



Oregon  
Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

635 Capitol Street, Suite 150  
Salem, OR 97301-2540  
(503) 373-0050  
Fax (503) 378-5518  
www.lcd.state.or.us



NOTICE OF ADOPTED AMENDMENT

11/16/2010

TO: Subscribers to Notice of Adopted Plan  
or Land Use Regulation Amendments

FROM: Plan Amendment Program Specialist

SUBJECT: City of Wilsonville Plan Amendment  
DLCD File Number 002-10

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures\*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Monday, November 29, 2010

This amendment was submitted to DLCD for review prior to adoption pursuant to ORS 197.830(2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

\*NOTE: The Acknowledgment or Appeal Deadline is based upon the date the decision was mailed by local government. A decision may have been mailed to you on a different date than it was mailed to DLCD. As a result, your appeal deadline may be earlier than the above date specified. NO LUBA Notification to the jurisdiction of an appeal by the deadline, this Plan Amendment is acknowledged.

Cc: Michael Wheeler, City of Wilsonville  
Gloria Gardiner, DLCD Urban Planning Specialist  
Chris Shirley, FEMA Specialist  
Jennifer Donnelly, DLCD Regional Representative

<paa> YA

FORM 2

DLCD

# Notice of Adoption

THIS FORM MUST BE MAILED TO DLCD  
WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION  
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18

☐ In person ☐ electronic ☐ mailed

DEPT OF

NOV 10 2010

LAND CONSERVATION  
AND DEVELOPMENT

For DLCD Use Only

Jurisdiction: **City of Wilsonville**

Local file number: **Ordinance No. 686**

Date of Adoption: **Nov. 1, 2010**

Date Mailed: **Nov. 8, 2010**

Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? **Select one** Date: 9/8/10

☐ Comprehensive Plan Text Amendment

☐ Comprehensive Plan Map Amendment

x Land Use Regulation Amendment

☐ Zoning Map Amendment

☐ New Land Use Regulation

☐ Other:

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

The ordinance amends 6 definitions in Wilsonville Code Sect. 4.001, and Section 4.172 to satisfy FEMA staff that the City's Code meets the requirements of the National Flood Insurance Program.

Does the Adoption differ from proposal? Please select one No

Plan Map Changed from: *NA*

to:

Zone Map Changed from: *NA*

to:

Location: **city areas in flood plain**

Acres Involved: *NA*

Specify Density: Previous: *NA*

New: *NA*

Applicable statewide planning goals:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Was an Exception Adopted? ☐ YES ☒ NO

Did DLCD receive a Notice of Proposed Amendment...

45-days prior to first evidentiary hearing?

x Yes ☐ No

If no, do the statewide planning goals apply?

☐ Yes ☐ No

If no, did Emergency Circumstances require immediate adoption?

☐ Yes ☐ No

DLCD File No. 002-10 (18377) [16407]

**DLCD file No.** \_\_\_\_\_

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

Please see attached list.

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Local Contact: **M. Wheeler**

Phone: **(503) 570-1583** Extension:

Address: **29799 SW. Town Center Loop**

Fax Number: **503-682-1015**

City: **Wilsonville**

Zip: **97070**

E-mail Address: **wheeler@ci.wilsonville.or.us**

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## **ADOPTION SUBMITTAL REQUIREMENTS**

This form **must be mailed** to DLCD **within 5 working days after the final decision**  
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and **TWO Complete Copies** (documents and maps) of the Adopted Amendment to:

**ATTENTION: PLAN AMENDMENT SPECIALIST  
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT  
635 CAPITOL STREET NE, SUITE 150  
SALEM, OREGON 97301-2540**

2. Electronic Submittals: At least **one** hard copy must be sent by mail or in person, or by emailing **larry.french@state.or.us**.
3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.
4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.
5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **twenty-one (21) days** of the date, the Notice of Adoption is sent to DLCD.
6. In addition to sending the Notice of Adoption to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.
7. **Need More Copies?** You can now access these forms online at **<http://www.lcd.state.or.us/>**. Please print on **8-1/2x11 green paper only**. You may also call the DLCD Office at (503) 373-0050; or Fax your request to: (503) 378-5518; or Email your request to **larry.french@state.or.us** - **Attention: Plan Amendment Specialist**.

Updated March 17, 2009

STATE OF OREGON )  
 )  
COUNTIES OF CLACKAMAS )  
 )  
CITY OF WILSONVILLE )

Page 1 of 2



29799 SW Town Center Loop E  
Wilsonville, Oregon 97070  
(503) 682-1011  
(503) 682-1015 Fax Administration  
(503) 682-7025 Fax Community Development

**WILSONVILLE CITY COUNCIL  
NOTICE OF DECISION**

**FILE NO:**                   **Ordinance No. 686** "An Ordinance Of The City Of Wilsonville Amending Wilsonville Code Section 4.172 – Flood Plain Regulations, And Section 4.001 – Definitions To Achieve Continued Consistency With The National Flood Insurance Program"

**APPLICANT:**           **City of Wilsonville**  
**REQUEST:**

After conducting public hearings, the City Council voted to adopt Ordinance No. 686 as submitted and adopted findings and conclusions to support their action.

This decision has been finalized in written form as **Ordinance No. 686** and placed on file in the city records at the Wilsonville City Hall this, 1<sup>st</sup> day of November 2010 and is available for public inspection. The date of filing is the date of decision. Any appeal(s) must be filed with the Land Use Board of Appeals (LUBA) in accordance with ORS Chapter 197, within twenty-one days from the date of decision. Copies of Ordinance No. 686 may be obtained from the City Recorder, 29799 SW Town Center Loop East, Wilsonville, OR 97070, (503) 570-1506.

For further information, please contact the Wilsonville Planning Division, 29799 SW Town Center Loop Road, Wilsonville, Oregon 97070 or telephone (503) 682-4960.

**Affected State or Federal Agencies, Local Governments or Special Districts**

Name	Company	Address	City	State	Zip
Columbia Cable of Oregon		14200 SW Brigadoon Ct.	Beaverton	OR	97005
Tualatin Valley Water District		PO Box 745	Beaverton	OR	97095
Canby School District		1110 S Ivy Street	Canby	OR	97013
City Planner	City of Canby	182 N. Holly	Canby	OR	97013
Doug McClain	Clackamas Cty Planning Section Mgr	150 Beavercreek Road	Oregon City	OR	97045
William Graffi	Unified Sewerage Agency	155 N. First Avenue, Room 270	Hillsboro	OR	97124
Brent Curtis	Wash. County Planning Manager	155 N. First Avenue	Hillsboro	OR	97124
Portland General Electric		121 SW Salmon 1 WTC-9	Portland	OR	97204
Tom Wolcott	BPA	PO Box 3621	Portland	OR	97208
Tom Simpson	NW Natural Gas	220 NW 2nd Avenue	Portland	OR	97209
Michael Dennis	Tri-Met Project Planning Dept	4012 SE 175th Avenue	Portland	OR	97202
Oregon Dept of Environ Quality		811 SW Sixth Avenue	Portland	OR	97204
Ray Valone	Metro	600 NE Grand Avenue	Portland	OR	97232
Manager, Community Development	Growth Management Services Metro	600 NE Grand Avenue	Portland	OR	97232
Attn: Development Review	ODOT	123 NW Flanders Street	Portland	OR	97209
John Lilly	Division of State Lands	775 Summer Street, NE	Salem	OR	97310
Richard Ross	Department of Corrections	2575 Center Street NE	Salem	OR	97310
Bobbi Burton	Community Coordinator, Facilities Division	2575 Center Street, NE	Salem	OR	97310
William Fujii, OWRD	Commerce Building	158 12th Street, NE	Salem	OR	97310
Sherwood School Dist Admin Office		23295 SW Main ST.	Sherwood	OR	97140
Doug Rux	Community Development Director City of Tualatin	18880 SW Martinazzi Avenue	Tualatin	OR	97062
Roger Woehl	West Linn/Wilsonville School District 3JT	PO Box 35	West Linn	OR	97068
Brian Tietsort	United Disposal Services	10295 SW Ridder Road	Wilsonville	OR	97070
Ray Lambert	Portland General Electric -Wilsonville	9480 SW Boeckman Road	Wilsonville	OR	97070
Tualatin Valley Fire and Rescue	South Division	7401 SW Washo Court	Tualatin	OR	97062-8350
Tualatin Valley Fire and Rescue		29875 SW Kinsman Road	Wilsonville	OR	97070

**ORDINANCE NO. 686**

**AN ORDINANCE OF THE CITY OF WILSONVILLE AMENDING WILSONVILLE CODE SECTION 4.172 - FLOOD PLAIN REGULATIONS, AND SECTION 4.001 - DEFINITIONS TO ACHIEVE CONTINUED CONSISTENCY WITH THE NATIONAL FLOOD INSURANCE PROGRAM**

WHEREAS, the City of Wilsonville is a participating municipality in the National Flood Insurance Program (NFIP), and is required to update its flood plain definitions (Wilsonville Code Section 4.001), and regulations (Wilsonville Code Section 4.172), as a requirement of continued participation; and

WHEREAS, participation in the NFIP benefits affected citizens of the community by lowering flood insurance rates for structures located in the flood plain; and

WHEREAS, in order to remain in good standing in the NFIP, the City is required to amend WC 4.001 and WC 4.172 consistent with FEMA requirements found in 44 CFR Section 60.3 of the NFIP; and

WHEREAS, City staff has coordinated closely with FEMA Region X staff, and the Department of Land Conservation and Development (DLCD) staff as part of the code update process; and

WHEREAS, on January 30, 2009, FEMA Region X staff requested additional amendments subsequent to those adopted by the City in Ordinance No. 647, on April 21, 2008; and

WHEREAS, it is in the best interest of the citizens of the community from a public health and safety standpoint to amend the code consistent with the FEMA requirements and remain in the NFIP; and

WHEREAS, after providing notice to affected parties inviting comment on the proposal, the Planning Commission held a public hearing on this matter on September 8, 2010, receiving no public comment; and

WHEREAS, the Planning Commission forwarded a unanimous recommendation of approval of the proposal to the City Council; and

WHEREAS, the City Council held a duly noticed public hearing on October 18, 2010, affording interested parties an opportunity to comment on the proposed Planning and Land Development Code amendments;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

**Section 1.** Findings. The Council adopts the foregoing recitals as findings and conclusions, and adopts the staff report in the matter, attached hereto as Exhibit A, as if set forth fully herein.

**Section 2.** Amendments. Wilsonville Code Section 4.001, Definitions, is hereby amended as follows. The **bold text** is inserted, ~~striktthrough-text~~ is deleted, and affected definitions renumbered:

**Section 4.001      Definitions.**

**Basement:** A portion of a building which has less than one-half (1/2) of its height measured from finished floor to finished ceiling above the average elevation of the adjoining grade. **For areas located in a Special Flood Hazard Area, the definition of basement is any area of the building having its floor subgrade (below ground level) on all sides.**

~~Floodway Map: An official map prepared for the City of Wilsonville by the Federal Insurance Administration which identifies floodways.~~

~~New Manufactured Home Park or Subdivision: Means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed on or after the effective date of flood plain management regulations adopted by the City.~~

**Special Flood Hazard Area:** Means an area having special flood, mudslide (i.e., mudflow), and/or flood-related erosion hazards, and shown on an FHBM or FIRM as zone A, AO, ~~A1-30, AE, AR, A99, AH, VO, VI-30, VE, or V, M, OR-E.~~ [Amended by Ord. # 647, 4/21/08]

**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 ~~or within any lawful extension of the 180 day permit period provided for by the Oregon State Structural Specialty Codes.~~ 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 and/or walkways; 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. **For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.** [Added by Ord. # 647, 4/21/08]

Structure: Anything built which requires location on the ground or is attached to something having a location on the ground. **For floodplain management purposes a structure is a walled and roofed building including a gas or liquid storage tank that is principally above ground.** [Amended by Ord. # 647, 4/21/08]

**Section 3.** Amendments. Wilsonville Code Section 4.172, Flood Plain Regulations, is amended to read as follows. The **bold text** is inserted, ~~striketrough text~~ is removed:

**Section 4.172. Flood Plain Regulations.**

(.01) Purpose:

- A. To minimize public and private losses due to flood conditions in flood-prone areas.
- B. To regulate uses and alteration of land which would otherwise cause erosion, decreased storm water storage capability, increased flood heights or velocities.
- C. To require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction, alteration or remodeling.
- D. To restrict filling, grading, dredging, and other development which would increase flood damage.
- E. To prevent construction of flood barriers which would unnaturally divert flood waters or increase flood hazards in other areas.
- F. To properly regulate the 100-year flood plain identified by the Federal Insurance Administration (FIA) in the "Flood Insurance Study for Clackamas County and Incorporated Areas dated effective June 17, 2008, and displayed on FIA Floodway and Flood Insurance Rate Maps dated effective June 17, 2008, which are on file with the City's Community Development Department.
- G. To implement the policies of the Comprehensive Plan and to provide standards consistent with - Wilsonville's adopted Storm Drainage Master Plan.
- H. To insure the City and its residents and businesses, continued eligibility in the National Flood Insurance Program by complying with the requirements of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

(.02) General Provisions Affecting Flood Plains:

- A. This section shall apply to all flood plain areas in the City of Wilsonville identified by the Flood Insurance Rate Map. No Building Permits, or Construction Permits, **or Development Permits** for development within the flood plain shall be issued except in compliance with the provisions of the Section.
- B. Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study – Clackamas County, Oregon and Incorporated Areas, effective June 17, 2008," with accompanying Flood Insurance Rate Maps (effective date June 17, 2008) is hereby adopted by reference and declared part of this ordinance. The Flood Insurance Study is on file at the City of Wilsonville Community Development Department.
- C. The City of Wilsonville Community Development Director shall review all Building and Grading Permit applications for new construction or substantial improvement to determine whether proposed building or grading sites will be located in a flood plain. If a proposed building or grading site is located within a flood plain, any proposed new construction, grading, or substantial improvement (including prefabricated and manufactured housing) must:
  - 1. Be designed (or modified) and anchored to prevent flotation, collapse or lateral movement of the structure.
  - 2. Use construction materials and utility equipment that are resistant to flood damage,
  - 3. Use construction methods and practices that will minimize flood damage, and
  - 4. Limit the addition of any fill material such that the total volume of fill within the flood plain does not exceed the volume of material removed from the flood plain in the same area.
- D. That the City of Wilsonville Planning Director shall review subdivision proposals and other proposed new developments within the flood plain to assure that:
  - 1. all such proposals are consistent with the need to minimize flood damage,
  - 2. all public utilities and facilities, such as sewer, gas, electrical and water systems are located, elevated and constructed to minimize or eliminate flood damage,
  - 3. adequate drainage is provided so as to reduce exposure to flood hazards, and
  - 4. No new lots or parcels shall be created for the purpose of increasing the development of buildings for human occupancy within the flood plain.
- E. That the City of Wilsonville Community Development Director shall require new or replacement water supply systems and/or sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and require on-site waste disposal systems to be located so as to avoid impairment of them or contamination from them during flooding.

(.03) Development Permit Required:

- A. A Development Permit shall be obtained before construction or development, including grading, begins within any area of special flood hazard. The Permit shall be for all structures including manufactured homes and for all development including fill and other activities.
- B. Outright Permitted Uses in the 100-year Flood Plain:
  - 1. Agricultural use that is conducted without a structure other than a boundary fence.
  - 2. Recreational uses which would require only minor structures such as picnic tables and barbecues.
  - 3. Residential uses that do not contain buildings.
  - 4. Underground utility facilities.
  - 5. Repair, reconstruction or improvement of an existing structure, the cost of which is less than 50 percent of the market value of the structure, as determined by the City's Building Official, prior to the improvement or the damage requiring reconstruction, provided no development occurs in the floodway.

(.04) Uses within the 100-year Flood Plain requiring a Flood Plain Permit:

- A. Any development except as specified in subsection (.03), above, that is otherwise permitted within the Zoning District provided such development is consistent with the Flood Plain Standards.
- B. All subdivisions and land partitions.
- C. Installation of dikes to provide buildable or usable property, provided that said dikes do not conflict with the policies of the Comprehensive Plan and this Section.

(.05) Prohibited Uses in the 100-year Flood Plain:

- A. Any use or building which stores or otherwise maintains hazardous materials, chemicals, explosives or any other similar materials.
- B. Storage of any materials that are not properly anchored, enclosed or protected to prevent movement or flotation beyond the property lines.
- C. Critical Facility. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Flood-proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or

above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

(.06) Flood Plain Permit Review Process:

- A. The Community Development Director is the local flood plain administrator and is hereby appointed to administer and implement this Section by granting or denying Development Permit applications in accordance with its provisions.
- B. Duties and Responsibilities of the Community Development Director:
  - 1. Duties of the Community Development Director shall include, but not be limited to:
    - a. Review all Development Permits to determine that the permit requirements of this ordinance have been satisfied.
    - b. Review all Development Permits to determine that all necessary permits have been obtained from those Federal, State or local government agencies from which prior approval is required. Notify the State Department of Land Conservation and Development and FEMA of final permit decision.
    - c. Review all Development Permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment limitations of subsection (.07)(H) are met.
- C. The Permit process for developments not regulated by Section 4.140 shall be as follows:
  - 1. Pre-application conference with the Planning Department in accordance with the procedures set forth in Section 4.008.
  - 2. A complete application in accordance with this Section shall be submitted to the Community Development Director.
  - 3. Within 30 days of complete application, the Community Development Director shall approve or deny the application based on the following Findings:
    - a. Reports from the City Engineer and Planning Director as to the applicant's submittal documents' compliance with this Section, including recommendations.
    - b. The proposed development's compliance with other provisions of the Comprehensive Plan and Zoning Regulations.
- D. The decision of the Community Development Director may be appealed to the Development Review Board, upon written notice to the City Recorder within ten (10) calendar days of the date of final decision. Upon appeal, the Board shall hear the matter in accordance with Section 4.022
- E. Any flood plain development proposed for property regulated under Section 4.140 shall be considered by the Development Review Board and the Community Development Director as part of the Planned Development Permit process.
- F. Submittal requirements.

1. A field survey in relation to mean sea level by a licensed surveyor or civil engineer of the actual location of the 100-year flood plain, fringe, floodway and the lowest habitable finished floor elevations, including basements, of all existing structures.
  2. A Site Plan map showing all existing and proposed contours and development and supplemented by a soils and hydrologic report sufficient to determine the net effect of the proposed development on the flood plain elevations on the subject site and adjacent properties. Proposed areas of cut or fill shall be clearly indicated.
  3. A soils stabilization plan for all cuts, fills and graded areas.
- G. Use and Interpretation of Base Flood Data and maps.
1. When specific 100-year flood plain elevation data has not been provided in as required in this Section, the Community Development Director shall obtain, review and reasonably utilize any base flood elevation data available from Federal, State or other sources, in order to determine compliance with this Section.
  2. The Community Development Director shall make the final interpretation of the exact 100-year flood plain boundaries on the FIRM and the Floodway Map. Appeals shall be granted consistent with the Standards of the rules and regulations of the National Flood Insurance Program and pursuant to WC 4.172(.08) Appeal Board.
- H. Monumentation and Recordation:
1. Prior to issuance of a Flood Plain Permit, the Community Development Director shall cause the placement of an elevation marker, set at two (2) feet above the 100-year flood elevation, on the subject property. The marker shall be properly identified and permanently monumented in concrete.
  2. A Site Plan or map showing the location and elevation of the monument shall be submitted to and maintained on file by the Community Development Director.
  3. Prior to issuance of an Occupancy Permit, for any structure within the 100-year flood plain, the Community Development Director shall insure by signature of a licensed surveyor or civil engineer (elevation certificate) that the finished floor elevation of commercial, industrial and public buildings are one and one-half (1-1/2) feet above the 100-year flood elevation and that residential uses are two (2) feet above the 100-year flood elevation. The finished floor elevation shall be in relation to mean sea level, of the lowest floor (including basement) of all structures. **A copy of the finished construction elevation certificate for all new and substantially improved structures shall be provided to and maintained on file by the Community Development Director.**
  4. **For all new or substantially improved flood proofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 4.172(.06)(G):**

- a. Verify and record the actual elevation (in relation to mean sea level) to which the structure was flood proofed, and
  - b. Maintain the flood proofing certifications required in Section 4.172(.07)(F)(1)(c).
5. Maintain for public inspection all records pertaining to the provisions of this ordinance.

(.07) General Standards:

A. Anchoring requirements:

- 1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- 2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top of frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).
- 3. All recreational vehicles must either be elevated **two (2) feet or more above the 100-year flood elevation** and anchored **in accordance with paragraph 2, above, or** be on the site for less than 180 consecutive days and be fully licensed and highway ready. A recreational vehicle is ready for highway use if its wheels are in place and it is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

B. Construction materials and methods:

- 1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- 2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- 3. Electrical, heating, ventilation, plumbing, and 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.
- 4. Below-grade crawl spaces:
  - a. Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, *Crawlspace Construction for Buildings Located in Special Flood Hazard Areas*:
    - i. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Section B below. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per

second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

- ii. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one (1) foot above the lowest adjacent exterior grade.
- iii. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.
- iv. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.
- v. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.
- vi. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four (4) feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.
- vii. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.
- viii. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.

For more detailed information, refer to FEMA Technical Bulletin 11-01.

#### C. Utilities:

1. All new replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. Alteration of Watercourses:

1. Provide description of the extent to which a watercourse will be altered or relocated as a result of proposed development.
2. Notify adjacent communities and the Federal Emergency Management Agency, Army Corps of Engineers, Department of Land Conservation and Development and Department of State Lands prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
3. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.  
(Amended by Ord. #316, 7/6/87).

E. Residential Construction:

1. New construction and substantial improvement of any residential structure shall have the lowest finished floor, including basement, elevated two (2) feet above the 100-year flood elevation.
2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for 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:
  - a. 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.
  - b. The bottom of all openings shall be no higher than one foot above grade.
  - c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
3. ~~Manufactured homes or mobile homes to be placed on sites within new or existing manufactured/mobile home parks shall be anchored to a permanent foundation and either or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated two (2) feet or more above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement in accordance with the provisions of Section 4.172(.07)(A)(2).:~~  
  - a. ~~Have the lowest floor 2' above the base flood elevation, or~~



- ~~4. Manufactured/mobile homes outside of manufactured/mobile home parks shall meet all requirements for residential structures at the same locations.~~
- ~~5. All manufactured homes to be placed or substantially improved within Flood Hazard Zones AI 30, AH or AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at or above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of sub-section 4.172(.07)(A).~~

F. Nonresidential Construction:

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest finished floor, including basement, elevated one and one-half (1-1/2) feet above the 100-year flood elevation; or, together with attendant utility and sanitary facilities, shall:
  - a. Be flood proofed so that below the base flood level the structure is water-tight with walls substantially impermeable to the passage of water.
  - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
  - c. Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Flood proofing certifications are required to be provided to the Community Development Director.
  - d. Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as prescribed for residential construction, above.
  - e. Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood-proofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level).
2. **Manufactured homes shall meet the requirements of Section 4.172(.07)(E)(3).**

**G. Before Regulatory Floodway: In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zone AE on the community's FIRM, 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 one foot at any point within the community.**

H. Floodways:

1. Located within the flood plain - are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
  - a. Encroachments, including fill, **new construction**, ~~in any new development or~~ substantial improvements, **and other development** shall be prohibited

unless certification by a registered professional **civil** engineer is provided, demonstrating **through hydrologic and hydraulic analyses performed in accordance with standard engineering practice** that encroachments shall not result in any increase flood levels during the occurrence of the 100-year base flood discharge.

- b. All development shall comply with all applicable flood plain standards of Section 4.172.
- c. All buildings designed for human habitation and/or occupancy shall be prohibited within the floodway.

**I. Parking Lots and Storage Areas:**

- 1. All parking lots and storage areas below the flood plain elevation shall be paved.
- 2. A minimum of twenty-five (25) percent of the required parking space must be provided above the 100-year flood plain elevation for all nonresidential uses.
- 3. Residential uses shall provide at least one parking space per unit above the 100-year flood plain elevation.

**J. Subdivision Proposals:**

- 1. All subdivision proposals shall be consistent with the need to minimize flood damage.
- 2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
- 3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage, and
- 4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

**K. Review of Building Permits.** Where elevation data is not available either through the Flood Insurance Study or from another authoritative source, applications for Building Permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

**(.08) Appeal Board.**

- A. The Development Review Board as established by the City of Wilsonville shall hear and decide appeals and requests for variances from the requirements of this ordinance.
- B. The Development Review Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the

Community Development Director in the enforcement or administration of this ordinance.

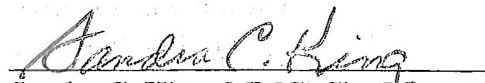
- C. Those aggrieved by the decision of the Development Review Board may appeal such decision to the City Council.
  - D. In acting upon such applications, the Development Review Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and
    - 1. the danger that materials may be swept onto other lands to the injury of others;
    - 2. the danger to life and property due to flooding or erosion damage;
    - 3. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
    - 4. the importance of the services provided by the proposed facility to the community;
    - 5. the necessity to the facility of a waterfront location, where applicable;
    - 6. the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
    - 7. the compatibility of the proposed use with existing and anticipated development;
    - 8. the relationship of the proposed use to the Comprehensive Plan and flood plain management program for that area;
    - 9. the safety of access to the property in times of flood for ordinary and emergency vehicles;
    - 10. the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
    - 11. the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas electrical and water systems, and streets and bridges.
  - E. Upon consideration of the factors of Sections 4.035, 4.184, and 4.196 and the purposes of this ordinance, the Development Review Board may attach such conditions to the granting of - permits as it deems necessary to further the purposes of this ordinance and to protect lives or property.
  - F. The Community Development Director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.
- (.09) Conflicts. If any provisions of Section 4.172 conflict with any other Sections of this Code, the most restrictive shall apply.

[Section 4.172 amended by Ord. 647, 4/21/08]

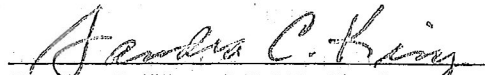
**Section 4.** Directive. The City Council hereby authorizes and directs the City Recorder to make any conforming changes necessary to amend the Wilsonville Code (WC) in keeping with the adoption of these revisions (e.g., renumbering of definitions within Section 4.001, following deletions).

**Section 5.** Severability. In the event any provisions of this Ordinance shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

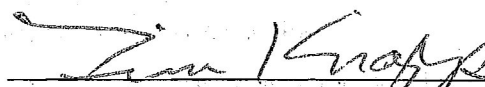
SUBMITTED to the Wilsonville City Council and read for the first time at a regular meeting thereof on the 18<sup>th</sup> day of October, 2010, at the hour of 7:00 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon, and scheduled for second reading on the 1<sup>st</sup> day of November, 2010, commencing at the hour of 7:00 p.m. at the Wilsonville City Hall.

  
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the 1st day of November, 2010, by the following votes: YEAS: -5- NAYS: -0-

  
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this 1<sup>st</sup> day of November, 2010.

  
Tim Knapp, Mayor

**SUMMARY OF VOTES:**

Mayor Knapp	Yes
Councilor Kirk	Yes
Councilor Nunez	Yes
Councilor Hurst	Yes
Councilor Goddard	Yes

**Attachments:**

- Exhibit 1: Proposed revisions to Section 4.001, Definitions.
- Exhibit 2: Proposed revisions to Section 4.172, Flood Plain Regulations.
- Exhibit 3: Planning Department Staff Report dated October 12, 2010
- Exhibit 4: Planning Commission Hearing Record; September 8, 2010

**Section 4.001     Definitions.**

**Basement:** A portion of a building which has less than one-half (1/2) of its height measured from finished floor to finished ceiling above the average elevation of the adjoining grade. **For areas located in a Special Flood Hazard Area, the definition of basement is any area of the building having its floor subgrade (below ground level) on all sides.**

**Existing Manufactured Home Park or Subdivision:** A manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations. [Added by Ord. # 647, 4/21/08]

~~**Floodway Map:** An official map prepared for the City of Wilsonville by the Federal Insurance Administration which identifies floodways.~~

~~**New Manufactured Home Park or Subdivision:** Means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed on or after the effective date of flood plain management regulations adopted by the City.~~

**Special Flood Hazard Area:** Means an area having special flood, mudslide (i.e., mudflow), and/or flood-related erosion hazards, and shown on an FHBM or FIRM as zone A, AO, ~~A1-30, AE, AR, A99, AH, VO, VI-30, VE, or V, M, OR-E.~~ [Amended by Ord. # 647, 4/21/08]

**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 ~~or within any lawful extension of the 180-day permit period provided for by the Oregon State Structural Specialty Codes.~~ 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 and/or walkways; 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. **For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.** [Added by Ord. # 647, 4/21/08]

**Structure:** Anything built which requires location on the ground or is attached to something having a location on the ground. **For floodplain management purposes a structure is a walled and roofed building including a gas or liquid storage tank that is principally above ground.** [Amended by Ord. # 647, 4/21/08]

**Section 4.172. Flood Plain Regulations.****(.01) Purpose:**

- A. To minimize public and private losses due to flood conditions in flood-prone areas.
- B. To regulate uses and alteration of land which would otherwise cause erosion, decreased storm water storage capability, increased flood heights or velocities.
- C. To require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction, alteration or remodeling.
- D. To restrict filling, grading, dredging, and other development which would increase flood damage.
- E. To prevent construction of flood barriers which would unnaturally divert flood waters or increase flood hazards in other areas.
- F. To properly regulate the 100-year flood plain identified by the Federal Insurance Administration (FIA) in the "Flood Insurance Study for Clackamas County and Incorporated Areas dated effective June 17, 2008, and displayed on FIA Floodway and Flood Insurance Rate Maps dated effective June 17, 2008, which are on file with the City's Community Development Department.
- G. To implement the policies of the Comprehensive Plan and to provide standards consistent with - Wilsonville's adopted Storm Drainage Master Plan.
- H. To insure the City and its residents and businesses, continued eligibility in the National Flood Insurance Program by complying with the requirements of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

**(.02) General Provisions Affecting Flood Plains:**

- A. This section shall apply to all flood plain areas in the City of Wilsonville identified by the Flood Insurance Rate Map. No Building Permits, ~~or~~ Construction Permits, ~~or~~ **Development Permits** for development within the flood plain shall be issued except in compliance with the provisions of the Section.
- B. Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study – Clackamas County, Oregon and Incorporated Areas, effective June 17, 2008," with accompanying Flood Insurance Rate Maps (effective date June 17, 2008) is hereby adopted by reference and declared part of this ordinance. The Flood Insurance Study is on file at the City of Wilsonville Community Development Department.
- C. The City of Wilsonville Community Development Director shall review all Building and Grading Permit applications for new construction or substantial improvement to determine whether proposed building or grading sites will be

located in a flood plain. If a proposed building or grading site is located within a flood plain, any proposed new construction, grading, or substantial improvement (including prefabricated and manufactured housing) must:

1. Be designed (or modified) and anchored to prevent flotation, collapse or lateral movement of the structure.
  2. Use construction materials and utility equipment that are resistant to flood damage,
  3. Use construction methods and practices that will minimize flood damage, and
  4. Limit the addition of any fill material such that the total volume of fill within the flood plain does not exceed the volume of material removed from the flood plain in the same area.
- D. That the City of Wilsonville Planning Director shall review subdivision proposals and other proposed new developments within the flood plain to assure that:
1. all such proposals are consistent with the need to minimize flood damage,
  2. all public utilities and facilities, such as sewer, gas, electrical and water systems are located, elevated and constructed to minimize or eliminate flood damage,
  3. adequate drainage is provided so as to reduce exposure to flood hazards, and
  4. No new lots or parcels shall be created for the purpose of increasing the development of buildings for human occupancy within the flood plain.
- E. That the City of Wilsonville Community Development Director shall require new or replacement water supply systems and/or sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and require on-site waste disposal systems to be located so as to avoid impairment of them or contamination from them during flooding.

(.03) Development Permit Required:

- A. A Development Permit shall be obtained before construction or development, including grading, begins within any area of special flood hazard. The Permit shall be for all structures including manufactured homes and for all development including fill and other activities.
- B. Outright Permitted Uses in the 100-year Flood Plain:
1. Agricultural use that is conducted without a structure other than a boundary fence.
  2. Recreational uses which would require only minor structures such as picnic tables and barbecues.
  3. Residential uses that do not contain buildings.
  4. Underground utility facilities.
  5. Repair, reconstruction or improvement of an existing structure, the cost of which is less than 50 percent of the market value of the structure, as



determined by the City's Building Official, prior to the improvement or the damage requiring reconstruction, provided no development occurs in the floodway.

(.04) Uses within the 100-year Flood Plain requiring a Flood Plain Permit:

- A. Any development except as specified in subsection (.03), above, that is otherwise permitted within the Zoning District provided such development is consistent with the Flood Plain Standards.
- B. All subdivisions and land partitions.
- C. Installation of dikes to provide buildable or usable property, provided that said dikes do not conflict with the policies of the Comprehensive Plan and this Section.

(.05) Prohibited Uses in the 100-year Flood Plain:

- A. Any use or building which stores or otherwise maintains hazardous materials, chemicals, explosives or any other similar materials.
- B. Storage of any materials that are not properly anchored, enclosed or protected to prevent movement or flotation beyond the property lines.
- C. Critical Facility. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Flood-proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

(.06) Flood Plain Permit Review Process:

- A. The Community Development Director is the local flood plain administrator and is hereby appointed to administer and implement this Section by granting or denying Development Permit applications in accordance with its provisions.
- B. Duties and Responsibilities of the Community Development Director:
  - 1. Duties of the Community Development Director shall include, but not be limited to:
    - a. Review all Development Permits to determine that the permit requirements of this ordinance have been satisfied.
    - b. Review all Development Permits to determine that all necessary permits have been obtained from those Federal, State or local government agencies from which prior approval is required. Notify the State Department of Land Conservation and Development and FEMA of final permit decision.

- c. Review all Development Permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment limitations of subsection (.07)(H) are met.
- C. The Permit process for developments not regulated by Section 4.140 shall be as follows:
  1. Pre-application conference with the Planning Department in accordance with the procedures set forth in Section 4.008.
  2. A complete application in accordance with this Section shall be submitted to the Community Development Director.
  3. Within 30 days of complete application, the Community Development Director shall approve or deny the application based on the following Findings:
    - a. Reports from the City Engineer and Planning Director as to the applicant's submittal documents' compliance with this Section, including recommendations.
    - b. The proposed development's compliance with other provisions of the Comprehensive Plan and Zoning Regulations.
- D. The decision of the Community Development Director may be appealed to the Development Review Board, upon written notice to the City Recorder within ten (10) calendar days of the date of final decision. Upon appeal, the Board shall hear the matter in accordance with Section 4.022
- E. Any flood plain development proposed for property regulated under Section 4.140 shall be considered by the Development Review Board and the Community Development Director as part of the Planned Development Permit process.
- F. Submittal requirements.
  1. A field survey in relation to mean sea level by a licensed surveyor or civil engineer of the actual location of the 100-year flood plain, fringe, floodway and the lowest habitable finished floor elevations, including basements, of all existing structures.
  2. A Site Plan map showing all existing and proposed contours and development and supplemented by a soils and hydrologic report sufficient to determine the net effect of the proposed development on the flood plain elevations on the subject site and adjacent properties. Proposed areas of cut or fill shall be clearly indicated.
  3. A soils stabilization plan for all cuts, fills and graded areas.
- G. Use and Interpretation of Base Flood Data and maps.
  1. When specific 100-year flood plain elevation data has not been provided in as required in this Section, the Community Development Director shall obtain, review and reasonably utilize any base flood elevation data available from Federal, State or other sources, in order to determine compliance with this Section.

2. The Community Development Director shall make the final interpretation of the exact 100-year flood plain boundaries on the FIRM and the Floodway Map. Appeals shall be granted consistent with the Standards of the rules and regulations of the National Flood Insurance Program and pursuant to WC 4.172(.08) Appeal Board.

H. Monumentation and Recordation:

1. Prior to issuance of a Flood Plain Permit, the Community Development Director shall cause the placement of an elevation marker, set at two (2) feet above the 100-year flood elevation, on the subject property. The marker shall be properly identified and permanently monumented in concrete.
2. A Site Plan or map showing the location and elevation of the monument shall be submitted to and maintained on file by the Community Development Director.
3. Prior to issuance of an Occupancy Permit, for any structure within the 100-year flood plain, the Community Development Director shall insure by signature of a licensed surveyor or civil engineer (elevation certificate) that the finished floor elevation of commercial, industrial and public buildings are one and one-half (1-1/2) feet above the 100-year flood elevation and that residential uses are two (2) feet above the 100-year flood elevation. The finished floor elevation shall be in relation to mean sea level, of the lowest floor (including basement) of all structures. **A copy of the finished construction elevation certificate for all new and substantially improved structures shall be provided to and maintained on file by the Community Development Director.**
4. **For all new or substantially improved floodproofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 4.172(.06)(G):**
  - a. **Verify and record the actual elevation (in relation to mean sea level) to which the structure was floodproofed, and**
  - b. **Maintain the floodproofing certifications required in Section 4.172(.07)(F)(1)(c).**
5. **Maintain for public inspection all records pertaining to the provisions of this ordinance.**

(.07) General Standards:

A. Anchoring requirements:

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top of frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

3. All recreational vehicles must either be elevated two (2) feet or more above the 100-year flood elevation and anchored in accordance with paragraph 2, above, or be on the site for less than 180 consecutive days and be fully licensed and highway ready. A recreational vehicle is ready for highway use if its wheels are in place and it is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

B. Construction materials and methods:

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
3. Electrical, heating, ventilation, plumbing, and 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.
4. Below-grade crawl spaces:
  - a. Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, *Crawlspace Construction for Buildings Located in Special Flood Hazard Areas*:
    - i. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Section B below. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.
    - ii. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one (1) foot above the lowest adjacent exterior grade.
    - iii. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.
    - iv. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.

Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

- v. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.
- vi. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four (4) feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.
- vii. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.
- viii. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.

For more detailed information, refer to FEMA Technical Bulletin 11-01.

C. Utilities:

1. All new replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. Alteration of Watercourses:

1. Provide description of the extent to which a watercourse will be altered or relocated as a result of proposed development.
2. Notify adjacent communities and the Federal Emergency Management Agency, Army Corps of Engineers, Department of Land Conservation and Development and Department of State Lands prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
3. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.  
(Amended by Ord. #316, 7/6/87).

E. Residential Construction:

1. New construction and substantial improvement of any residential structure shall have the lowest finished floor, including basement, elevated two (2) feet above the 100-year flood elevation.
2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for 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:
  - a. 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.
  - b. The bottom of all openings shall be no higher than one foot above grade.
  - c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
3. ~~Manufactured homes or mobile homes to be placed on sites within new or existing manufactured/mobile home parks shall be anchored to a permanent foundation and either or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated two (2) feet or more above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement in accordance with the provisions of Section 4.172(.07)(A)(2).:~~
  - a. ~~Have the lowest floor 2' above the base flood elevation, or~~
4. ~~Manufactured/mobile homes outside of manufactured/mobile home parks shall meet all requirements for residential structures at the same locations.~~
5. ~~All manufactured homes to be placed or substantially improved within Flood Hazard Zones AI-30, AH or AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at or above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of sub-section 4.172(.07)(A).~~

F. Nonresidential Construction:

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest finished floor, including basement, elevated one and one-half (1-1/2) feet above the 100-year flood elevation; or, together with attendant utility and sanitary facilities, shall:
  - a. Be floodproofed so that below the base flood level the structure is water-tight with walls substantially impermeable to the passage of water.
  - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

- c. Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Floodproofing certifications are required to be provided to the Community Development Director.
- d. Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as prescribed for residential construction, above.
- e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood-proofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level).

2. Manufactured homes shall meet the requirements of Section 4.172(.07)(E)(3).

G. Before Regulatory Floodway: In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zone AE on the community's FIRM, 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 one foot at any point within the community.

H. Floodways:

- 1. Located within the flood plain - are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
  - a. Encroachments, including fill, new construction, ~~in any new development or~~ substantial improvements, and other development shall be prohibited unless certification by a registered professional civil engineer is provided, demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase flood levels during the occurrence of the 100-year base flood discharge.
  - b. All development shall comply with all applicable flood plain standards of Section 4.172.
  - c. All buildings designed for human habitation and/or occupancy shall be prohibited within the floodway.

I. Parking Lots and Storage Areas:

- 1. All parking lots and storage areas below the flood plain elevation shall be paved.
- 2. A minimum of twenty-five (25) percent of the required parking space must be provided above the 100-year flood plain elevation for all nonresidential uses.
- 3. Residential uses shall provide at least one parking space per unit above the 100-year flood plain elevation.

J. Subdivision Proposals:

1. All subdivision proposals shall be consistent with the need to minimize flood damage.
  2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
  3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage, and
  4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).
- K. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source, applications for Building Permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

(.08) Appeal Board.

- A. The Development Review Board as established by the City of Wilsonville shall hear and decide appeals and requests for variances from the requirements of this ordinance.
- B. The Development Review Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Community Development Director in the enforcement or administration of this ordinance.
- C. Those aggrieved by the decision of the Development Review Board may appeal such decision to the City Council.
- D. In acting upon such applications, the Development Review Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and
  1. the danger that materials may be swept onto other lands to the injury of others;
  2. the danger to life and property due to flooding or erosion damage;
  3. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  4. the importance of the services provided by the proposed facility to the community;
  5. the necessity to the facility of a waterfront location, where applicable;
  6. the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;



7. the compatibility of the proposed use with existing and anticipated development;
  8. the relationship of the proposed use to the Comprehensive Plan and flood plain management program for that area;
  9. the safety of access to the property in times of flood for ordinary and emergency vehicles;
  10. the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
  11. the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas electrical and water systems, and streets and bridges.
- E. Upon consideration of the factors of Sections 4.035, 4.184, and 4.196 and the purposes of this ordinance, the Development Review Board may attach such conditions to the granting of - permits as it deems necessary to further the purposes of this ordinance and to protect lives or property.
- F. The Community Development Director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.
- (.09) Conflicts. If any provisions of Section 4.172 conflict with any other Sections of this Code, the most restrictive shall apply.

[Section 4.172 amended by Ord. 647; 4/21/08]

**WILSONVILLE PLANNING DIVISION  
LEGISLATIVE  
STAFF REPORT**

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**HEARING DATE:** October 18, 2010

**DATE OF REPORT:** October 12, 2010

**APPLICATION NO:** LP09-0010: Amendment to Wilsonville Planning and Land Development Ordinance

**REQUEST:** Amend the Planning and Land Development Ordinance Sections 4.001, Definitions; and, Section 4.172, Flood Plain Regulations

**APPLICANT:** City of Wilsonville

**STAFF REVIEWER:** Michael R. Wheeler, Associate Planner

**APPLICABLE REVIEW CRITERIA:**

Planning and Land Development Ordinance:

Section 4.197 – Zoning Changes and Amendments to this Code - Procedures  
Sections 4.008 through 4.024 – Application Procedures, In General  
Section 4.001 – Definitions  
Section 4.172 – Flood Plain Regulations

**PROJECT LOCATION:** The proposed amendments would be applicable to development in the flood plain, within the City.

**SUMMARY:**

Before the City Council is an ordinance to amend the Flood Plain regulations and associated definitions.

- The ordinance amends six (6) definitions in Wilsonville Code (WC) Section 4.001, in order to satisfy Federal Emergency Management Agency staff that the City's Code meets the requirements of the National Flood Insurance Program (NFIP).

- The ordinance also amends WC Section 4.172, Flood Plain Regulations, necessary to satisfy Federal Emergency Management Agency staff in demonstrating that the City's Flood Plain Regulations meet the requirements of the National Flood Insurance Program (NFIP).
- On September 8, 2010 the Planning Commission conducted a public hearing on the proposal. No public comments were received. The Planning Commission deliberated and forwarded a unanimous recommendation of approval to the City Council. Subsequent to the Planning Commission meeting there has been no public testimony.

#### **STAFF RECOMMENDATION:**

Approve the request to amend Sections 4.001 and 4.172 of the Planning and Land Development Code, as recommended by the Planning Commission.

#### **BACKGROUND:**

Over the course of 2006-07, FEMA undertook an update to the 100-year flood plain maps for Clackamas County and incorporated areas. This process is commonly referred to as a map modernization process. The City of Wilsonville is a participating community in the National Flood Insurance Program (NFIP), and administers flood plain regulations through the Development Code (WC Section 4.172). The National Flood Insurance Program was established with the passage of the National Flood Insurance Act of 1968. As a participating community in the National Flood Insurance Program, and to remain in good standing, the City is required to adopt the revised Flood Insurance Rate Maps (FIRM), Flood Insurance Study (FIS), and revise the local flood plain regulations to comply with Federal Regulations.

In order for the City to continue to obtain eligibility in the NFIP, FEMA's FIS and FIRM needed to be adopted by the City, including public hearings and final adoption with the City Council prior June 17, 2008. This has occurred. Communities that failed to enact the necessary flood plain management regulations would be suspended in the NFIP and subject to the prohibitions contained in Section 202(a) of the Flood Disaster Protection Act of 1973, as amended.

In order to comply, the City was required to update Wilsonville Code (WC) *Section 4.172: Flood Plain Regulations*, to comply with Section 1361 of the National Flood Insurance Act of 1968. To remain eligible, the City demonstrated compliance with the standards of paragraph 60.3(d) of the NFIP regulations, as audited by the DLCD.

The Wilsonville City Council enacted Ordinance No. 647 on April 21, 2008, which adopted the maps and ordinance amendments mentioned above.

In a letter dated January 30, 2009, following an on-site review of the City's 2008 Code amendments, FEMA representative Denise Atkinson identified additional Code provisions that

needed revision (Exhibit 4, portion). This legislative application proposes additional Code amendments intended to address those requested revisions.

The Planning Commission considered the current revisions at a public hearing on September 8, 2010, and are forwarding their recommendation to the City Council by way of this report.

#### **PROPOSED DEVELOPMENT CODE AMENDMENTS:**

##### **Amend the Planning and Land Development Ordinance as follows:**

Delete ~~struck-through~~ language; **Bold** is proposed language.

##### **Section 4.001 – Definitions**

Please refer to Exhibit 1 for the text of the proposed revisions.

##### **Section 4.172 – Flood Plain Regulations**

Please refer to Exhibit 2 for the text of the proposed revisions.

#### **FINDINGS AND CONCLUSIONS:**

##### Planning and Land Development Ordinance:

##### **Section 4.197. Zone Changes and Amendments To This Code – Procedures.**

*(.01) The following procedure shall be followed in applying for an amendment to the text of this Chapter:*

*A. The Planning Commission shall conduct a public hearing on the proposed amendment at its earliest practicable meeting after it is proposed and shall, within forty (40) days after concluding the hearing, provide a report and recommendation to the City Council regarding the proposed amendment. The findings and recommendations of the Commission shall be adopted by resolution and shall be signed by the Chair of the Commission.*

Response: A public hearing was conducted these matters on September 8, 2010. The action of the Planning Commission was adopted by resolution. The Planning Commission record and recommendations will be provided to the City Council on October 18, 2010.

*B. In recommending approval of a proposed text amendment, the Planning Commission shall, at a minimum, adopt findings relative to the following:*

1. That the application was submitted in compliance with the procedures set forth in Section 4.008;

Response: This application is an amendment to the text of Chapter 4, subject to Section 4.197, addressed in this section of this report.

2. *The amendment substantially complies with all applicable goals, policies and objectives set forth in the Comprehensive Plan; and*

Response: Compliance with the Comprehensive Plan was addressed in detail during the 2008 review of major amendments to the Flood Plain Regulations. The proposed revisions enable continued compliance with the Comprehensive Plan, and are intended to satisfy FEMA's Region X staff that the City's Code complies with the requirements of the National Flood Insurance Program (NFIP).

3. *The amendment does not materially conflict with, nor endanger, other provisions of the text of the Code;*

Response: The proposed Code text amendments are limited to Sections 4.001 and 4.172, and have no impact on other provisions of the Zoning Code.

4. *If applicable, the amendment is necessary to insure that the City's Land Use and Development Ordinance complies with mandated requirements of State or Federal laws and/or statutes.*

Response: These amendments are required to meet federal requirements, and will bring the City into compliance with the requirements of the National Flood Insurance Program.

#### **Section 4.008. Application Procedures - In General.**

*(.01) The general application procedures listed in Sections 4.008 through 4.024 apply to all land use and development applications governed by Chapter 4 of the Wilsonville Code. These include applications for all of the following types of land use or development approvals:*

*F. Changes to the text of Chapter 4, pursuant to Section 4.197;*

Response: The above items apply to the application, a request for City Council review and approval of requested Code text amendments.

#### **Section 4.009. Who May Initiate Applications.**

*(.01) Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring*

*the property, or by an agent who has been authorized by the owner, in writing, to apply. Changes to the Comprehensive Plan or zoning may also be initiated by the City Council, Planning Commission, or Development Review Board, acting by motion. Applications involving a Specific Area Plan shall be initiated as provided in Section 4.125(.18)(C) and (D). [Amended by Ord. 557 adopted 9/5/03].*

*(.02) Applications involving large areas of the community or proposed amendments to the text of this Chapter or the Comprehensive Plan may be initiated by any property owner, business proprietor, or resident of the City, as well as by the City Council, Planning Commission, or Development Review Board acting by motion.*

Response: These applications are initiated by the City, who is the applicant.

*(.03) A decision by the City Council, Planning Commission, or Development Review Board to initiate an action under this Section does not predetermine that the same body will approve or adopt the proposed change after concluding public hearings.*

Response: Although the City's Zoning Code already regulates development in the flood plain, and these applications are City initiated, the Planning Commission and Council will review the proposals, listen to any testimony and may adopt all, part or none of the recommended changes.

*(.04) In the event that the City of Wilsonville is the applicant, the City Manager may authorize any City employee or consultant to act as the City's agent.*

Response: The Planning Division is serving as the City's agent in these matters.

#### **Section 4.011. How Applications are Processed.**

*(.01) Applications submitted without the required filing fee shall not be considered to be "filed" and shall be returned to the prospective applicant without being processed.*

Response: The City is the applicant, and is exempt from fees.

*(.02) After filing, all applications shall be reviewed by City staff for completeness.  
A. In the event that an application is found to be incomplete in any way, the Planning Director shall notify the applicant in writing within thirty (30) days of the original filing and shall list the deficiencies in the application.*

Response: The application was deemed complete on June 24, 2010.

*2. Each written staff report includes a list of the agencies and departments contacted in the review process and their written comments, if any.*

Response: The staff report includes responses to the informal written comments provided by Denise Atkinson, FEMA staff in Region X. At the time of preparation of this Staff Report, no written comments had been received.

#### **Section 4.012. Public Hearing Notices.**

*(.01) Published Notice. The Planning Director shall have published in a newspaper of general circulation in the City of Wilsonville, prior to the date of the Planning Commission or Development Review Board meeting, a notice that the Commission or the Board will consider proposals, documents, or pending applications.*

*A. If the matter will require a public hearing, the notice shall be published at least ten (10) and not more than twenty-one (21) days before the first hearing.*

Response: Notice of the public hearings on these applications was published in the newspaper, mailed to interested parties and HOAs, and posted in three places at least 10 and not more than 21 days before the first evidentiary hearing.

*C. In any case where State law requires different timing or form of notice than that specified in this Code, the standard requiring a broader coverage or duration of notice shall be followed.*

Response: Notice of the first evidentiary hearing was sent to DCLD 45 days prior to that hearing date.

#### **Section 4.013. Hearing Procedures.**

*(.01) Public Hearings shall be conducted in accordance with procedures for evidentiary hearings set forth in Section 2.560 of the Wilsonville Code, or as otherwise amended by City Council action.*

Response: The Planning Commission follows hearing procedures established in City Code.

#### **Section 4.014. Burden of Proof.**

*The burden of proving that the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case. In the case of an appeal, the burden of proof rests with the appellant.*

Response: This staff report contains the necessary findings to support a recommendation of approval of the proposed text amendments.

#### **Section 4.016. Notification of Action on Applications.**

*All individuals who are required by law to receive notification, as well as any persons who submit oral or written testimony on an application, shall be provided with written notification of the decision on the application at the same time. This notification shall include information on local appeal procedures and requirements.*

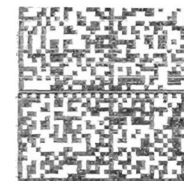
Response: The City is the applicant and will know immediately of the recommendations made by the Commission. Notice of the City Council action will be mailed to those who are required to receive notice and those who participated in the hearing.

**EXHIBITS:**

- Exhibit 1: Proposed revisions to Section 4.001, Definitions.
- Exhibit 2: Proposed revisions to Section 4.172, Flood Plain Regulations.
- Exhibit 3: Planning Department Staff Report Dated October 12, 2010
- Exhibit 4: Planning Commission Hearing Record; September 8, 2010



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