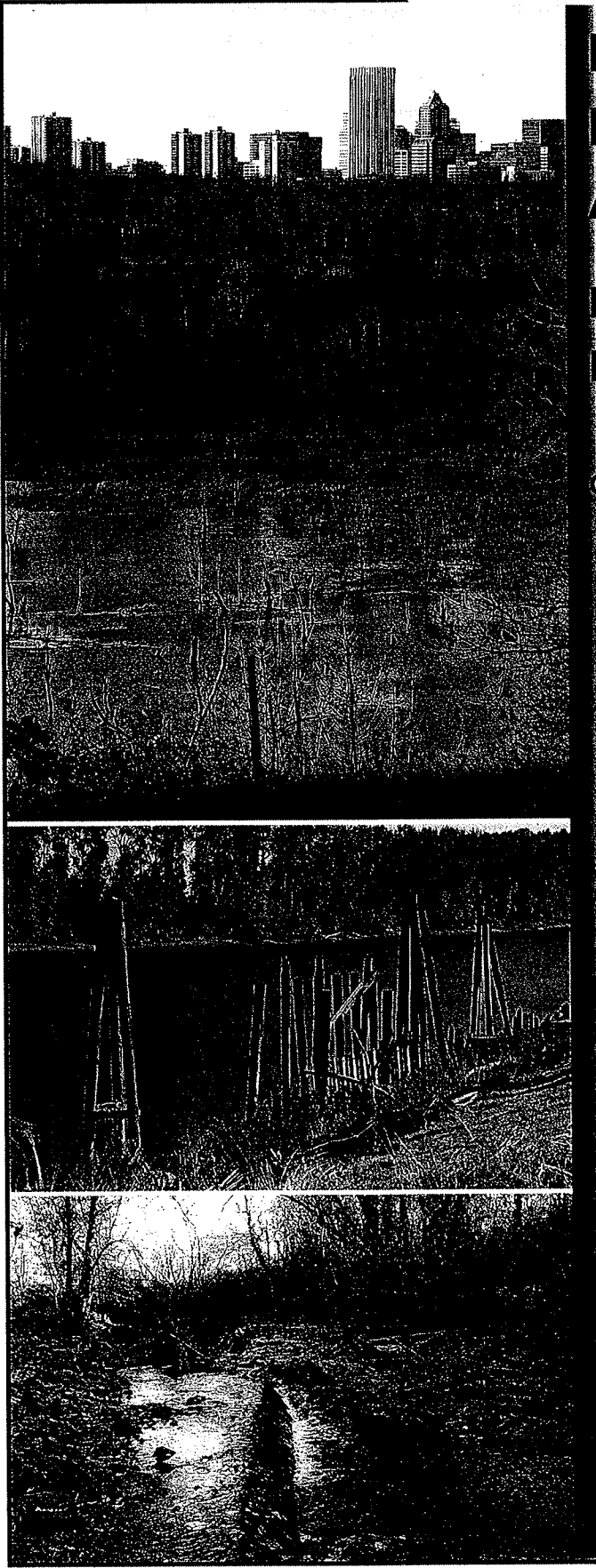
- 1) Adopt the Recommended Ordinance; and
- 2) Adopt the FEMA Flood Map Update Project: Recommended Draft.

We commend the project team for their quick and diligent work and thank you for your consideration of our recommendation.

Sincerely,

Don Hanson, Chair  
Portland Planning and Sustainability Commission

Exhibit A



# Federal Emergency Management Agency (FEMA)

## Flood Map Update Project Recommended Draft

October 27, 2010



City of Portland Bureau of  
**Planning and Sustainability**

Sam Adams, Mayor | Susan Anderson, Director



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**Federal Emergency Management Agency (FEMA)**  
**Flood Map Update Project**

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The Bureau of Planning and Sustainability is committed to providing equal access to information and hearings. If you need special accommodation, please call 503-823-7700, the City's TTY at 503-823-6868, or the Oregon Relay Service at 1-800-735-2900.

For more information about the **FEMA Flood Map Update Project** please contact:

Douglas Hardy, Senior Planner  
Bureau of Development Services

**Phone:** 503-823-7816

**Email:** [douglas.hardy@portlandoregon.gov](mailto:douglas.hardy@portlandoregon.gov)

or visit [PortlandOnline.com/bps/femaupdate](http://PortlandOnline.com/bps/femaupdate)

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## Acknowledgements

### **Portland City Council**

Sam Adams, *Mayor*  
Nick Fish, *Commissioner*  
Amanda Fritz, *Commissioner*  
Randy Leonard, *Commissioner*  
Dan Saltzman, *Commissioner*

### **Portland Planning and Sustainability Commission**

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Michelle Rudd—Vice Chair  
Howard Shapiro—Vice Chair  
Andre' Baugh  
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# I. Introduction

## Background

The Federal Emergency Management Agency (FEMA) maintains maps of areas around the country that are prone to flooding. When communities have flood-hazard regulations that apply within the areas mapped by FEMA, community members in those areas are eligible to participate in the National Flood Insurance Program (NFIP). The regulations limit the kinds of development allowed in the areas likely to flood, and specify building regulations that limit damage when there is a flood. The NFIP makes flood insurance available to homeowners, renters, and business owners at a lower rate than private insurance companies would be able to provide.

FEMA updates these maps periodically. The most recent set of updated maps will be effective on November 26, 2010. In Portland, the maps consist of 26 separate map panels. Nine of the 26 map panels are being revised; this affects areas in the North Reach of the Willamette River, Columbia River, Columbia Slough, and the drainage districts adjacent to the Columbia River. The revised flood boundaries are based on more detailed and up-to-date topographic data. Flood elevations are not changed on the revised maps.

Portlanders are eligible to participate in the NFIP. However, to maintain that eligibility, the City must adopt the FEMA-updated maps of flood-prone areas. Some references in our regulations must also be updated.

## Recommended Map Changes

These amendments adopt the maps most recently updated by FEMA, which will become effective on November 26, 2010. There has been no change to the elevation at which the map boundaries are drawn. However, more accurate topographical information has resulted in revised map boundaries that provide better information on the location of flood elevations.

## Recommended Amendments to City Codes

Some minor amendments are needed to both Title 24 (Building Regulations) and Title 33 (Planning and Zoning) to refer to the updated maps. No substantive changes to the regulations are proposed.

In Title 24, Section 24.50.040 will be changed to refer to the updated maps. In addition, several code changes are recommended to ensure full compliance with the Federal regulations:

- New definitions and changes to existing definitions;
- Revised reference to the Flood Insurance Study and Flood Insurance Rate Maps to cite the documents by their official publication names and dates;
- Clarification to the floodway encroachment standard for AE Zone flood hazard areas without a regulatory floodway;
- Clarification to requirements for the use and design of fully enclosed spaces located below the lowest floor; and
- The addition of standards for drainage paths in AH/AO Zone flood hazard areas.

In Title 33, Planning and Zoning, changes are proposed throughout the code:

- The term "flood hazard area" will be changed to "special flood hazard area" to be consistent with FEMA terminology.
- The definition of "special flood hazard area" will refer to the 100-year floodplain "as defined by FEMA as of November 26, 2010", replacing the reference to the 100-year floodplain "as currently defined by FEMA" for specificity.

- Terms such as flood hazard area, floodplain, 100-year floodplain, and the like will be changed to "special flood hazard area" to be consistent both within the Zoning Code and with FEMA terminology.

The recommended amendments to Title 24 and Title 33 do not change how development is regulated. The amendments only update the two Titles to refer to the most recent FEMA maps, and to clarify terminology in City Codes so that it is consistent within the Titles and with FEMA's terminology.

### **Planning and Sustainability Commission Recommendation**

The Planning and Sustainability Commission recommends that City Council take the following actions:

- Adopt the ordinance;
- Adopt this report;
- Amend Title 24, Building Regulations, and Title 33, Planning and Zoning, as shown in this report;
- Adopt the special flood hazard areas information on the FEMA Flood Insurance Rate Map (FIRM) as shown in this report; and
- Adopt the report and commentary as further findings and legislative intent.

## **II. Amendments to Title 24, Building Regulations**

The recommended amendments to Title 24 are in this section of the report. The amendments are on the odd-numbered pages. The facing (even-numbered) pages contain commentary about the recommended amendments.



**Chapter 24.50, Flood Hazard Areas**

**24.50.030 Flood Related Definitions**

Some definitions are added and others clarified to come into conformance with Federal regulations.

- X. For clarity, Subsection X (previously W) is split into multiple definitions, lettered X through EE. There are no substantive changes.

Language to be **added** is underlined  
 Language to be **deleted** is shown in ~~strikethrough~~

## AMEND CHAPTER 24.50, FLOOD HAZARD AREAS

### 24.50.030 Flood Related Definitions.

The definitions contained in this Section relate to flood hazard areas and considerations outlined in this Chapter.

A through D: [No change]

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

**E. F.** "City Datum" means the reference datum for the City of Portland maps. The FIRM maps described in Section 24.50.050 are referenced to the North American Vertical Datum (NAVD) of 1988. To convert NAVD 1988 level to City datum, subtract 2.125 feet from the elevation referenced to NAVD 1988 level.

**F. G.** "Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings, bridges, other structures, and mining, dredging, filling, grading, paving, excavation, fencing, landscaping, drainage facilities, or drilling operations, or storage of equipment or materials.

[Re-letter G through V to H through W]

**W. X.** "New manufactured home park or manufactured home subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lots on which the manufactured home is to be affixed (including as a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets) is completed on or after the original date of this Chapter.

**Y.** "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets, walkways, sanitary sewers, storm sewers, and/or drainage facilities; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

**Z.** "Structure or accessory structure" means, for the purposes of this Chapter, a walled and roofed building including a gas or liquid storage tank that is principally above ground.

**AA.** "Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

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## Commentary

### 24.50.030 Flood Related Definitions (con't)

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Language to be **added** is underlined  
Language to be **deleted** is shown in ~~strikethrough~~

#### 24.50.030 Flood Related Definitions (con't)

**BB.** "Substantial Improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the 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. Substantial improvement is 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:

- a. 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
- b. Any alteration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places.

**CC.** "Variance" means a grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

**DD.** "Water surface elevation" means the height of the water surface of the base flood for any point along the longitudinal course of a stream.

**EE.** "Watercourse" means a channel in which a flow of water occurs, either continuously or intermittently, and if the latter, with some degree of regularity. Watercourses may be either natural or artificial.

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## Commentary

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### 24.50.040 FIA Study and Flood Hazard Maps.

These amendments change the reference to include the latest revision to the Flood Insurance Study and Flood Insurance Rate Maps, which will become effective on November 26, 2010. The Flood Insurance Rate Maps consist of 26 separate map panels. Nine of the 26 map panels are being revised which affect areas in the North Reach of the Willamette River, Columbia River, Columbia Slough, and the drainage districts adjacent to the Columbia River.

The boundaries on the maps have been revised based on the use of more detailed and up-to-date topographic data. Flood elevations have not been changed.

Language to be **added** is underlined  
Language to be **deleted** is shown in ~~strikethrough~~

#### **24.50.040 FIA Study and Flood Hazard Maps.**

The following study and maps in this Section are hereby adopted and declared to be a part of this Chapter.

- A.** Flood Insurance Study is the official scientific and engineering report entitled "Flood Insurance Study for City of Portland, Oregon: Multnomah, Clackamas and Washington Counties", dated November 26, 2010 prepared by the Federal Insurance Administration (FIA) under agency agreement with the Portland District Corps of Engineers. The latest ~~revised October 19, 2004~~, edition of the report, along with accompanying FIRMs, are on file with the Bureau of Development Services.
- B.** Flood Insurance Rate Maps (FIRMs) are ~~is~~ the official maps entitled "The Flood Insurance Rate Maps (FIRMs) for City of Portland, Oregon: Multnomah, Clackamas and Washington Counties", dated either October 19, 2004 or November 26, 2010, whichever is more current, on which the Federal Insurance Administration has delineated the areas of flood hazards along with the 100-year (base flood) and 500-year flood boundaries, the floodway zone boundaries and the 100-year flood elevations.
- C.-E.** No Change.



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## Commentary

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### 24.50.060 Provisions for Flood Hazard Reduction.

These amendments revise flood protection standards necessary to conform to the minimum requirements of the National Flood Insurance Program (NFIP).

The floodway encroachment standard is revised to address flood zones where a regulatory floodway has not been identified on the Flood Insurance Rate Maps (FIRMs).

Standards are added to provide for the automatic equalization of hydrostatic flood forces on building walls of fully enclosed areas located below the lowest floor of buildings.

**RECOMMENDED CODE LANGUAGE**

Language to be **added** is underlined  
 Language to be **deleted** is shown in ~~strikethrough~~

**24.50.060 Provisions for Flood Hazard Reduction.**

In all flood hazard areas defined in Section 24.50.050, the following provisions are required:

**A through C.** [No change.]

**D. Floodway.** Encroachments into the floodway by development and structures defined in Section 24.50.020 are prohibited unless it is demonstrated by technical analysis from a registered engineer that the development will result in no increase in the base flood elevation. In areas where a regulatory floodway has not been designated, no new construction, substantial improvement or other development (including fill) shall be permitted within Zone AE, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community. Technical analysis shall be reviewed and approved by the Sewage System Administrator. However, the minimum width of the floodway shall not be less than 15 feet.

**E.** [No change.]

**F. Special flood hazard areas.**

1. [No change]

2. **Residential construction.**

a. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above the flood protection elevation. Floodproofing of "lowest floor" space is not permitted.

b. Fully closed areas below the lowest floor that are subject to flooding are prohibited or shall be used solely for parking of vehicles, building access or limited storage and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

(1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;

(2) The bottom of all openings shall be no higher than one foot above grade;

(3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

a. Fills required to elevate the lowest floor to the flood protection level shall comply with Chapter 24.70. Fill selection and placement shall recognize the effects of inundation from floodwaters on slope stability, fill settlement, and scour. The minimum elevation at the top of the fill slope shall be at the

### 24.50.060 Provisions for Flood Hazard Reduction (con't)

Standards are added to provide for adequate drainage pathways around buildings in flood areas subject to shallow ponding and sheetflow (AH/AO Zones).

Language to be **added** is underlined  
Language to be **deleted** is shown in ~~strikethrough~~

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**24.50.060 Provisions for Flood Hazard Reduction (con't)**

base flood level. Minimum distance from any point of the building perimeter to the top of the fill slope shall be either 25 feet or twice the depth of fill at that point, whichever is the greater distance.

- b. Piling foundations required to elevate the lowest habitable floor to the flood protection level shall comply with Section 1809 and 1808 of the Structural Specialty Code. Pilings shall be spaced no more than 10 feet apart, and reinforcement shall be provided for piling more than 6 feet above the ground level.

**3 through 10.** [No change.]

- 11. AH/AO Zone Drainage.** Adequate drainage paths shall be provided around structures on slopes to guide floodwaters around and away from proposed structures.

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## Commentary

### III. Amendments to Title 33, Planning and Zoning

The recommended amendments to Title 33 are included in this section of the report. The amendments are on the odd-numbered pages. The facing (even-numbered) pages contain commentary about the recommended amendments.

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#### Chapter 33.910, Definitions

##### Flood Hazard Area

This amendment updates Zoning Code definition of "Flood Hazard Area" in three ways.

First, the term "flood hazard area" is changed to "special flood hazard area" to be consistent with FEMA terminology.

Second, this amendment changes the definition by referring to the special flood hazard area in effect on November 26, 2010. This is the date of the most recent FEMA update. The new language replaces language that refers to the area "as currently defined by FEMA." The new language is more specific. For future updates, the effective date will be changed in this definition instead of throughout the code.

Finally, the definition is amended to be consistent with FEMA's definitions of special flood hazard area and base flood. The amended Zoning Code definition directly incorporates portions of FEMA's definitions:

##### **Special Flood Hazard Area (FEMA Definition, FCR 44.I.59.1)**

The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The SFHA includes Zones A, AO, AH, A1-A30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO V1-30, VE, and V.

##### **Base Flood (FEMA Definition, FCR 44.I.59.1 )**

The flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood." The base flood is the national standard used by the NFIP and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. Base Flood Elevations (BFEs) are typically shown on Flood Insurance Rate Maps (FIRMs).

##### Floodway

No change. This definition is included here for reference only.

**AMEND CHAPTER 33.910, DEFINITIONS**

**Special Flood Hazard Area.** Land area covered by the floodwaters of the base flood, as mapped that is in the 100-year floodplain as currently defined by shown on the Federal Emergency Management Agency (FEMA) maps in effect on November 26, 2010. The base flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood."

**Floodway.** The active flowing channel during a flood, as designated on the flood maps adopted under authority of Title 24 of the Portland City Code. The channel of a river 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.



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## Commentary

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### Title 33, Planning and Zoning

#### **Code provisions where "special flood hazard area" will replace other terms**

These amendments substitute the newly-defined term "special flood hazard area" where "flood hazard area," "100-year floodplain," and "100-year floodplain, as currently defined by Federal Emergency Management Agency (FEMA)" currently exist in the Code. See commentary on previous page for legislative intent.

#### **Code provisions where "potential" will be deleted from "flood hazard area"**

A project called "Code Maintenance 2004" deleted a map and terminology that referred to the "potential" flood hazard area. The references in 33.660.120, 33.662.120, 33.664.120 and 33.664.220 were inadvertently left in the Code. This amendment corrects that oversight and clarifies that the provisions apply to the special flood hazard area.

**Replace “flood hazard area” with “special flood hazard area” in the following places:**

- 33.564.310.A – Pleasant Valley Plan District
- 33.610.100.C – Land Divisions – Lots in RF through R5
- 33.610.100.C and D – Land Divisions – Lots in RF through R5 Zones
- 33.611.100.C and D – Land Divisions – Lots in R2.5 Zone
- 33.631 – Sites in Special Flood Hazard Areas (9 changes in this chapter)
- 33.634.200.D.2 – Required Recreation Area
- 33.660.110.B.3 and 120.C – Review of Land Divisions in Open Space and Residential Zones, Review Procedures and Approval Criteria
- 33.662.110.B.3 and 120.C – Review of Land Divisions in Commercial, Employment, and Industrial Zones, Review Procedures and Approval Criteria
- 33.664.120.A.3 and 220.B.1.c – Review of Land Divisions of Large Sites in Industrial Zones, Review of Preliminary Plan and Final Plat – Approval Criteria
- 33.730.060.D.1.c – Quasi-Judicial Procedures, Application Requirements

**Replace “100-year floodplain” or “100-year floodplain, as currently defined by Federal Emergency Management Agency (FEMA)” with “special flood hazard area” in the following places:**

- 33.430.240.A.1.a. – Environmental Zones
- 33.537.020 – Johnson Creek Basin Plan District (JCBPD)
- 33.537.110.A, B.1.b., and B.2.b. – JCBPD, Transfer of Development Rights
- 33.537.120.B.2 – JCBPD, Bonus Density
- 33.537.140.B – JCBPD, South Subdistrict Development Standards
- 33.537.150.B – JCBPD, Floodplain Standards
- 33.730.060.D.1.c – Quasi-Judicial Procedures, Application Requirements

**Delete “potential” in the following places:**

- 33.660.120.C – Review of Land Divisions in Open Space and Residential Zones, Preliminary Plan, Approval Criteria
- 33.662.120.C – Review of Land Divisions in Commercial, Employment, and Industrial Zones, Preliminary Plan, Approval Criteria
- 33.664.120.A.3 and 220.B.1.c – Review of Land Divisions on Large Sites in Industrial Zones, Preliminary Plan and Final Plat, Approval Criteria

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## Commentary

### Chapter 33.537, Johnson Creek Basin Plan District

#### 33.537.100 General Development Standards

The term "floodway" is already defined in the Code. This amendment removes the language that refers to the "currently defined" floodway because it is redundant with the definition. See pages 14-15 of this report for reference.

### Chapter 33.730, Quasi-Judicial Procedures

#### 33.730.060.D. Application Requirements. Required information for land divisions

See commentary on page 6.

This amendment deletes the reference to FEMA to avoid confusion, as both "floodway" and "special flood hazard area" are FEMA designations, but only floodway is currently called out as pertaining to a FEMA designation. See page 15 for definitions of Special Flood Hazard Area and Floodway.

## AMEND CHAPTER 33.537, JOHNSON CREEK BASIN PLAN DISTRICT

### 33.537.100 General Development Standards

The standards of this section apply to the entire Johnson Creek Basin plan district.

- A.** The following are prohibited within the Johnson Creek floodway ~~as currently defined by the Federal Emergency Management Agency (FEMA)~~. Exceptions to this are fences, public bridges, outfall structures, and fire hydrants, which are allowed subject to standards set by the Bureau of Environmental Services.

1. – 3. [No change.]

**B.-E.** [No Change.]

## AMEND CHAPTER 33.730, QUASI-JUDICIAL PROCEDURES

### 33.730.060 Application Requirements

**A.-C.** [No Change.]

**D. Required information for land divisions.** [No change.]

1. [No Change.]

a.-c. [No Change.]

d. [No change.]

(1) [No Change.]

(2) Existing conditions map. The following existing site conditions must be shown:

Surveyed information:

- Bullets 1-6 [No change.]
- Location of flood hazard areas, including elevations of the special flood hazard area 100-year floodplains, and ~~FEMA F~~floodway boundaries. Sites that contain a water body not shown on the FEMA maps must identify the location of the flood hazard areas;

Additional information:

- [No change.]
- [No change.]

(3)-(4). [No Change.]

e.-k. [No Change.]

2.-4. [No Change.]

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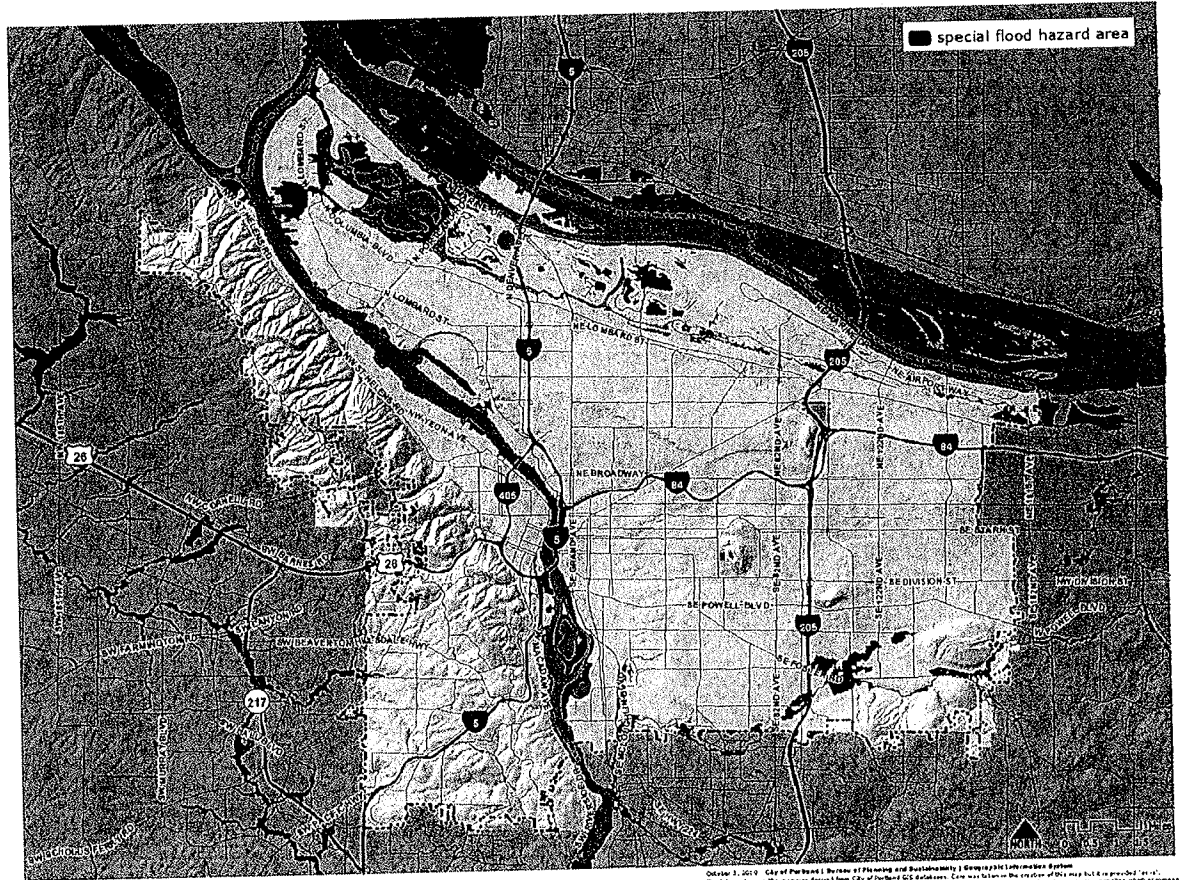
## Commentary

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### IV. Recommended Portland Special Flood Hazard Areas Map as of November 26, 2010

This map shows, at a citywide scale, the recommended special flood hazard areas map as of November 26, 2010. It is the same as the maps created by FEMA.

To see the map on a larger scale, visit [PortlandOnline.com/bps/femaupdate](http://PortlandOnline.com/bps/femaupdate). There will also be a large version of this map at public hearings, and is available for review at the Bureau of Planning and Sustainability offices.



FEMA Special Flood Hazard Area (effective 11/26/2010)

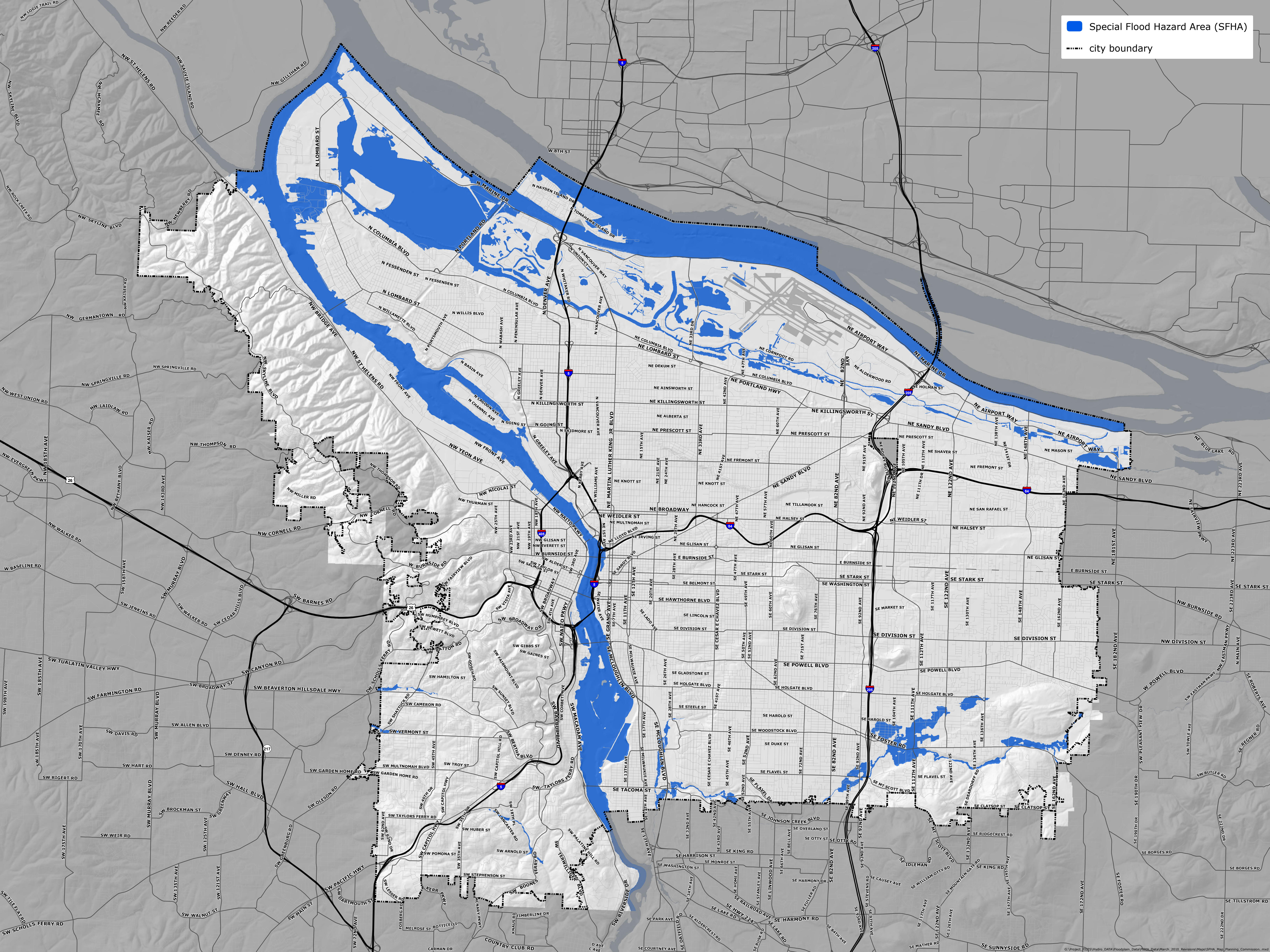
184235



City of Portland Bureau of  
**Planning and Sustainability**

Sam Adams, Mayor | Susan Anderson, Director





Special Flood Hazard Area (SFHA)

city boundary

Exhibit B: Portland Special Flood Hazard Areas as of November 26, 2010



0 0.25 0.5 1 1.5 Miles