

AGENDA
DAYTON PLANNING COMMISSION



DATE: THURSDAY, JANUARY 9, 2025
TIME: 6:30 PM
PLACE: DAYTON CITY HALL ANNEX - 408 FERRY STREET, DAYTON, OREGON
VIRTUAL: ZOOM MEETING - ORS 192.670/HB 2560

You may join the Planning Commission Meeting online via Zoom at: <https://us06web.zoom.us/j/81015733239>

Dayton - Rich in History . . . Envisioning Our Future

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PAGE #</u>
A.	CALL TO ORDER & PLEDGE OF ALLEGIANCE	
B.	APPROVAL OF THE AGENDA	
C.	APPEARANCE OF INTERESTED CITIZENS	
D.	WORK SESSION	
	1. Model Flood Code Ordinance	
	i. FEMA Letter to the Mayor	1-5
	ii. Draft Code Amendments	6-41
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E.	OTHER BUSINESS	
	1. Joint Meeting with City Council	
F.	ADJOURN	

Posted: January 3, 2025

By: Rocio Vargas, City Recorder/Planning Coordinator

NEXT MEETING DATES

Joint City Council and Planning Commission Meeting **January 29, 2025**

Planning Commission Meeting **February 13, 2025** (if needed)

Virtually via Zoom and in Person, City Hall Annex, 408 Ferry Street, Dayton, Oregon

The public is strongly encouraged to relay concerns and comments to the Commission of any other topic in one of the following ways:

- Email - at any time up to 5 pm the day of the meeting to rvargas@daytonoregon.gov. The Chair will read the comments emailed to the Planning Coordinator.
- Appear in person - If you would like to speak during public comment, please sign up on the sign-in sheet located on the table when you enter the City Hall Annex.
- Appear by Telephone only - please sign up prior to the meeting by emailing the Planning Coordinator at rvargas@daytonoregon.gov the chat function is not available when calling by phone into Zoom.
- Appear Virtually via Zoom - once in the meeting send a chat directly to the Planning Coordinator Rocio Vargas, use the raise hand feature in Zoom to request to speak during public comment, **you must give the Planning Coordinator your First and Last Name, Address and Contact Information (email or phone number) before you are allowed to speak.** When it is your turn, the Chair will announce your name and unmute your mic.



FEMA

July 15, 2024

Annette Frank
416 Ferry Street
Post Office Box 339
Dayton, Oregon 97114

Dear Annette Frank:

The purpose of this letter is to announce the start of the United States Department of Homeland Security's Federal Emergency Management Agency's (FEMA) Pre-Implementation Compliance Measures (PICM) for National Flood Insurance Program (NFIP) participating communities in Oregon. The intent of PICM is to ensure the continued existence of threatened or endangered species in compliance with the Endangered Species Act (ESA). These measures include coordination with communities to provide appropriate technical assistance, help identify available resources, deliver trainings, and facilitate workshops to ensure on-going community participation in the NFIP. These pre-implementation compliance measures will assist communities in preparing for the Final NFIP-ESA Implementation Plan by helping them develop short and long-term solutions to ensure their on-going participation in the NFIP.

FEMA is currently conducting a National Environmental Policy Act (NEPA) evaluation of impacts associated with the Oregon NFIP-ESA Implementation Plan. FEMA developed this plan, in part, due to a Biological Opinion in 2016 from National Marine Fisheries Services. The Biological Opinion recommended specific measures for FEMA to take to avoid jeopardizing endangered species, including interim compliance measures. The release of the Final Implementation Plan (Plan) is anticipated by 2026, following the Record of Decision in the Environmental Impact Statement (EIS) process, then FEMA will fully implement the Plan in 2027.

FEMA has heard concerns from several communities regarding challenges they are facing to meet the expectations of this Plan. To provide communities with the support needed to incorporate ESA considerations to their permitting of development in the floodplain, FEMA will inform, educate, and support our Oregon NFIP participating communities through the PICM before the Final Implementation Plan is released.

NFIP participating communities in Oregon must select one of the PICM pathways which include the following: (1) adopt a model ordinance that considers impacts to species and their habitat and requires mitigation to a no net loss standard; (2) choose to require a habitat assessment and mitigation plan for development on a permit-by-permit basis; or (3) putting in place a prohibition on floodplain development in the Special Flood Hazard Area (SFHA). Communities must pick a PICM pathway by December 1, 2024. If a community fails to inform FEMA of its selection, they will default to the permit-by-permit PICM pathway. Communities will be required to report their floodplain development activities to FEMA beginning in January of 2025. Failure to report may result in a

compliance visit.

As a part of the PICM, FEMA will implement a delay in the processing of two types of Letters of Map Changes in the Oregon NFIP-ESA Implementation Plan area, specifically Letters of Map Changes associated with the placement of fill in the floodplain: Conditional Letter of Map Revision Based on Fill (CLOMR-F) and Letter of Map Revision Based on Fill (LOMR-F) requests. This action was specifically requested by NMFS in their 2016 Biological Opinion and serves to remove any perceived programmatic incentive of using fill in the floodplain. This delay in processing will begin on August 1, 2024, and will be in place until the Final Implementation Plan is released.

Your community's ongoing participation in the NFIP is critical, as it provides access to flood insurance for property owners, renters, and businesses. In City Of Dayton there are currently 1 of NFIP policies in force representing \$250000 in coverage for your community.

FEMA will be conducting informational virtual webinars this summer to provide an overview and status update for the Oregon NFIP-ESA integration, introduce the Pre-Implementation Compliance Measures, and provide an opportunity for Oregon NFIP floodplain managers to ask questions of FEMA staff. In the fall, FEMA will hold workshops to provide in-depth opportunities for local technical staff to work with FEMA technical staff, to understand and discuss issues relating to the PICM.

The webinars will be held virtually over Zoom. The information at each webinar is the same so your jurisdiction only needs to attend one. You can register for a webinar using the links below.

- Wednesday, July 31 at 3-5pm PT: <https://kearnswest.zoom.us/meeting/register/tZEkc-murjstGdPJiFioethjRk-id8N-k0hj>
- Tuesday, August 13 at 9:30-11:30am PT: <https://kearnswest.zoom.us/meeting/register/tZAod-isrTsqGN0KqckRLPPeaZuu4rv96lcR>
- Thursday, August 15 at 2-4pm PT: https://kearnswest.zoom.us/meeting/register/tZlqcOGpqDojHtTXaa946aI9dMpCTcJIH_zt
- Wednesday, August 21 at 12:30-2:30pm PT: <https://kearnswest.zoom.us/meeting/register/tZYqcuGsrD8rH9DZO22vG0v9KrNzVeUZA9gY>

FEMA will also develop a questionnaire to allow communities to identify how they currently incorporate or plan to incorporate ESA considerations, both in the short-term and long-term. To assist communities in making this determination, FEMA will be offering guidance on the potential pathways that help ensure current compliance. Communities will also be asked to help identify what technical assistance and training would be most beneficial. Feedback from this questionnaire will drive FEMA's engagement and outreach.

Upon completion of the Environmental Impact Statement review and determination, the Final Implementation Plan will be distributed along with several guidance documents and a series of Frequently Asked Questions. FEMA will also be starting NFIP Compliance Audits, in which we will be reviewing permits issued by communities for development in the floodplain and will expect the community to be able to demonstrate what actions are being taken to address ESA considerations.

If you have any questions, please contact us through our project email address fema-r10-mit-

Frank
July 15 2024
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PICM@fema.dhs.gov. Thank you for your community's on-going efforts to reduce flood risk in your community and for your support as we worked toward these milestones.

Sincerely,

A handwritten signature in blue ink, appearing to read "Willie G. Nunn", with a horizontal line extending to the right.

Willie G. Nunn
Regional Administrator
FEMA Region 10

cc: DaveRucklos, City Of Dayton
John Graves, Floodplain Management and Insurance Branch Chief
Deanna Wright, Oregon State National Flood Insurance Program Coordinator

Enclosure: Pre-Implementation Compliance Measures Fact Sheet

Pre-Implementation Compliance Measures Overview

Beginning this summer, FEMA will assist communities with coming changes to the National Flood Insurance Program (NFIP) in Oregon.

Why are the changes needed?

As the result of a Biological Opinion issued by the National Marine Fisheries Service, communities are required to demonstrate how floodplain development is compliant with the Endangered Species Act in Special Flood Hazard Areas. Changes are needed to protect the habitat of several species of fish and the Southern Resident killer whales to comply with the Endangered Species Act (ESA). FEMA outlined these changes in the [draft Oregon NFIP-ESA Implementation Plan](#).

Current status

FEMA is evaluating proposed changes to the NFIP outlined in the Implementation Plan through an environmental impact statement (EIS), in compliance with the National Environmental Policy Act (NEPA).



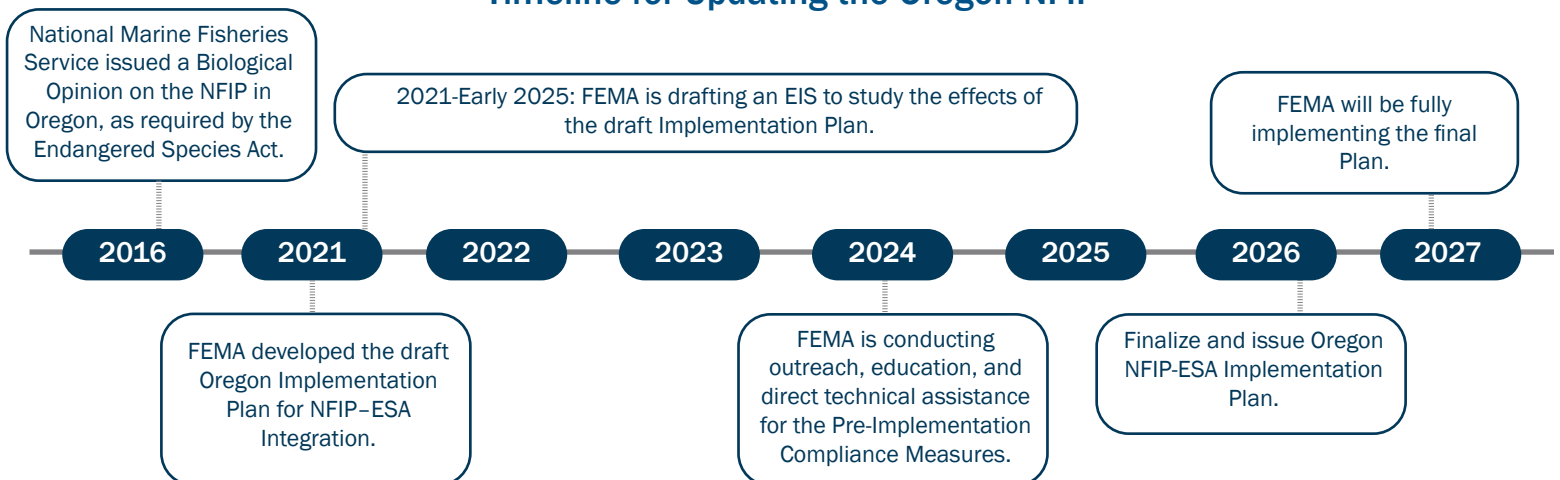
The National Flood Insurance Program serves to protect lives and property, while reducing costs to taxpayers due to flooding loss.

What is “no net loss”?

Any development action resulting in negative impacts to one or more key floodplain functions that are then mitigated or avoided to offset said impacts.

The Final Implementation Plan is anticipated by 2026 following the Record of Decision in the EIS process, then FEMA will fully implement the plan in 2027. Until then, communities need to begin taking action to protect habitat and achieve “no net loss.” FEMA is offering several resources for communities to learn more and implement interim measures, called Pre-Implementation Compliance Measures (PICMs).

Timeline for Updating the Oregon NFIP



What can communities do to comply with these changes?

Oregon communities participating in the NFIP can take short-term measures to comply with ESA requirements, known as PICMs. FEMA developed these measures in response to concerns from communities about the time and resources needed to meet requirements and ensure their future good standing in the NFIP. By implementing these measures now, communities will be better prepared for compliance audits, which will begin when the Final Implementation Plan is in place.

Communities can select one of the following three PICMs:

- Prohibit all new development in the floodplain.
- Incorporate the ESA into local floodplain ordinances.
- Require permit applicants to develop a Floodplain Habitat Assessment documenting that their proposed development in the Special Flood Hazard Area will achieve “no net loss.”

Communities must report to FEMA on their implementation of interim measures.

In addition to the above measures, as of August 1, 2024, FEMA is temporarily suspending processing applications for Letters of Map Revision based on Fill (LOMR-Fs) and Conditional Letters of Map Revision based on Fill (CLOMR-Fs) in NFIP communities to avoid potentially negative effects on ESA-listed species.

FEMA is here to support your community.

FEMA is offering several resources to assist communities in preparing for the Oregon NFIP-ESA Implementation Plan.

- **Informational Webinars (Summer 2024):** Learn about what FEMA is doing to revise the Implementation Plan and receive an introduction to the PICMs.
- **Questionnaire (Summer 2024):** Share what floodplain management measures your community is currently implementing to comply with the ESA, which PICMs you’re most interested in, and what support you need. Your feedback will help us plan the fall workshops and identify needs for technical assistance.
- **Workshops (Fall 2024):** Get an in-depth look at PICMs and talk through questions and concerns with FEMA staff.
- **Technical Assistance (Begins in Fall 2024):** Get support from FEMA to begin implementing PICMs.

Learn more and participate

Visit www.fema.gov/about/organization/region-10/oregon/nfip-esa-integration to read the latest information about NFIP-ESA Integration in Oregon.

You can also contact us at FEMA-R10-MIT-PICM@fema.dhs.gov

Draft Code Amendments

7.2.113 Flood Plain Overlay District (FPO)

7.2.113.01 Purpose

7.2.113.02 Definitions

7.2.113.03 General Provisions

7.2.113.04 Uses—Exempt

7.2.113.05 Uses—Permitted And Subject To Flood Plain Development Permit

7.2.113.06 (Reserved)

7.2.113.07 Flood Protection Standards

7.2.113.08 Generalized Flood Plain Areas

7.2.113.09 Variances

7.2.113.10 Variance Criteria

7.2.113.11 Warning And Disclaimer Of Liability

7.2.113.01 Purpose

The purpose of the Flood Plain Overlay Zone is to:

1. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.
2. Minimize expenditure of public money for flood control projects, rescue and relief efforts in areas subject to flooding.
3. Minimize flood damage to new construction by elevating or flood proofing all structures.
4. Control the alteration of natural flood plains, stream channels, and natural protective barriers which hold, accommodate or channel flood waters.
5. Control filling, grading, dredging and other development which may be subject to or increase flood damage.
6. Prevent or regulate the construction of flood barriers which may increase flood hazards in other areas.
7. Comply with the requirements of the Federal Insurance Administration to qualify the City of Dayton for participation in the National Flood Insurance Program.
8. Minimize flood insurance premiums paid by the citizens of the City of Dayton by reducing potential hazards due to flood damage.
9. Implement the flood plain policies in the City of Dayton Comprehensive Plan.
10. Coordinate and supplement provisions of the State Building Code with local land use and development ordinances. (Amended ORD 594 2/1/10 & enacted 3/2/10)

7.2.113.02 Definitions

For purposes of this Overlay Zone, the following terms shall mean:

1. ~~Accessory Structure: Sheds or small garages that are exempt from elevation or flood-proofing requirements. This definition shall be limited to detached structures less than 480 square feet in area.~~
2. ~~Area of Special Flood Hazard: Land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.~~
3. ~~Base Flood Level: The flood level having a one (1) percent chance of being equaled or exceeded in any given year (100 year flood plain).~~
4. ~~Below-Grade Space: An enclosed area below the base flood elevation in which the interior grade is not more than two (2) feet below the lowest adjacent exterior grade and the height, measured from the interior grade of the crawlspace to the top of the crawlspace foundation, and does not exceed four (4) feet at any point. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
5. ~~Critical Facility: A facility for which even a slight change of flooding might be too great. Critical facilities include but are not limited to schools, nursing homes, hospitals, police, fire, and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
6. ~~Conveyance: Refers to the carrying capacity of all or a part of the flood plain. It reflects the quantity and velocity of flood waters. Conveyance is measured in cubic feet per second (CFS). If the flow is 30,000 CFS at a cross section, this means that 30,000 cubic feet of water pass through the cross section each second.~~
7. ~~Development: Any activity that has the potential to cause erosion or increase the velocity or depth of flood water. Development may include, but is not limited to, residential and non-residential structures, fill, utilities, transportation facilities, and the storage and stockpiling of buoyant or hazardous materials.~~
8. ~~Encroachment: Any obstruction in the flood plain which affects flood flows.~~
9. ~~Existing Mobile/Manufactured Home Park or Manufactured Home Subdivision: A parcel (or contiguous parcels) of land divided into two or more mobile/manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile/manufactured home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this Code.~~
10. ~~Expansion to an Existing Mobile/Manufactured Home Park or Manufactured Home Subdivision: The preparation of additional sites by the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets).~~
11. ~~FEMA: The Federal Emergency Management Agency, the federal organization responsible for administering the National Flood Insurance Program.~~
12. ~~Fill: The placement of any material on the land for the purposes of increasing its elevation in relation to that which exists. Fill material includes, but is not limited to, the following: soil, rock, concrete, bricks, wood stumps, wood, glass, garbage, plastics, metal, etc.~~
13. ~~Flood or Flooding: A general and temporary condition of partial or complete inundation of usually dry land areas from the unusual and rapid accumulation of runoff of surface waters from any source.~~

14. Flood Boundary Floodway Map (FBFM): The map portion of the Flood Insurance Study (FIS) issued by the Federal Insurance Agency on which is delineated the Flood Plan, Floodway (and Floodway Fringe), and cross sections (referenced in the text portion of the FIS).
15. Flood Insurance Rate Map (FIRM): The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards (flood plain) and the risk premium zones applicable to the community and is on file with the City of Dayton.
16. Flood Insurance Study (FIS): The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary Floodway map and the water surface elevation of the base flood and is on file with the City of Dayton.
17. Flood Plain: Lands within the City that are subject to a one (1) percent or greater chance of flooding in any given year as identified on the official zoning maps of the City of Dayton. Also referenced in the State's Model Ordinance and the FEMA documents as the Special Flood Hazard Area (SFHA) as the 100 year flood plain. (Amended ORD 594 2/1/10, Enacted 3/2/10)
18. Flood Proofing: A combination of structural or non-structural provisions, changes, or adjustments to structures, land or waterways for the reduction or elimination of flood damage to properties, water and sanitary facilities, structures and contents of buildings in a flood hazard area.
19. Floodway: The channel of a river or other watercourse and the adjacent land areas that must remain unobstructed to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. Once established, nothing can be placed in the floodway that would cause any rise in the base flood elevation.
20. Floodway Fringe: The area of the flood plain lying outside of the floodway as delineated on the FBFM where encroachment by development will not increase the flood elevation more than one foot during the occurrence of the base flood discharge.
21. Hazardous Material: Combustible, flammable, corrosive, explosive, toxic or radioactive substance which is potentially harmful to humans and the environment.
22. Lowest Floor: Means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Code.
23. Manufactured Home: Means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes, the term "manufactured home" also includes mobile homes as defined in sub Q., of this Section. For insurance and flood plain management purposes, the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.
24. Manufactured Home Park or Subdivision: Means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
25. Mean Sea Level (MSL): Means, for purposes of the National Flood Insurance Program, the North American Vertical Datum of 1988 or other datum, to which base flood elevations shown on a

community's Flood Insurance Rate Map are referenced. (Amended ORD 594 2/1/10, Enacted 3/2/10)

26. ~~Mobile Home: A vehicle or structure, transportable in one or more sections, which is eight feet or more in width, is 32 feet or more in length, is built on a permanent chassis to which running gear is or has been attached, and is designed to be used as a dwelling with or without permanent foundation when connected to the required utilities. Such definition does not include any recreational vehicle as defined by sub CC., of this Section.~~
27. ~~New Construction: Any structure(s) for which the start of construction commenced on or after the original effective date of the Flood plain Overlay Zone.~~
28. ~~Obstruction: Any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure or matter in, along, across or projecting into any channel, watercourse, or regulatory flood hazard area which may impede, retard or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that it is placed where the flow of water might carry the same downstream to the damage of life or property.~~
29. ~~Recreational Vehicle: Means a "camper," "motor home," "travel trailer," as defined in ORS 801.180, 801.350, and 801.565 that is intended for human occupancy and is equipped with plumbing, sinks, or toilet, and does not meet the definition of a mobile home in sub Z., of this Section.~~
30. ~~Special Flood Hazard Area (SFHA): See Flood Plain. (Amended ORD 594, Effective 3/2/10)~~
31. ~~Start of Construction: The first placement or permanent construction of a structure (other than a mobile/manufactured home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. 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 excavation for a basement, footings, piers or foundations 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 used as part of the main structure.~~
- ~~For a structure (other than a mobile/manufactured home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation.~~
- ~~For mobile/manufactured homes not within a mobile/manufactured home park or manufactured home subdivision, "start of construction" means affixing of the mobile/manufactured home to its permanent site. For mobile/manufactured homes within mobile/manufactured home parks or manufactured home subdivisions, "start of construction" is the date on which the construction of facilities for servicing the site on which the mobile/manufactured home is to be affixed (including at a minimum, the construction of streets with final site grading or the pouring of concrete pads, and installation of utilities) is completed.~~
32. ~~State Building Code: The combined specialty codes adopted by the State of Oregon. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
33. ~~Structure: Roofed buildings that have two or more walls, and gas or liquid storage tanks that are principally above ground.~~

~~34. Substantial Improvement: Any repair, reconstruction, addition, rehabilitation or other improvements of a structure, the cost of which exceeds 50% of the market or assessed value of the structure before the start of construction of the improvement:~~

- ~~1. Before the improvement or repair is started; or~~
- ~~2. If the structure has been damaged and is being restored, before the damage occurred. For purposes of this definition, "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 structures. The term does not include:
 - ~~1. Any project to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local building code enforcement official and which are the minimum necessary to assure safe living conditions.~~
 - ~~2. Any alteration of a structure listed on the National Register of Historic Places or State Inventory of Historic Places, provided, the alteration will not preclude the structure's continued designation as an historic structure as determined by the City Manager or Planning Commission using alteration criteria. (Amended 11/4/10 ORD 600)~~~~

~~35. Watercourse: A natural or artificial channel in which a flow of water occurs either continually or intermittently in identified flood plain.~~

~~7.2.113.03 General Provisions~~

~~The following regulations apply to all lands in identified flood plains as shown graphically on the zoning maps. The flood plain is those areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Yamhill County, Oregon, and Incorporated Areas, with an effective date of March 2, 2010," with accompanying Flood Insurance Rate Maps. The report and maps are incorporated in the overlay zone by this reference and are on file at the City of Dayton. When base flood elevation data has not been provided, the City Manager, or designee, shall have the authority to determine the location of the boundaries of the flood plain where there appears to be a conflict between a mapped boundary and the actual field conditions, provided a record is maintained of any such determination. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~

- ~~1. Duties of the City Manager, or designee, shall include, but not be limited to:
 - ~~1. Review all development permits to determine that the permit requirements and conditions of this Code have been satisfied. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
 - ~~2. Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.~~
 - ~~3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 7.2.113, are met.~~~~
- ~~2. Use of Other Base Flood Data: When base flood elevation data has not been provided on the FIRM, or when more detailed data is available, the City Manager, or designee, shall obtain,~~

review, and reasonably utilize any base flood elevation data available from a federal, state or other source, in order to administer the provisions of this Section.

~~3.— Information to be Obtained and Maintained~~

~~1.— From the developer of the property, obtain and record the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement and below grade crawl space) of all new or substantially improved structures. (Note: Below grade crawl spaces are allowed subject to the standards as found in Federal Emergency Management Agency (FEMA) Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas.) (Amended ORD 594 2/1/10, Enacted 3/2/10)~~

~~2.— For all new or substantially improved flood proofed structures:~~

~~1.— Verify and record the actual elevation as furnished by the developer (in relation to mean sea level), and,~~

~~2.— Maintain any flood proofing certifications required by this Section.~~

~~3.— Maintain for public inspection all records pertaining to the provisions of this Code.~~

~~4.— Permitted, but not exempt, activities in the flood area shall be reviewed as a Type I-A action. Activities requiring conditional use approval shall be reviewed as a Type II action.~~

~~7.2.113.04 Uses—Exempt~~

~~Within a Flood Plain Overlay zone no uses, structures, vehicles, and premises shall be used or established except as provided in the applicable underlying zone and the provisions of this overlay zone. Except as provided herein all uses and flood plain development shall be subject to issuance of a determination or a conditional use permit as provided in Sections 7.2.113.06, and 7.2.113.07. The following uses are exempt from the regulations of this overlay zone:~~

~~1.— Signs, markers, aids, etc., placed by a public agency to serve the public.~~

~~2.— Driveways, parking lots and other open space use areas where no alteration of topography will occur.~~

~~3.— Minor repairs or alterations to existing structures provided the alterations do not increase the size or intensify the use of the structure, and do not constitute "substantial improvement" as defined in Section 2.110.~~

~~4.— Customary dredging associated with channel maintenance consistent with applicable State or Federal law.~~

~~5.— Placement of utility facilities necessary to serve established and permitted uses within flood plain areas, such as telephone poles. This exemption does not apply to buildings, substations, or other types of flood plain development.~~

~~7.2.113.05 Uses—Permitted And Subject To Flood Plain Development Permit~~

~~If otherwise allowed in the zone, dwellings, a manufactured home on a lot, a manufactured home in a manufactured home park, and other structures that involve a building permit such as commercial and industrial uses, including the placement of fill to elevate a structure or site grading to prepare a site for development, may be allowed subject to a written determination (flood plain development permit) that the following requirements are met:~~

1. ~~The structure is not located within a floodway. (See 7.2.113.07 L.) (Amended ORD 594, Enacted 3/2/10)~~
2. ~~The required elevation to which the lowest floor of the structure must be elevated can be determined from the Flood Insurance Study.~~
3. ~~The structures will be located on natural grade or compacted fill.~~
4. ~~The lowest floor will be elevated to at least one (1) foot above the level of the base flood elevation and the anchoring requirements in Section 7.2.113.07.F. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
5. ~~The Building Official has determined that any construction and substantial improvements below base flood level meet the requirements of Sections 7.2.113.A.4.07.~~
6. ~~The building permit specifies the required elevation of the lowest floor, any anchoring requirements and requires provision of certification under Section 7.2.113.03.C, prior to occupancy.~~
7. ~~A certificate signed by a licensed surveyor or civil engineer certifying that the lowest floor including basement, is at or above the specific minimum is submitted to the Zoning Manager prior to use of the structure.~~
8. ~~No alteration of topography beyond the perimeter of the structure is proposed.~~
9. ~~A recreational vehicle may be located in a flood plain only during the non flood season (June 1 through September 30), provided, it is fully licensed and ready for highway use, or meet the requirements for manufactured homes. A recreation vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and, has no permanently attached additions.~~

7.2.113.06 (Reserved)

7.2.113.07 Flood Protection Standards

In all areas of identified flood plain, the following requirements apply:

1. ~~Dwellings and Manufactured Homes New residential construction, substantial improvement of any residential structures, location of a manufactured home on a lot or in a manufactured home park or park expansion approved after adoption of this Code shall:

 1. ~~Have the lowest floor, including basement and below grade crawl space, elevated on a permanent foundation to a minimum of one (1) foot above base flood elevation; and (Amended ORD 5942/1/10, enacted 3/2/10)~~
 2. ~~Manufactured homes shall be anchored in accordance with subsection F; and~~
 3. ~~No manufactured home shall be placed in a floodway, except in an existing manufactured home park.~~
 4. ~~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:~~~~

1. ~~A minimum of 2 openings having a total net area of not less than one (1) 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.~~
2. ~~Manufactured Homes in Existing Manufactured Home Parks – Manufactured homes placed on sites within existing manufactured home parks must be anchored to a permanent foundation and either:~~
1. ~~Have the finished floor elevated to a minimum of 18 inches above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement; or, (Amended ORD 5942/1/10, enacted 3/2/10)~~
 2. ~~Have the chassis supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. (Amended ORD 5942/1/10, enacted 3/2/10)~~

~~Manufactured homes outside existing manufactured home parks must meet the requirements for residential structures.~~

3. ~~Non-residential Development – New construction and substantial improvement of any commercial, industrial or other non-residential structures shall either have the lowest floor, including basement, elevated to one (1) foot above the level of the base flood elevation or, together with attendant utility and sanitary facilities, shall:~~
1. ~~Be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water.~~
 2. ~~Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.~~
 3. ~~Be certified by a registered professional engineer or architect that the standards in this subsection and subsection E, are satisfied. This certificate shall include the specific elevation (in relation to mean sea level) to which such structures are flood-proofed.~~
 4. ~~Non-residential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in 7.2.110.07A,4.~~
 5. ~~Applicants flood-proofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the flood-proofed level (e.g. a building constructed to the base flood level will be rated as one (1) foot below that level).~~
4. ~~Accessory Structures – Sheds or detached garages may be exempt from elevation and flood-proofing standards providing the following development standards are met:~~
1. ~~The structure cannot be more than 480 square feet in area and shall not be used for human habitation;~~
 2. ~~Shall be designed to have low potential for flood damage;~~

~~3.— Shall be constructed and placed on the building site so as to offer minimum resistance to the flow of floodwater; and,~~

~~4.— Shall be firmly anchored to prevent flotation which may result in damage to other structures.~~

~~5.— Fill~~

~~1.— Any fill or materials proposed must be shown to have a beneficial purpose and the amount thereof not greater than is necessary to achieve that purpose as demonstrated by a plan submitted by the owner showing the uses to which the filled land will be put and the final dimensions for the proposed fill or other materials.~~

~~2.— Such fill or other materials shall be protected against erosion by rip rap, vegetation cover, or bulk heading.~~

~~6.— Anchoring~~

~~1.— All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.~~

~~2.— All manufactured homes shall be anchored to resist flotation, collapse or lateral movement by providing over the top and frame ties to ground anchors. Specific requirements shall be that:~~

~~1.— Over the top ties be provided at each of the four corners of the manufactured home with two additional ties per side at intermediate locations with manufactured homes more than 50 feet long requiring only one additional tie per side.~~

~~2.— Frame ties be provided at each corner of the home with five additional ties per side at intermediate points with manufactured homes less than 50 feet long requiring only four ties per side.~~

~~3.— All components of the anchoring system be capable of carrying a force of 4,800 pounds.~~

~~4.— Any additions or expansions to the manufactured home be similarly anchored.~~

~~3.— An alternative method of anchoring may involve a system designed to withstand a wind force of 90 miles per hour or greater (must be certified).~~

~~7.— Construction Materials and Methods~~

~~1.— All new construction and substantial improvements below base flood level shall be constructed with materials and utility equipment resistant to flood damage, and the design and methods of construction are in accord with accepted standards of practice based on an engineer's or architect's review of the plans and specifications.~~

~~2.— All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damages.~~

~~8.— Utilities~~

~~1.— All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system as approved by the State Health Division.~~

2. ~~New and replacement sanitary sewage systems shall be designed and located to minimize flood water contamination consistent with the requirements of the Oregon State Department of Environmental Quality.~~
 3. ~~Electrical, heating, ventilation, plumbing, and air conditioning equipment shall be designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.~~
9. ~~Developments, Generally—Residential developments involving more than one single family dwelling, including subdivisions, manufactured home parks, multiple family dwellings and planned developments including development regulated under A, and C, shall meet the following requirements:~~
1. ~~Be designed to minimize flood damage.~~
 2. ~~Have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.~~
 3. ~~Have adequate drainage provided to reduce exposure to flood damage.~~
 4. ~~Base flood elevation data shall be provided by the developer. In cases where no base flood elevation is available, analysis by standard engineering methods (as approved by the Building Official and/or City Engineer) will be required. (Amended ORD 594 2/1/10, Effective 3/2/10)~~
10. ~~Storage of Materials and Equipment—Materials that are buoyant, flammable, obnoxious, toxic or otherwise injurious to persons or property, if transported by floodwaters, are prohibited. Storage of materials and equipment not having these characteristics is permissible only if the materials and equipment have low damage potential and are anchored or are readily removable from the area within the time available after forecasting and warning.~~
11. ~~Alteration of Watercourses (Floodways)—When considering a conditional use permit to allow alteration or modification of a watercourse (floodway) the following shall apply:~~
1. ~~Adjacent communities, the Oregon Division of State Lands and the Department of Land Conservation and Development, and other appropriate state and federal agencies shall be notified prior to any alteration or relocation of a watercourse and evidence of such notification shall be submitted to the Federal Insurance Administration. (Amended ORD 594 2/1/10, Effective 3/2/10)~~
 2. ~~Maintenance shall be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.~~
12. ~~Floodways—Located within areas of flood plain established in Section 7.2.110.03 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 shall apply in addition to the requirement in 1: (These provisions shall also apply to areas within a flood plain where a floodway has not been technically determined and the base flood level is three (3) or more feet above the land surface:)~~
1. ~~Except as provided in number 5 below, prohibit encroachments, including fill, new construction, substantial improvements and other development unless a technical evaluation is provided by a registered professional engineer or architect demonstrating that encroachments shall not result in any increase in flood levels during the occurrence~~

of the base flood discharge. This evaluation may be submitted to the Federal Emergency Management Agency for technical review. (Amended ORD 594 2/1/10, Enacted 3/2/10)

2. ~~If Section 1 above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 7.2.110.07.~~
3. ~~Prohibit the placement of any new manufactured home parks and manufactured homes except in an existing manufactured home park. (Amended ORD 594 2/1/10, Enacted 3/2/10)~~
4. ~~The area below the lowest floor shall remain open and unenclosed to allow the unrestricted flow of flood waters beneath the structure.~~
5. ~~Projects for stream habitat restoration may be permitted in the floodway provided: (Added ORD 594 2/1/10, Enacted 3/2/10)~~
 1. ~~The project is certified by a qualified professional (a Registered Professional Engineer, Yamhill County staff, or an applicable State agency); provides a feasibility analysis and certification indicating that the project was designed to keep any rise in the 100-year flood levels as close to zero as practically possible given the goals of the project; evidence is presented that no structures will be impacted by a potential rise in flood elevation; and evidence that the local approval process requires an agreement to monitor the project, correct problems, and ensure the flood-carrying capacity remains unchanged. (Added ORD 594 2/1/10, Enacted 3/2/10)~~
6. ~~New Installation of Manufactured dwellings is prohibited (2002 Oregon Manufactured Dwelling Park and Specialty Code). Manufactured dwellings may only be located in floodways according to one of the following conditions. (Added ORD 594 2/1/10, Enacted 3/2/10)~~
 1. ~~If the manufactured dwelling already exists in the floodway, the placement was permitted at the time of the original installation, and the continued use is not a threat to life, health, property, or the general welfare of the public; or (Added ORD 594 2/1/10, Enacted 3/2/10)~~
 2. ~~A new manufactured dwelling is replacing an existing manufactured dwelling whose original placement was permitted at the time of installation and the replacement home will not be a threat to life, health, property, or general welfare of the public and it meets the following: (Added ORD 594 2/1/10, Enacted 3/2/10)~~
 1. ~~Demonstrate through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the manufactured dwelling and any accessory buildings, accessory structures, or property improvements (encroachments) will not result in any increase in flood levels during occurrence of the base flood discharge; (Added ORD 594 2/1/10, Enacted 3/2/10)~~
 2. ~~Provide evidence that the replacement manufactured dwelling and any accessory buildings or accessory structures (encroachments) shall have the finished floor elevated a minimum of 18 inches (46cm) about the~~

base flood elevation as identified on the Floor Insurance Rate Map; (Added ORD 594 2/1/10, Enacted 3/2/10)

- 3.— Provide evidence that the replacement manufactured dwelling is placed and secured to a foundation support system designed by an Oregon professional engineer or architect and approved by Yamhill County Building Official. Placement shall be as approved; (Added ORD 594 2/1/10, Enacted 3/2/10)
- 4.— Provide evidence that the replacement manufactured dwelling, its foundation supports, and any accessory buildings, accessory structures, or property improvements (encroachments) do not displace water to the degree that it causes a rise in the water level or diverts water in a manner that causes erosion or damage to other properties; (Added ORD 594 2/1/10, Enacted 3/2/10)
- 5.— Provide evidence that the location of a replacement manufactured dwelling is allowed by the local planning department's ordinances; and; (Added ORD 594 2/1/10, Enacted 3/2/10)
- 6.— Provide evidence of compliance with any requirements deemed necessary by the authority having jurisdiction. (Added ORD 594 2/1/10, Enacted 3/2/10)

13.— Recreational Vehicles—For recreational vehicles on individual lots see Off Street Parking and Loading, Section 7.2.303.10 C,3, and for recreational vehicles within recreational vehicle parks see Section 7.2.408.05, Floodplain. (Added ORD 594 2/1/10, Enacted 3/2/10)

14.— Critical Facilities—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 (3) feet above the base flood elevation (BFE) 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. (Added ORD 594 2/1/10, Enacted 3/2/10)

7.2.113.08 Generalized Flood Plain Areas

Where elevation data is generalized, such as the unnumbered A zones on the FIRM, conditional use permits shall include a review and determination that proposed construction will be reasonably safe from flooding and meet the flood protection standards. In determining whether the proposed flood plain development is reasonably safe, applicable criteria shall include, among other things, the use of historical data, high water marks, photographs of past flooding, or data (e.g. an engineering study or soil and landscape analysis) may be submitted by qualified professionals that demonstrate the site is not in a flood plain. In such cases, a letter of map amendment may be required by the City Manager.

7.2.113.09 Variances

1. ~~A variance may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the criteria in Section 7.2.114.10.~~
2. ~~A community shall notify the applicant in writing over the signature of a community official that: (1) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage; and, (2) such construction below the base flood level increases risk to life and property. Such notification shall be maintained with a record of all variance actions as required in subsection C.~~
3. ~~A community shall: (1) maintain a record of all variance actions, including justification for their issuance; and, (2) report such variances issued in its annual report submitted to the Manager.~~

7.2.113.10 Variance Criteria

The following criteria shall be used to review variance applications.

1. ~~Variances shall only be issued upon a showing that:

 1. ~~There is a good and sufficient cause;~~
 2. ~~That failure to grant the variance would result in exceptional hardship to the applicant;~~
 3. ~~That the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws;~~
 4. ~~The variance is the minimum necessary, considering the flood hazard, to afford relief;~~
 5. ~~The variance will be consistent with the intent and purpose of the provision being varied;~~
 6. ~~There has not been a previous land use action approved on the basis that variances would not be allowed; and~~
 7. ~~The new construction or substantial improvement is not within any designated regulatory floodway, or if located in a floodway, no increase in base flood discharge will result.~~~~

7.2.113.11 Warning And Disclaimer Of Liability

~~The degree of flood protection required by this overlay zone is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on occasion. Flood heights may be increased by man-made or natural causes. This zone does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This zone will not create liability on the part of the City of Dayton, any officer or employee thereof or the Federal Insurance Administration for any flood damages that result from reliance on this chapter or any decision lawfully made thereunder~~

7.113.01 Purpose.

The flood hazard areas of Dayton preserve the natural and beneficial values served by floodplains but are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

The purpose of the Flood Plain Overlay District (FPO) is to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding in special flood hazard areas by provisions designed to:

- A. Protect human life and health;*
- B. Minimize expenditure of public money for costly flood control projects;*
- C. Preserve natural and beneficial floodplain functions;*
- D. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;*
- E. Minimize prolonged business interruptions;*
- F. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in special flood hazard areas;*
- G. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas so as to minimize blight areas caused by flooding;*
- H. Notify potential buyers that the property is in a special flood hazard area;*
- I. Notify those who occupy special flood hazard areas that they assume responsibility for their actions;*
- J. Participate in and maintain eligibility for flood insurance and disaster relief.*

7.113.02 Methods of Reducing Flood Losses.

In order to accomplish its purposes, this ordinance includes methods and provisions for:

- A. Restricting or prohibiting development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;*
- B. Requiring that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;*
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;*
- D. Controlling filling, grading, dredging, and other development which may increase flood damage;*

- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.
- F. Employing a standard of “no net loss” of natural and beneficial floodplain functions.

7.113.03 Definitions.

For the FPO only, the following terms, words or phrases shall be interpreted so as to give them the meaning they have in common usage.

Appeal: A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

Area of shallow flooding: A designated Zone AO, AH, AR/AO or AR/AH on a community’s Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard: The land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as Zone A, AO, AH, A1-30, AE, A99, AR. “Special flood hazard area” is synonymous in meaning and definition with the phrase “area of special flood hazard.”

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE): The elevation to which floodwater is anticipated to rise during the base flood.

Basement: Any area of the building having its floor subgrade (below ground level) on all sides.

Development: Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Fill: Placement of any materials such as soil, gravel, crushed stone, or other materials that change the elevation of the floodplain. The placement of fill is considered “development.”

Fish Accessible Space: The volumetric space available to fish to access.

Fish Egress-able Space: The volumetric space available to fish to exit or leave from.

Flood or Flooding:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters.
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.
- (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

Flood elevation study: an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood Insurance Rate Map (FIRM): The official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

Flood Insurance Study (FIS): See "Flood elevation study."

Floodway: 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. Also referred to as "Regulatory Floodway."

Functionally Dependent Use: A use which cannot perform its intended purpose unless it is located or carried out in proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Green Infrastructure: Use of natural or human-made hydrologic features to manage water and provide environmental and community benefits. Green infrastructure uses management approaches and technologies that use, enhance, and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration, and reuse. At a large scale, it is an interconnected network of green space that conserves natural systems and provides assorted benefits to human populations. At a local scale, it manages stormwater by infiltrating it into the ground where it is generated using vegetation or porous surfaces, or by capturing it for later reuse. Green infrastructure practices can be used to achieve no net loss of pervious surface by creating infiltration of stormwater in an amount equal to or greater than the infiltration lost by the placement of new impervious surface.

Habitat Restoration Activities: Activities with the sole purpose of restoring habitats that have only temporary impacts and long-term benefits to habitat. Such projects cannot include ancillary structures such as a storage shed for maintenance equipment, must demonstrate that no rise in the BFE would occur as a result of the project and obtain a CLOMR and LOMR, and have obtained any other required permits (e.g., CWA Section 404 permit).

Hazard Trees: Standing dead, dying, or diseased trees or ones with a structural defect that makes it likely to fail in whole or in part and that present a potential hazard to a structure or as defined by the community.

Highest adjacent grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure: Any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - (1) By an approved state program as determined by the Secretary of the Interior or
 - (2) Directly by the Secretary of the Interior in states without approved programs.

Hydraulically Equivalent Elevation: A location (e.g., a site where no net loss standards are implemented) that is approximately equivalent to another (e.g., the impacted site) relative to the same 100-year water surface elevation contour or base flood elevation. This may be estimated based on a point that is along the same approximate line perpendicular to the direction of flow.

Hydrologically Connected: The interconnection of groundwater and surface water such that they constitute one water supply and use of either results in an impact to both.

Impervious Surface: A surface that cannot be penetrated by water and thereby prevents infiltration and increases the amount and rate of surface water runoff, leading to erosion of stream banks, degradation of habitat, and increased sediment loads in streams. Such surfaces can accumulate large amounts of pollutants that are then “flushed” into local water bodies during storms and can also interfere with recharge of groundwater and the base flows to water bodies.

Low Impact Development: An approach to land development (or redevelopment) that works with nature to manage stormwater as close to its source as possible. It employs principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product. Low Impact Development refers to designing and implementing practices that can be employed at the site level to control stormwater and help replicate the predevelopment hydrology of the site. Low impact development helps achieve no net loss of pervious surface by infiltrating stormwater in an amount equal to or greater than the infiltration lost by the placement of new impervious surface. LID is a subset of green infrastructure.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building’s lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured dwelling: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured dwelling” does not include a “recreational vehicle” and is synonymous with “manufactured home.”

Manufactured dwelling park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured dwelling lots for rent or sale.

Mean Higher-High Water: The average of the higher-high water height of each tidal day observed over the National Tidal Datum Epoch.

Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction: For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by the City of Dayton and includes any subsequent improvements to such structures.

No Net Loss: A standard where adverse impacts must be avoided or offset through adherence to certain requirements so that there is no net change in the function from the existing condition when a development application is submitted to the state, tribal, or local jurisdiction. The floodplain functions of floodplain storage, water quality, and vegetation must be maintained.

Offsite: Mitigation occurring outside of the project area.

Onsite: Mitigation occurring within the project area.

Ordinary High Water Mark: The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas.

Qualified Professional: Appropriate subject matter expert that is defined by the community.

Reach: A section of a stream or river along which similar hydrologic conditions exist, such as discharge, depth, area, and slope. It can also be the length of a stream or river (with varying conditions) between major tributaries or two stream gages, or a length of river for which the characteristics are well described by readings at a single stream gage.

Recreational vehicle: A vehicle which is:

- (a) Built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towable by a light duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Riparian: Of, adjacent to, or living on, the bank of a river, lake, pond, or other water body.

Riparian Buffer Zone (RBZ): The outer boundary of the riparian buffer zone is measured from the ordinary high water line of a fresh waterbody (lake; pond; ephemeral, intermittent, or perennial stream) or mean higher-high water line of a marine shoreline or tidally influenced river reach to 170 feet horizontally on each side of the stream or 170 feet inland from the MHHW. The riparian buffer zone includes the area between these outer boundaries on each side of the stream, including the stream channel. Where the RBZ is larger than the special flood hazard area, the no net loss standards shall only apply to the area within the special flood hazard area.

Riparian Buffer Zone Fringe: The area outside of the RBZ and floodway but still within the SFHA.

Silviculture: The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands.

Special flood hazard area: See "Area of special flood hazard" for this definition.

Start of construction: Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. 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 dwelling 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 excavation for a basement, footings, piers, or foundations 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. 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.

Structure: For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured dwelling.

Substantial damage: 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.

Substantial improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- (b) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Undeveloped Space: The volume of flood capacity and fish-accessible/egress-able habitat from the existing ground to the Base Flood Elevation that is undeveloped. Any form of development including, but not limited to, the addition of fill, structures, concrete structures (vaults or tanks), pilings, levees and dikes, or any other development that reduces flood storage volume and fish accessible/egress-able habitat must achieve no net loss.

Variance: A grant of relief by City of Dayton from the terms of a floodplain management regulation.

Violation: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation

certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

7.113.04 Applicability.

- A. *Lands to which this Ordinance applies: This ordinance shall apply to all special flood hazard areas within the jurisdiction of the City of Dayton.*
- B. *Basis for Establishing the Areas of Special Flood Hazard. The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study for Yamhill County, Oregon and Incorporated Areas, dated March 2, 2010," with accompanying flood insurance map (FIRM) is hereby adopted by reference and declared to be part of this chapter. The flood insurance study and the FIRM are on file at the City Hall.*
- C. *Coordination with State of Oregon Specialty Codes. Pursuant to the requirement established in ORS 455 that the City of Dayton administers and enforces the State of Oregon Specialty Codes, the City of Dayton does hereby acknowledge that the Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. Therefore, this ordinance is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.*
- D. *Compliance. All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.*
- E. *Penalties for Noncompliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of this ordinance are subject to enforcement by the City of Carton under Section 7.04.06.*
- F. *Abrogation. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.*
- G. *Severability. This ordinance and the various parts thereof are hereby declared to be severable. If any section clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.*
- H. *Interpretation. In the interpretation and application of this ordinance, all provisions shall be:*
 - 1. *Considered as minimum requirements;*
 - 2. *Liberally construed in favor of the governing body; and*
 - 3. *Deemed neither to limit nor repeal any other powers granted under state statutes.*

7.113.05 Warning and disclaimer of liability

- A. *Warning. The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.*

B. *Disclaimer of liability. This ordinance shall not create liability on the part of the City of Dayton, any officer or employee thereof, or the Federal Insurance Administrator for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.*

7.113.06 Administration.

A. *Designation of the Floodplain Administrator. The City Manager (or designee) is hereby appointed to administer, implement, and enforce this ordinance by granting or denying development permits in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions.*

B. *Duties and Responsibilities of the Floodplain Administrator. Duties of the floodplain administrator, or their designee, shall include, but not be limited to:*

1. *Permit Review. Review of all floodplain development permits to:*

- a. *Determine that the permit requirements of this ordinance have been satisfied;*
- b. *Determine that all other required local, state, and federal permits have been obtained and approved;*
- c. *Determine if the proposed development is in a floodway.*
 - i. *If located in the floodway assure that the floodway provisions of this ordinance in Section 7.113.09 are met; and*
 - ii. *Determine if the proposed development is in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available then ensure compliance with the provisions of Section 7.113.09; and*
 - iii. *Provide to building officials the Base Flood Elevation (BFE) applicable to any building requiring a floodplain development permit.*
- d. *Determine if the proposed development qualifies as a substantial improvement as defined in Section 7.113.03.*
- e. *Determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in section 7.113.09.A.*
- f. *Determine if the proposed development activity includes the placement of fill or excavation.*
- g. *Determine whether the proposed development activity complies with the no net loss standards in Section 7.113.11.*

C. *Information to be obtained and maintained.*

The following information shall be obtained and maintained and shall be made available for public inspection as needed:

1. *The actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with Section 7.113.09.H.*

2. *The elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of Sections 7.113.06.B.1 and 7.113.07 are adhered to.*
 3. *Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, documentation, prepared and sealed by a professional licensed surveyor or engineer, certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).*
 4. *Where base flood elevation data are utilized, As-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection.*
 5. *Maintain all Elevation Certificates (EC) submitted to the community.*
 6. *The elevation (in relation to mean sea level) to which the structure and all attendant utilities were floodproofed for all new or substantially improved floodproofed structures where allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtained in accordance with Section 7.113.09.H.*
 7. *All floodproofing certificates required under this ordinance.*
 8. *All variance actions, including justification for their issuance.*
 9. *All hydrologic and hydraulic analyses performed as required under Section 7.113.10.D.*
 10. *All Substantial Improvement and Substantial Damage calculations and determinations as required under Section 7.113.06.D.4.*
 11. *Documentation of how no net loss standards have been met (see Section 7.113.11.A).*
 12. *All records pertaining to the provisions of this ordinance.*
- D. *Requirement to notify other entities and submit new technical data.*
1. *Community Boundary Alterations.*
The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.
 2. *Watercourse Alterations.*
 - a. *The Floodplain Administrator shall notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification shall be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:*
 - (i). *A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or*

(ii). Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

b. The applicant shall be required to submit a Conditional Letter of Map Revision (CLOMR) when required under Section 7.113.06.D.

3. Requirement to Submit New Technical Data. A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 of the Code of Federal Regulations (CFR), Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process. The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:

a. Proposed floodway encroachments that increase the base flood elevation; and

b. Proposed development which increases the base flood elevation by more than one foot in areas where FEMA has provided base flood elevations but no floodway.

An applicant shall notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

4. Substantial Improvement and Substantial Damage Assessments and Determinations.

Conduct Substantial Improvement (SI) (as defined in Section 7.113.03) reviews for all structural development proposal applications and maintain a record of SI calculations within permit files in accordance with Section 7.113.06.C. Conduct Substantial Damage (SD) (as defined in Section 7.113.03) assessments when structures are damaged due to a natural hazard event or other causes. Make SD determinations whenever structures within the special flood hazard area (as established in Section 7.113.06.B) are damaged to the extent that 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.

7.113.07 Floodplain Development Permit

A. Floodplain Development Permit Required.

A floodplain development permit shall be obtained before construction or development begins within any area horizontally within the special flood hazard area established in 7.113.06.B. The floodplain development permit shall be required for all structures, including manufactured dwellings, and for all other development, as defined in Section 7.113.03, including fill and other development activities.

B. Application for Floodplain Development Permit.

Application for a floodplain development permit may be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

1. *In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures; in accordance with the requirements of Section 7.113.06.C.*
2. *Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed.*
3. *Certification by a registered professional engineer or architect licensed in the State of Oregon that the floodproofing methods proposed for any non-residential structure meet the floodproofing criteria for non-residential structures in Section 7.113.10.C.3.*
4. *Description of the extent to which any watercourse will be altered or relocated.*
5. *Base Flood Elevation data for subdivision proposals or other development when required per Sections 7.113.06.B.1 and 7.113.09.G.*
6. *Substantial improvement calculation for any improvement, addition, reconstruction, renovation, or rehabilitation of an existing structure.*
7. *The amount and location of any fill or excavation activities proposed.*

7.113.08 Variance Procedure.

- A. *A variance as described in this section is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.*
- B. *Conditions for variances.*
 1. *Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of Sections 7.113.08.B.3 and 5, and 7.113.08.C. As the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.*
 2. *Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.*
 3. *Variances shall not be issued within any floodway if any increase in flood levels during the base flood discharge would result.*
 4. *Variances shall only be issued upon finding:*
 - a. *A showing of good and sufficient cause;*
 - b. *A determination that failure to grant the variance would result in exceptional hardship to the applicant; and,*
 - c. *A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.*
 5. *Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of this section are met, and the structure or other development is protected by*

methods that minimize flood damages during the base flood and create no additional threats to public safety.

6. *Variations shall not be issued unless it is demonstrated that the development will not result in net loss of the following proxies for the three floodplain functions in the SFHA: undeveloped space; pervious surface; or trees 6 inches dbh or greater (see Section 7.113.11 and associated options in Table 1).*

C. *Variance Notification*

Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance and that such construction below the base flood elevation increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance shall be maintained in accordance with Section 7.113.06.C.

7.113.09 Provisions for Flood Hazard Reduction.

General Standards. In all special flood hazard areas, the no net loss standards (see Section 7.113.11.A) and the following standards shall be adhered to:

A. *Alteration of Watercourses.*

Require that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained. Require that maintenance is provided within the altered or relocated portion of said watercourse to ensure that the flood carrying capacity is not diminished. Require compliance with Section 7.113.06.D.2. and 7.113.06.3.

B. *Anchoring.*

1. *All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.*
2. *All manufactured dwellings shall be anchored per Section 7.113.10.C.4.*

C. *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 also be constructed using methods and practices that minimize flood damage.*

D. *Water Supply, Sanitary Sewer, and On-Site Waste Disposal Systems.*

All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system. 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. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with the Oregon Department of Environmental Quality.

E. *Electrical, Mechanical, Plumbing, and Other Equipment.*

Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall be elevated at or above the base flood level or shall be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall meet all the requirements of this section if replaced as part of a substantial improvement.

F. *Tanks.*

Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood. Above-ground tanks shall be installed at or above the base flood level or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

G. *Subdivision proposals and other proposed developments.*

1. *All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, shall include within such proposals Base Flood Elevation data.*
2. *All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) shall:*
 - i. *Be consistent with the need to minimize flood damage.*
 - ii. *Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.*
 - iii. *Have adequate drainage provided to reduce exposure to flood hazards.*
 - iv. *Comply with no net loss standards in Section 7.113.11.A.*

H. *Use of Other Base Flood Elevation Data.*

1. *When Base Flood Elevation data has not been provided in accordance with Section 7.113.04.B, the local floodplain administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer Section 7.113.09. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of Section 7.113.09.G.*
2. *Base Flood Elevations shall be determined for development proposals that are 5 acres or more in size or are 50 lots or more, whichever is lesser in any A zone that does not have an established base flood elevation. Development proposals located within a riverine unnumbered A Zone shall be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and 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.*

10. *Structures Located in Multiple or Partial Flood Zones. In coordination with the State of Oregon*

Commented [CF1]: Staff Note in Response to this Model Code Standard: Certain subdivision applications will fall below the threshold description (above) at 50 lots or 5 acres, whichever is the lesser. Also, BFA data is not known in certain parts of the city (i.e., where an A zone is shown to the FIRM). Planning Commission may recommend / Council may consider for adoption – a lower threshold for BFA data and require a flood study to determine location of the BFA on-site if unknown.

Commented [CF2]: Staff Note in Response to this Model Code Standard: Same note as before. Some subdivision applications will fall below the threshold description (above) at 50 lots or 5 acres, whichever is the lesser. Model code (above) refers to the A zone and identifies the data applicants would be expected to utilize / include as part of study for determining the BFE to an A zone. Again, Planning Commission may recommend / Council may consider for adoption – a lower threshold for BFA data and require a flood study to determine location of the BFA on-site if unknown. If the Commission recommends additional data to be include as part of study for determining the BFA, such must be clear, objective, and reasonable.

I. Structures Located In Multiple Or Partial Flood Zones

In coordination with the State of Oregon Specialty Codes:

1. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.
2. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

7.113.10 Specific Standards for Riverine Flood Zones.

These specific standards shall apply to all new construction and substantial improvements in addition to the General Standards contained in Section 7.113.09 of this ordinance and the no net loss standards (see Section 7.113.11.A).

A. Flood Openings.

All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements. Enclosed areas below the Base Flood Elevation, including crawl spaces shall:

1. Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;
2. Be used solely for parking, storage, or building access;
3. Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:
 - a. A minimum of two openings;
 - b. The total net area of non-engineered openings shall be not less than one square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls;
 - c. The bottom of all openings shall be no higher than one foot above grade;
 - d. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area; and,
 - e. All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.

B. Garages

1. Attached Garages. Attached garages may be constructed with the garage floor slab below the Base Flood Elevation (BFE) in riverine flood zones, if the following requirements are met:
 - a. If located within a floodway the proposed garage must comply with the requirements of section 7.113.10.D;
 - b. The floors are at or above grade on not less than one side;
 - c. The garage is used solely for parking, building access, and/or storage;

- d. *The garage is constructed with flood openings in compliance with section 7.113.10.A to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater;*
 - e. *The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;*
 - f. *The garage is constructed in compliance with the standards in section 7.113.09.I and,*
 - g. *The garage is constructed with electrical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.*
2. *Detached Garages. Detached garages must be constructed in compliance with the standards for appurtenant structures in Section 7.113.10.C.6 or non-residential structures in section 7.113.10.C.3 depending on the square footage of the garage.*

C. *For Riverine Special Flood Hazard Areas with Base Flood Elevations.*

In addition to the general standards listed in Section 7.113.10. A the following specific standards shall apply in Riverine (non-coastal) special flood hazard areas with Base Flood Elevations (BFE): Zones A1-A30, AH, and AE.

1. *Before Regulatory Floodway.*

In areas where a regulatory floodway has not been designated, no new construction, substantial improvement, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's Flood Insurance Rate Map (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 and will not result in the net loss of flood storage volume. When determined that structural elevation is not possible and where the placement of fill cannot meet the above standard, impacts to undeveloped space must adhere to the no net loss standards in Section 7.113.11.A.

2. *Residential Construction.*

New construction, conversion to, and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at or above the Base Flood Elevation (BFE). Enclosed areas below the lowest floor shall comply with the flood opening requirements in Section 7.113.10.A.

3. *Non-Residential Construction.*

- a. *New construction, conversion to, and substantial improvement of any commercial, industrial, or other non-residential structure shall:*
 - i. *Have the lowest floor, including basement elevated at or above the Base Flood Elevation (BFE); or*
 - ii. *Together with attendant utility and sanitary facilities:*
 - (a) *Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water; b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects*

of buoyancy; and, c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Floodplain Administrator as set forth Section 7.113.06.C.

- (b). Non-residential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in Section 7.113.10.A.*
- (c). Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one (1) foot below).*

4. Manufactured Dwellings.

- a. Manufactured dwellings to be placed (new or replacement) or substantially improved that are supported on solid foundation walls shall be constructed with flood openings that comply with Section 7.113.10.A.*
- b. The bottom of the longitudinal chassis frame beam shall be at or above Base Flood Elevation;*
- c. Manufactured dwellings to be placed (new or replacement) or substantially improved shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and;*
- d. Electrical crossover connections shall be a minimum of twelve (12) inches above Base Flood Elevation (BFE).*

5. Recreation Vehicles.

Recreational vehicles placed on sites are required to:

- a. Be on the site for fewer than 180 consecutive days, and*
- b. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or*
- c. Meet the requirements of Section 7.113.10.C.4, including the anchoring and elevation requirements for manufactured dwellings.*

6. Appurtenant (Accessory) Structures.

Relief from elevation or floodproofing requirements for residential and non-residential structures in Riverine flood zones may be granted for appurtenant structures that meet the following requirements:

- a. Appurtenant structures located partially or entirely within the floodway must comply with requirements for development within a floodway found in Section 7.113.10.D.*

- b. *Appurtenant structures must only be used for parking, access, and/or storage and shall not be used for human habitation;*
- c. *In compliance with State of Oregon Specialty Codes, appurtenant structures on properties that are zoned residential are limited to one story structures less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines. Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet;*
- d. *The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials;*
- e. *The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;*
- f. *The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in Section 7.113.10.A.*
- g. *Appurtenant structures shall be located and constructed to have low damage potential;*
- h. *Appurtenant structures shall not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed in compliance with Section 7.113.09.F; and,*
- i. *Appurtenant structures shall be constructed with electrical, mechanical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.*

D. Floodways.

Where the floodway is an extremely hazardous area due to the velocity of the floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

1. *Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless:*
 - a. *Certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment shall not result in any increase in flood levels within the community during the occurrence of the base flood discharge; or*
 - b. *A community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that conditional approval has been obtained by the Federal Insurance Administrator through the Conditional Letter of Map Revision (CLOMR) application process, all requirements established under 44 CFR 65.12 are fulfilled, and the encroachment(s) comply with the no net loss standards in section 7.113.11.A.*
2. *If the requirements of Section 7.113.10.D. are satisfied, all new construction, substantial improvements, and other development shall comply with all other applicable flood hazard reduction provisions of Sections 7.113.09 and 7.113.11.*

E. *Standards for Shallow Flooding Areas.*

Shallow flooding areas appear on FIRMs as AO zones with depth designations or as AH zones with Base Flood Elevations. For AO zones the base flood depths range from one (1) to three (3) feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. For both AO and AH zones, adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

1. *Standards for AH Zones.*

Development within AH Zones must comply with the standards in 7.113.09 and 7.113.10.

2. *Standards for AO Zones.*

In AO zones, the following provisions apply in addition to the requirements in 7.113.10.

- a. *New construction, conversion to, and substantial improvement of residential structures and manufactured dwellings within AO zones shall have the lowest floor, including basement, elevated above the highest grade adjacent to the building, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRM) or at least two (2) feet if no depth number is specified. For manufactured dwellings the lowest floor is considered to be the bottom of the longitudinal chassis frame beam.*
- b. *New construction, conversion to, and substantial improvements of nonresidential structures within AO zones shall either:*
 - i. *Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRMS) or at least two (2) feet if no depth number is specified; or*
 - ii. *Together with attendant utility and sanitary facilities, be completely floodproofed to or above the depth number specified on the FIRM or a minimum of two (2) feet above the highest adjacent grade if no depth number is specified, so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as stated in section 5.2.3.3(A)(4).*
- c. *Recreational vehicles placed on sites within AO Zones on the community's Flood Insurance Rate Maps (FIRM) shall either:*
 - i. *Be on the site for fewer than 180 consecutive days, and*
 - ii. *Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or*
 - iii. *Meet the elevation requirements of Section 7.113.10.E.2 and the anchoring and other requirements for manufactured dwellings of Section 7.113.10.E.2(c).*
- d. *In AO zones, new and substantially improved appurtenant structures must comply with the standards in Section 7.113.10.C.6*

- e. *In AO zones, enclosed areas beneath elevated structures shall comply with the requirements in Section 7.113.10.A*

7.113.11 Standards for Protection of SFHA Floodplain Functions

The standards described below apply to all special flood hazard areas as defined in Section 7.113.03.

A. No Net Loss Standards.

No net loss of the three proxies for the floodplain functions is required for development in the special flood hazard area that would reduce undeveloped space, increase impervious surface, or result in a loss of trees that are 6-inches dbh or greater. No net loss can be achieved by first avoiding negative effects to floodplain functions to the degree possible, then minimizing remaining effects, then replacing and/or otherwise compensating for, offsetting, or rectifying the residual adverse effects to the three floodplain functions. Prior to the issuance of any development authorization, the applicant shall:

- 1. Demonstrate a legal right by the project proponent to implement the proposed activities to achieve no net loss (e.g., property owner agreement);*
- 2. Demonstrate that financial assurances are in place for the long-term maintenance and monitoring of all projects to achieve no net loss;*
- 3. Include a management plan that identifies the responsible site manager, stipulates what activities are allowed on site, and requires the posting of signage identifying the site as a mitigation area.*

B. Compliance with no net loss for undeveloped space or impervious surface is preferred to occur prior to the loss of habitat function but, at a minimum, shall occur concurrent with the loss. To offset the impacts of delay in implementing no net loss, a 25 percent increase in the required minimum area is added for each year no net loss implementation is delayed.

C. No net loss must be provided within, in order of preference:

- 1. The lot or parcel that floodplain functions were removed from,*
- 2. The same reach of the waterbody where the development is proposed, or*
- 3. The special flood hazard area within the same hydrologically connected area as the proposed development. Table 1 presents the no net loss ratios, which increase based on the preferences listed above.*

D. Undeveloped Space.

- 1. Development proposals shall not reduce the fish-accessible and egress-able undeveloped space within the special flood hazard area.*
- 2. A development proposal with an activity that would impact undeveloped space shall achieve no net loss of fish-accessible and egress-able space.*
- 3. Lost undeveloped space must be replaced with fish-accessible and egress-able compensatory volume based on the ratio in Table 1 and at the same flood level at which the development causes an impact (i.e., plus or minus 1 foot of the hydraulically equivalent elevation).*

a. *Hydraulically equivalent sites must be found within either the equivalent 1-foot elevations or the same flood elevation bands of the development proposal. The flood elevation bands are identified as follows:*

(1) Ordinary High Water Mark to 10-year,

(2) 10-year to 25-year,

(3) 25-year to 50-year,

(4) And 50-year to 100-year

b. *Hydrologically connected to the waterbody that is the flooding source;*

c. *Designed so that there is no increase in velocity; and*

d. *Designed to fill and drain in a manner that minimizes anadromous fish stranding to the greatest extent possible.*

E. Impervious Surfaces.

Impervious surface mitigation shall be mitigated through any of the following options:

- 1. Development proposals shall not result in a net increase in impervious surface area within the SFHA, or*
- 2. Use low impact development or green infrastructure to infiltrate and treat stormwater produced by the new impervious surface, as documented by a qualified professional, or*
- 3. If prior methods are not feasible and documented by a qualified professional stormwater retention is required to ensure no increase in peak volume or flow and to maximize infiltration, and treatment is required to minimize pollutant loading. See Section 7.113.11.G for stormwater retention specifications.*

F. Trees.

Development proposals shall result in no net loss of trees 6-inches dbh or greater within the special flood hazard area. This requirement does not apply to silviculture where there is no development.

- 1. Trees of or exceeding 6-inches dbh that are removed from the RBZ, Floodway, or RBZ-fringe must be replaced at the ratios in Table 1.*
- 2. Replacement trees must be native species that would occur naturally in the Level III ecoregion of the impact area.*

G. Stormwater Management.

Any development proposal that cannot mitigate as specified in Section 7.113.11.E.1. and 2. must include the following:

- 1. Water quality (pollution reduction) treatment for post-construction stormwater runoff from any net increase in impervious area; and*

2. *Retention facilities that must:*
 - a. *Limit discharge to match the pre-development peak discharge rate (i.e., the discharge rate of the site based on its natural groundcover and grade before any development occurred) for the 10-year peak flow using a continuous simulation for flows between 50 percent of the 2-year event and the 10-year flow event (annual series).*
 - b. *Treat stormwater to remove sediment and pollutants from impervious surfaces such that at least 80 percent of the suspended solids are removed from the stormwater prior to discharging to the receiving water body.*
 - c. *Be designed to not entrap fish and drain to the source of flooding.*
 - d. *Be certified by a qualified professional.*
3. *Stormwater treatment practices for multi-parcel facilities, including subdivisions, shall have an enforceable operation and maintenance agreement to ensure the system functions as designed. This agreement will include:*
 - a. *Access to stormwater treatment facilities at the site by the City of Dayton for the purpose of inspection and repair.*
 - b. *A legally binding document specifying the parties responsible for the proper maintenance of the stormwater treatment facilities. The agreement will be recorded and bind subsequent purchasers and sellers even if they were not party to the original agreement.*
 - c. *For stormwater controls that include vegetation and/or soil permeability, the operation and maintenance manual must include maintenance of these elements to maintain the functionality of the feature.*
 - d. *The responsible party for the operation and maintenance of the stormwater facility shall have the operation and maintenance manual on site and available at all times. Records of the maintenance and repairs shall be retained and made available for inspection by the City of Dayton for five years.*

H. *Activities Exempt from No Net Loss Standards.*

The following activities are not subject to the no net loss standards in Section 7.113.11.A; however, they may not be exempt from floodplain development permit requirements.

1. *Normal maintenance of structures, such as re-roofing and replacing siding, provided there is no change in the footprint or expansion of the roof of the structure;*
2. *Normal street, sidewalk, and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, that does not alter contours, use, or alter culverts. Activities exempt do not include expansion of paved areas;*
3. *Routine maintenance of landscaping that does not involve grading, excavation, or filling;*
4. *Routine agricultural practices such as tilling, plowing, harvesting, soil amendments, and ditch cleaning that does not alter the ditch configuration provided the spoils are removed from special flood hazard area or tilled into fields as a soil amendment;*
5. *Routine silviculture practices that do not meet the definition of development, including harvesting of trees as long as root balls are left in place and forest road construction or maintenance that does not alter contours, use, or alter culverts;*

6. Removal of noxious weeds and hazard trees, and replacement of non-native vegetation with native vegetation;
7. Normal maintenance of above ground utilities and facilities, such as replacing downed power lines and utility poles provided there is no net change in footprint;
8. Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility. Normal maintenance does not include repair from flood damage, expansion of the prism, expansion of the face or toe or addition of protection on the face or toe with rock armor.
9. Habitat restoration activities.

I. Riparian Buffer Zone (RBZ)

1. The Riparian Buffer Zone is measured from the ordinary high-water line of a fresh waterbody (lake; pond; ephemeral, intermittent, or perennial stream) or mean higher-high water of a marine shoreline or tidally influenced river reach to 70 feet horizontally on each side of the stream or inland of the MHHW. The riparian buffer zone includes the area between these outer boundaries on each side of the stream, including the stream channel.
2. Habitat restoration activities in the RBZ are considered self-mitigating and are not subject to the no net loss standards described above.
3. Functionally dependent uses are only subject to the no net loss standards for development in the RBZ. Ancillary features that are associated with but do not directly impact the functionally dependent use in the RBZ (including manufacturing support facilities and restrooms) are subject to the beneficial gain standard in addition to no net loss standards.
4. Any other use of the RBZ requires a greater offset to achieve no net loss of floodplain functions, on top of the no net loss standards described above, through the beneficial gain standard.
5. Under FEMA’s beneficial gain standard, an area within the same reach of the project and equivalent to 5% of the total project area within the RBZ shall be planted with native herbaceous and shrub vegetation and designated as open space.

Table 1 No Net Loss Standards

Basic Mitigate Ratios	Undeveloped Space (ft ³)	Impervious Surface (ft ²)	Trees (6”<dbh≤20”)	Trees (20”<dbh≤39”)	Trees (39”<dbh)
RBZ and Floodway	2:1*	1:1	3:1*	5:1	6:1
RBZ - Fringe	1.5:1*	1:1	2:1*	4:1	5:1
Mitigation multipliers					
Mitigation onsite to Mitigation offsite, same reach	100%	100%	100%	100%	100%

Mitigation onsite to Mitigation offsite, different reach, same watershed (5th field)	200% *	200% *	200% *	200%	200%
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Notes (table above):

1. Ratios with asterisks are indicated in the BiOp
2. Mitigation multipliers of 100% result in the required mitigation occurring at the same value described by the ratios above, while multipliers of 200% result in the required mitigation being doubled.
 - a. For example, if only 500 square feet of the total 1000 square feet of required pervious surface mitigation can be conducted onsite and in the same reach, the remaining 500 square feet of required pervious surface mitigation occurring offsite at a different reach would double because of the 200% multiplier.
3. RBZ impacts must be offset in the RBZ, on-site or off-site.
4. Additional standards may apply in the RBZ (See Riparian Buffer Zone)



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TO: City Managers/City Recorders

FROM: Jim Jacks, Community Development Department, MWVCOG

SUBJ: Early Implementation of the “Oregon Implementation Plan for NFIP – ESA Integration”

DATE: September 12, 2024

The purpose of this memo is to present basic information about the July 2024 FEMA Region 10’s (R10) letter to 231 cities and 13 counties in Oregon announcing the early implementation of the “Oregon Implementation Plan for NFIP – ESA Integration.” (See pages 2 and 3 for the history and background information.)

The July announcement indicated that no later than December 1, 2024, local governments must:

1. Select which Pre-Implementation Compliance Measure (PICM) they intend to adopt,
2. Notify R10 of their selection and
3. Amend their floodplain overlay district and begin implementing their selection.

If a jurisdiction does not make a selection and notify R10 by December 1, the jurisdiction defaults to the permit-by-permit PICM.

Prior to the July 2024 announcement of the pre-implementation program, the deadline to select an option and notify R10 was December 1, 2024, and the deadline to amend the local floodplain overlay district and begin implementation was no later than July 2025.

R10 developed three pre-implementation compliance measures (PICM) based on the reasonable and prudent alternatives (RPA) in the 2016 Biological Opinion (BiOp). An affected local government would adopt their selected PICM to comply with the Endangered Species Act (ESA) requirements in the interim period while the “Oregon Implementation Plan for NFIP – ESA Integration” is being reviewed under the National Environmental Policy Act (NEPA)(to be completed in late 2025) which would be followed by its full implementation by R10 in 2027.

There are three pre-implementation compliance measures (PICM). They are:

1. Adopt R10’s Model Code which is coordinated with DLCD’s Floodplain Model Code and is available on the R10 website (see link below). It includes performance standards, e.g., a 170 foot riparian buffer zone on each side of a creek, stream or river, and mitigation ratios to achieve a “no net loss” standard. The phrase “no net loss” means any development action resulting in negative impacts to one or more key floodplain functions that are then mitigated or avoided to offset said impacts.

2. Adopt a habitat assessment and mitigation plan for development on a permit-by-permit basis to address the potential impacts to species and habitat. The R10 Habitat Assessment and Mitigation Guide is available on the R10 website. Applicants must show, and the local jurisdiction's approval of a Floodplain Development Permit would confirm, the development would achieve "no net loss."
3. Adopt a prohibition of new development in the Special Flood Hazard Area (100-year floodplain).

It would appear a local government could adopt a hybrid of two or three of the PICM pathways, but would need to work closely with R10 to ensure the hybrid approach complies with the BiOp and the "Oregon Implementation Plan for NFIP – ESA Integration."

The R10 website with the Model Code, Habitat Assessment and Mitigation Guide and other items is: <https://www.fema.gov/about/organization/region-10/oregon/nfip-esa-integration>.

It is not the purpose of this memo to describe and analyze the 3 PICMs, especially PICMs 1 and 2. It would be prudent for a local government to better understand the PICMs before making their selection. R10 plans to present up to 10 zoom workshops covering the 3 PICMs in September and likely extending into October.

Most cities might not select PICM 3. R10 described it as an option whose applicability would likely be where the 100-year floodplain within an incorporated city is small and where a local government owns all, or virtually all, of the 100-year floodplain area.

History and Background.

The following explains that the 1973 Endangered Species Act (ESA) is (1) the basis for the intertie with the National Flood Insurance Program (NFIP) requiring "consultation" between FEMA and the National Oceanic and Atmospheric Administration, (2) the 2016 Biological Opinion (BiOp) concluding changes are needed by FEMA and local governments to better protect listed species, (3) R10 creating the 2021 draft "Oregon Implementation Plan for NFIP – ESA Integration" explaining how Oregon's local governments can address the BiOp, (4) R10 creating the original implementation schedule, and (5) R10 creating the early implementation schedule.

The 1973 Endangered Species Act (ESA) provides a framework to conserve and protect endangered and threatened species and their habitats. Federal agencies, i.e., FEMA which administers the 1968 National Flood Insurance Program (NFIP), must "consult" with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS – "nimfs") to consider whether the NFIP provisions, which allow development in floodplains, affect protected threatened or endangered species or adversely modifies the habitat of such species.

After successfully challenging FEMA's failure to consult in several States, in 2009 R10 was successfully sued regarding its failure to consult regarding the NFIP in Oregon. In 2016, consistent with the ESA consultation process, NMFS issued a 410-page Biological Opinion (BiOp). It concluded the implementation of the NFIP in Oregon jeopardizes 16 anadromous fish species and the Southern Resident Killer Whale which are listed as threatened or endangered. The BiOp included Reasonable and Prudent Alternatives (RPA) that identified changes needed to protect species and habitat in accordance with the ESA.

R10 must make changes and ensure NFIP participating communities adopt measures to avoid jeopardy and/or adverse modification and meet a standard of “no net loss” for habitat functions.

The affected 231 cities and 31 counties in Oregon are those where local water bodies drain to the Pacific Ocean, and are participating in the NFIP (a Flood Insurance Rate Map shows a Special Flood Hazard Area within the city limits) by adopting a floodplain overlay district and implementing it.

In 2021 R10 issued a 101-page draft “Oregon Implementation Plan for NFIP – ESA Integration.” It outlines the actions R10 will take and local governments must implement to ensure the local NFIP implementation is consistent with the BiOp and the “Oregon Implementation Plan for NFIP – ESA Integration.”

Other deadlines are:

January 31, 2025, local governments must set-up a reporting system which will be provided by R10 and start collecting data regarding new development in the 100-year floodplain.

Summer, 2025, the NEPA Environmental Impact Statement process will end with issuance of a Record of Decision.

January 2026 local governments begin reporting the collected data to R10.

Late in 2026 R10 will finalize and issue the Oregon NFIP-ESA Implementation Plan.

2027 R10 will fully implement the Oregon NFIP-ESA Implementation Plan.



NFIP Oregon Implementation Program Guidance

Model Floodplain Management Ordinance

For Participating Communities in the
Implementation Plan Area



FEMA

Federal Emergency Management Agency
Region 10
Department of Homeland Security
130 - 228th Street SW
Bothell, WA 98021

Note to Communities: This document presents the draft model ordinance that for the Pre-Implementation Compliance Measures and is intended to closely represent most of the language that will be presented as Pathway A of the Draft Implementation Plan. It is built off the 2020 State of Oregon Model Flood Hazard Management Ordinance and the 2018 iteration of the Oregon Model ordinance for ESA Integration. It reflects the NMFS 2016 Biological Opinion (BiOp) (except where noted) and is informed by the 2023 NEPA Scoping effort.

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Acronyms and Abbreviations

BiOp	Biological Opinion
CFR	Code of Federal Regulations
CLOMR	Conditional Letter of Map Revision
CRS	Community Rating System
dbh	diameter breast height
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
LID	Low-Impact Development
LOMR	Letter of Map Revision
MHHW	Marine Higher-High Water line
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
OHW	Ordinary High Water Mark
ORS	Oregon Revised Statutes
ORSC	Oregon Residential Specialty Code
OSSC	Oregon Structural Specialty Code
RBZ	Riparian buffer zone
SFHA	Special Flood Hazard Area
TB	Technical Bulletin

SECTION 1. Introduction

FEMA has developed this model flood hazard management ordinance (“2024 model ordinance”) to address the requirements outlined in the Draft Implementation Plan for National Flood Insurance Program (NFIP)-Endangered Species Act (ESA) Integration in Oregon (“Oregon Implementation Plan”). The Federal Emergency Management Agency (FEMA) consulted with the National Marine Fisheries Service (NMFS) on potential effects of the implementation of the NFIP in Oregon on listed species under NMFS authority. In 2016, NMFS issued a Biological Opinion (BiOp), which recommended changes to the implementation of the NFIP in Oregon within the plan area (see the 2024 Draft Oregon Implementation Plan for NFIP-ESA Integration [2024 Draft Implementation Plan] for a description of the plan area).

As a result of the BiOp issued by NMFS, communities are required to demonstrate how floodplain development is compliant with the Endangered Species Act in the SFHA while the 2024 Draft Implementation Plan undergoes an Environmental Impact Statement (EIS). The 2024 model ordinance provides the tools a community would need to implement “Path A” of the 2024 Draft Implementation Plan and serves as one of three actions a community can take under Pre-Implementation Compliance Measures (PICM).

The regulatory language contained within the 2024 model ordinance can be adopted verbatim and incorporated into local floodplain and land use regulations, or a community may select those sections that are missing from its current floodplain ordinance and adopt those sections. The State of Oregon’s Model Flood Hazard Management Ordinance (2020) was used as a starting point, with additions to provide compliance with the Oregon Implementation Plan. The additional sections are clearly noted with yellow highlighting to simplify implementation for Oregon communities in the plan area that have already adopted the Oregon Model Flood Hazard Management Ordinance (2020).

This 2024 model ordinance provides a set of provisions to protect the built environment from flood damage and to minimize potential impacts of construction and reconstruction on public health and safety, property, water quality, and aquatic and riparian habitats. The requirements pertain to new development in Special Flood Hazard Area (see definitions), which includes the maintenance, repair, or remodel of existing structures and utilities when the existing footprint is expanded and/or the floodplain is further encroached upon.

The Oregon Implementation Plan and this model ordinance do not change the definition of development in 44 Code of Federal Regulations [CFR] 59.1.

“Development” is defined as “any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.” (44 C.F.R. 59.1)

The 2024 model ordinance provides compliance with federal and state statutes and with the Oregon Implementation Plan. The 2024 model ordinance conforms to the following:

- 37 1. The requirements of the NFIP, as specified in 44 CFR 59 and 60.
- 38 2. Oregon State codes to protect structures from flood damage that are specified in Oregon
39 Structural Specialty Code (OSSC), Section 1612 and Oregon Residential Specialty Code
40 (ORSC), Section R322.
- 41 3. Oregon Statewide Land Use Planning Goals
- 42 4. Provisions needed to meet the requirements of the Oregon Implementation Plan for NFIP-ESA
43 Integration. These sections are highlighted in yellow in the model ordinance.

44 This 2024 model ordinance provides communities with ordinance language that complies with the
45 NFIP-ESA Integration Implementation Plan. Adoption of the ordinance language will ensure
46 compliance with the minimum standards for participation in the NFIP in the plan area in Oregon.
47 Prior to adoption of the ordinance language, communities must have their locally proposed draft
48 language reviewed by FEMA and/or the Oregon Department of Land Conservation and Development.

49 The model flood hazard ordinance includes standards and provisions that encourage sound
50 floodplain management. The language is based on the minimum requirements of the NFIP found in
51 44 CFR 59 and 60, Oregon's statewide land use planning Goal 7, and Oregon specialty codes. The
52 new language added to the state model floodplain ordinance, highlighted in yellow, provides
53 compliance with the ESA for floodplain development in the plan area.

54 Adherent to the NMFS 2016 Biological Opinion, mitigation is necessary to ensure a no net loss in
55 floodplain functions. FEMA's 2024 Draft Oregon Implementation Plan identifies proxies that provide
56 measurable actions that can prevent the no net loss of the parent floodplain functions. These
57 proxies include undeveloped space, pervious surfaces, and trees to account for a no net loss in
58 respective floodplain functions of floodplain storage, water quality, and vegetation. Mitigation of
59 these proxies must be completed to ensure compliance with no net loss standards. No net loss
60 applies to the net change in floodplain functions as compared to existing conditions at the time of
61 proposed development and mitigation must be addressed to the floodplain function that is receiving
62 the detrimental impact.

63 **1.1. How to Use this Document**

64 This 2024 model ordinance includes a Table of Contents and a Regulatory Crosswalk that identifies
65 the federal and state standards that align to and are reflected in each section. Communities will
66 need to review their ordinances and ensure that all the required components are included.

67 Please refer to [FEMA's website](#) for information on how to determine whether or not your community
68 is within the plan area.

69 1.1.1. ORDINANCE LANGUAGE LEGEND:

70 The colors are used in the text in the model ordinance to denote specific actions or sections with
71 specific applicability.

- 72 • Black: Represents the existing NFIP and current state minimum requirements that are found
73 in the 2020 Oregon Model Flood Hazard Management Ordinance.
- 74 • Red: Represents language that must be replaced with community specific information. Only
75 include the appropriate language for your community.
- 76 • Purple: Represents language required for communities with Coastal High Hazard Areas
77 mapped by FEMA (V Zones or Coastal A Zones). (DELETE ALL PURPLE LANGUAGE IF NOT A
78 COASTAL COMMUNITY).
- 79 • Blue: Represents hyperlinks to other sections of the document or external websites.
- 80 • Yellow highlighting: Represents new ordinance language not in the 2020 Oregon Model Flood
81 Hazard Management Ordinance. Communities that have previously adopted the state model
82 ordinance may focus on the yellow highlighted sections.

83 1.2. Changes from the 2020 Oregon Model Flood Hazard Management 84 Ordinance

85 This 2024 version of the Oregon Model Flood Hazard Ordinance (to be referred to herein as the
86 “2024 Model Ordinance”), varies from the 2020 Oregon Model Flood Hazard Management
87 Ordinance. with the addition of new content to be included for ESA compliance for NFIP-participating
88 communities in the plan area. If no part of the Special Flood Hazard Area (SFHA) in your NFIP-
89 participating community is in the Oregon NFIP-ESA Integration plan area, your community may
90 continue to use the 2020 Oregon Model Flood Hazard Management Ordinance.

91 In general, the ordinance was revised to ensure that the implementation of the NFIP-ESA integration
92 no net loss standards avoids or offsets adverse impacts on threatened and endangered species and
93 their critical habitat. A summary of the primary changes found in the 2024 model ordinance is
94 provided below:

- 95 1. New language has been added to incorporate the following no net loss standards:
 - 96 a. No net loss of undeveloped space (see Section 6.1.1).
 - 97 b. No net loss of pervious surface. (see Section 6.1.2).
 - 98 c. No net loss of trees equal to or greater than 6 inches dbh (i.e., tree diameter
99 measured at 4.5 feet from the ground surface). (see Section 6.1.3).

- 100 2. Some definitions (see 2.0) have been added to provide context for the new no net loss
101 standards from the Oregon Implementation Plan.

- 102 3. Language has been added:
 - 103 a. (see 6.3) to address activities that may require a floodplain development permit but
104 are exempt from the no net loss requirement per the BiOp.

 - 105 b. (see 6.4) to address the specific requirements of the Riparian Buffer Zone (RBZ).

- 106 4. In general, the language in the 2024 model ordinance mirrors the language from the 2020
107 Oregon Model Flood Hazard Management Ordinance. Minor edits to the 2020 language have
108 been made for clarity, punctuation, and grammar.

109 1.3. Community Rating System

110 Implementation of the new no net loss standards related to NFIP-ESA integration may be eligible for
111 credit under the Community Rating System (CRS). The CRS is explained further in CRS Credit for
112 Habitat Protection, available online at: [https://crsresources.org/files/guides/crs-credit-for-habitat-
113 protection.pdf](https://crsresources.org/files/guides/crs-credit-for-habitat-protection.pdf), and the 2017 CRS Coordinators' Manual, available online at:
114 [https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinators-
115 manual_2017.pdf](https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinators-manual_2017.pdf), and the 2021 Addendum to the 2017 CRS Coordinator's Manual, available
116 online at: [https://www.fema.gov/sites/default/files/documents/fema_community-rating-
117 system_coordinator-manual_addendum-2021.pdf](https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinator-manual_addendum-2021.pdf). The Association of State Floodplain Managers'
118 Green Guide, also provides useful information on development techniques that avoid impacts on
119 natural functions and values of floodplains. This document is available at:
120 www.floodsciencecenter.org/products/crs-community-resilience/green-guide/. Communities
121 interested in CRS credits should contact their CRS specialist for additional information and review.

122 Implementation of the no net loss standards would most likely contribute to credits under the
123 following CRS activities:

- 124 • Activity 430 Higher Regulatory Standards
 - 125 ○ Development Limitations
 - 126 ■ Prohibition of all fill (DL1a): This credit is for prohibiting all filling in the regulatory
127 floodplain. To meet this standard, communities may NOT approve Conditional
128 Letters or Letters of Map Revision based on Fill (CLOMR-F or LOMR-F). If a
129 CLOMR-F or LOMR-F is issued for a property in a community, then DL1 credit will
130 be denied. This applies to CLOMRs and LOMRs that include filling as part of the
131 reason for requesting a map change. Minor filling may be allowed where needed
132 to protect or restore natural floodplain functions, such as part of a channel
133 restoration project.

- 134 ▪ The CRS manual describes a number of regulatory approaches that do not
135 warrant credit under DL1; however, because the Oregon NFIP-ESA integration no
136 net loss standards exceed the approaches described in the manual, a community
137 meeting the Oregon no net loss standards should qualify for credit under DL1.

- 138 ▪ Compensatory storage (DL1b): This credit is for regulations that require new
139 development to provide compensatory storage at hydraulically equivalent sites up
140 to a ratio of 1.5:1. Credit is not provided for:
 - 141 • Compensatory storage requirements in floodways only or in V Zones only,
142 or
 - 143 • Stormwater management regulations that require a developer to
144 compensate for any increase in runoff created by the development. This
145 is credited under Activity 450.

- 146 • Activity 450 Stormwater Management
 - 147 ○ Stormwater management regulations (SMR – 452a): This credit is the sum of four
148 sub-elements: Size of development (Section 452.a(1), SZ); design storm used (Section
149 452.a(2), DS); low-impact development (LID) regulations (Section 452.a(3), LID); and
150 public agency authority to inspect and maintain, at the owner’s expense, private
151 facilities constructed to comply with the ordinance (Section 452.a.(4), PUB).

 - 152 ▪ LID credits the community’s regulatory language that requires the
153 implementation of LID techniques to the maximum extent feasible to control
154 peak runoff when new development occurs. LID techniques can significantly
155 reduce or eliminate the increase in stormwater runoff created by traditional
156 development, encourage aquifer recharge, and promote better water quality.

- 157

- 158

SECTION 2. Regulatory Crosswalk

1
 2 The following table presents a crosswalk of the model ordinance sections against the relevant
 3 federal and state laws, regulations, and policies. The new sections related to the Oregon NFIP-ESA
 4 integration implementation (yellow highlighted sections of the model ordinance) are not listed in this
 5 table and are related to compliance with the ESA.

Ordinance Section	44 CFR and Technical Bulletin (TB) Citation(s)	State of Oregon Citation(s) (Goal 7, Specialty Codes*, Oregon Revised Statutes [ORS])
1.1 Statutory Authorization	59.22(a)(2)	Goal 7; ORS 203.035 (Counties), ORS 197.175 (Cities)
1.2 Findings of Fact	59.22(a)(1)	Goal 7
1.3 Statement of Purpose	59.2; 59.22(a)(1) and (8); 60.22	Goal 7
1.4 Methods of Reducing Flood Losses	60.22	Goal 7
2.0 Definitions	59.1; 33 CFR 328.3(c)(7)	Goal 7
3.1 Lands to Which this Ordinance Applies	59.22(a)	Goal 7
3.2 Basis for Establishing the Special Flood Hazard Areas	59.22(a)(6); 60.2(h)	Goal 7
3.3 Coordination with Specialty Codes Adopted by the State of Oregon Building Codes Division		ORS 455
3.4.1 Compliance	60.1(b) – (d)	Goal 7
3.4.2 Penalties for Noncompliance	60.1(b) – (d)	Goal 7
3.5.1 Abrogation	60.1(b) – (d)	Goal 7
3.5.2 Severability		
3.6 Interpretation	60.1(b) – (d)	Goal 7
3.7.1 Warning		
3.7.2 Disclaimer of Liability		
4.1 Designation of the Floodplain Administrator	59.22(b)(1)	Goal 7
4.2.1 Permit Review	60.3(a)(1) – (3); 60.3(c)(10)	Goal 7
4.2.2 Information to be Obtained and Maintained	59.22(a)(9)(iii); 60.3(b)(5)(i) and (iii); 60.3(c)(4); 60.3(b)(3); 60.6(a)(6)	Goal 7; 105.9; 110.33; R106.1.4; R109.1.3; R109.1.6.1; R322.1.10; R322.3.6

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Ordinance Section	44 CFR and Technical Bulletin (TB) Citation(s)	State of Oregon Citation(s) (Goal 7, Specialty Codes*, Oregon Revised Statutes [ORS])
4.2.3.1 Community Boundary Alterations	59.22(a)(9)(v)	Goal 7
4.2.3.2 Watercourse Alterations	60.3(b)(6) – (7), 65.6(12-13)	Goal 7
4.2.3.3 Requirement to Submit New Technical Data	65.3, 65.6, 65.7, 65.12	Goal 7
4.2.4 Substantial Improvement and Substantial Damage Assessments and Determinations	59.1; 60.3(a)(3); 60.3(b)(2); 60.3(b)(5)(i); 60.3(c)(1), (2), (3), (5) – (8), (10), (12); 60.3(d)(3); 60.3(e)(4), (5), (8)	Goal 7
4.3.1 Floodplain Development Permit Required	60.3(a)(1)	Goal 7
4.3.2 Application for Development Permit	60.3(a)(1); 60.3(b)(3); 60.3(c)(4)	Goal 7; Oregon Residential Specialty Code (R) 106.1.4; R322.3.6
4.4 Variance Procedure	60.6(a)	Goal 7
4.4.1 Conditions for Variances	60.6(a)	Goal 7
4.4.2 Variance Notification	60.6(a)(5)	Goal 7
5.1.1 Alteration of Watercourses	60.3(b)(6) and (7)	Goal 7
5.1.2 Anchoring	60.3(a)(3); 60.3(b)(1), (2), and (8)	Goal 7; R322.1.2
5.1.3 Construction Materials and Methods	60.3(a)(3), TB 2; TB 11	Goal 7; R322.1.3; R322.1.3
5.1.4.1 Water Supply, Sanitary Sewer, and On-Site Waste Disposal Systems	60.3(a)(5) and (6)	Goal 7; R322.1.7
5.1.4.2 Electrical, Mechanical, Plumbing, and Other Equipment	60.3(a)(3)	Goal 7; R322.1.6;
5.1.5 Tanks		R322.2.4; R322.3.7
5.1.6 Subdivision Proposals	60.3(a)(4)(i) – (iii); 60.3(b)(3)	Goal 7
5.1.7 Use of Other Base Flood Data	60.3(a)(3); 60.3(b)(4); 60.3(b)(3); TB 10-01	Goal 7; R322.3.2
5.1.8 Structures Located in Multiple or Partial Flood Zones		R322.1
5.2.1 Flood Openings	60.3(c)(5); TB 1; TB 11	Goal 7; R322.2.2;

Regulatory Crosswalk

Ordinance Section	44 CFR and Technical Bulletin (TB) Citation(s)	State of Oregon Citation(s) (Goal 7, Specialty Codes*, Oregon Revised Statutes [ORS])
		R322.2.2.1
5.2.2 Garages	TB 7-93	R309
5.2.3.1 Before Regulatory Floodway	60.3(c)(10)	Goal 7
5.2.3.2 Residential Construction	60.3(c)(2)	Goal 7
5.2.3.3 Non-residential Construction	60.3(c)(3) – (5); TB 3	Goal 7; R322.2.2; R322.2.2.1
5.2.3.4 Manufactured Dwellings	60.3(b)(8); 60.3(c)(6)(iv); 60.3(c)(12)(ii)	Goal 7; State of OR Manufactured Dwelling Installation Specialty Code (MDISC) and associated statewide Code Interpretation dated 1/1/2011
5.2.3.5 Recreational Vehicles	60.3(c)(14)(i) – (iii)	Goal 7
5.2.3.6 Appurtenant (Accessory) Structures	60.3(c)(5); TB 1; TB 7-93	Oregon Structural Specialty Code (S) 105.2; R105.2
5.2.4 Floodways	60.3(d); FEMA Region X Fish Enhancement Memo (Mark Riebau)	Goal 7
5.2.5 Standards for Shallow Flooding Areas	60.3(c)(7), (8), (11), and (14)	Goal 7
5.3 Specific Standards for Coastal High Hazard Flood Zones, and 5.3.1 Development Standards	60.3(e); TB 5; TB 8; TB 9	Goal 7; R322.3.1; R322.3.2; R322.3.3; R322.3.4; R322.3.5
5.3.1.1 Manufactured Dwelling Standards for Coastal High Hazard Zones	60.3(e)(8)(i) – (iii)	Goal 7; RR322.3.2; State of OR Manufactured Dwelling Installation Specialty Code (MDISC) and associated statewide Code Interpretation dated 1/1/2011

Regulatory Crosswalk

Ordinance Section	44 CFR and Technical Bulletin (TB) Citation(s)	State of Oregon Citation(s) (Goal 7, Specialty Codes*, Oregon Revised Statutes [ORS])
5.3.1.2 Recreational Vehicle Standards for Coastal High Hazard Zones	60.3(e)(9)(i)- (iii)	Goal 7
5.3.1.3 Tank Standards for Coastal High Hazard Zones		R322.2.4; R322.3.7

*[Link to Oregon Specialty Codes \(https://www.oregon.gov/bcd/codes-stand/Pages/adopted-codes.aspx\)](https://www.oregon.gov/bcd/codes-stand/Pages/adopted-codes.aspx)

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SECTION 3. Model Ordinance Language

1.0 STATUTORY AUTHORITY, FINDINGS OF FACT, PURPOSE, AND METHODS

1.1 STATUTORY AUTHORIZATION

The State of Oregon has in **ORS 203.035 (COUNTIES) OR ORS 197.175 (CITIES)** delegated the responsibility to local governmental units to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry.

Therefore, the **COMMUNITY NAME** does ordain as follows:

1.2 FINDINGS OF FACT

- A. The flood hazard areas of **COMMUNITY NAME** **preserve the natural and beneficial values served by floodplains but** are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- B. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding in special flood hazard areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Preserve natural and beneficial floodplain functions;**
- D. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- E. Minimize prolonged business interruptions;

- 31 F. Minimize damage to public facilities and utilities such as water and gas mains;
32 electric, telephone and sewer lines; and streets and bridges located in special flood
33 hazard areas;
- 34 G. Help maintain a stable tax base by providing for the sound use and development of
35 flood hazard areas so as to minimize blight areas caused by flooding;
- 36 H. Notify potential buyers that the property is in a special flood hazard area;
- 37 I. Notify those who occupy special flood hazard areas that they assume responsibility
38 for their actions;
- 39 J. Participate in and maintain eligibility for flood insurance and disaster relief.

40 **1.4 METHODS OF REDUCING FLOOD LOSSES**

41 In order to accomplish its purposes, this ordinance includes methods and provisions for:

- 42 A. Restricting or prohibiting development which is dangerous to health, safety, and
43 property due to water or erosion hazards, or which result in damaging increases in
44 erosion or in flood heights or velocities;
- 45 B. Requiring that development vulnerable to floods, including facilities which serve such
46 uses, be protected against flood damage at the time of initial construction;
- 47 C. Controlling the alteration of natural floodplains, stream channels, and natural
48 protective barriers, which help accommodate or channel flood waters;
- 49 D. Controlling filling, grading, dredging, and other development which may increase
50 flood damage;
- 51 E. Preventing or regulating the construction of flood barriers which will unnaturally divert
52 flood waters or may increase flood hazards in other areas.
- 53 F. Employing a standard of “no net loss” of natural and beneficial floodplain functions.

54 **2.0 DEFINITIONS**

55 Unless specifically defined below, words or phrases used in this ordinance shall be
56 interpreted so as to give them the meaning they have in common usage.

57 **Appeal:** A request for a review of the interpretation of any provision of this ordinance or a
58 request for a variance.

59 **Area of shallow flooding:** A designated Zone AO, AH, AR/AO or AR/AH on a community’s
60 Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of
61 flooding to an average depth of one to three feet where a clearly defined channel

62 does not exist, where the path of flooding is unpredictable, and where velocity
63 flow may be evident. Such flooding is characterized by ponding or sheet flow.

64 **Area of special flood hazard:** The land in the floodplain within a community subject to a 1
65 percent or greater chance of flooding in any given year. It is shown on the Flood
66 Insurance Rate Map (FIRM) as Zone A, AO, AH, A1-30, AE, A99, AR (V, V1-30, VE).
67 “Special flood hazard area” is synonymous in meaning and definition with the
68 phrase “area of special flood hazard.”

69 **Base flood:** The flood having a one percent chance of being equaled or exceeded in any
70 given year.

71 **Base flood elevation (BFE):** The elevation to which floodwater is anticipated to rise during
72 the base flood.

73 **Basement:** Any area of the building having its floor subgrade (below ground level) on all
74 sides.

75 **Breakaway wall:** A wall that is not part of the structural support of the building and is
76 intended through its design and construction to collapse under specific lateral
77 loading forces, without causing damage to the elevated portion of the building or
78 supporting foundation system.

79 **Coastal high hazard area:** An area of special flood hazard extending from offshore to the
80 inland limit of a primary frontal dune along an open coast and any other area
81 subject to high velocity wave action from storms or seismic sources.

82 **Development:** Any man-made change to improved or unimproved real estate, including
83 but not limited to buildings or other structures, mining, dredging, filling, grading,
84 paving, excavation or drilling operations or storage of equipment or materials.

85 **Fill:** Placement of any materials such as soil, gravel, crushed stone, or other materials
86 that change the elevation of the floodplain. The placement of fill is considered
87 “development.”

88 **Fish Accessible Space:** The volumetric space available to fish to access.

89 **Fish Egress-able Space:** The volumetric space available to fish to exit or leave from.

90 **Flood or Flooding:**

91 (a) A general and temporary condition of partial or complete inundation of normally
92 dry land areas from:

93 (1) The overflow of inland or tidal waters.

94 (2) The unusual and rapid accumulation or runoff of surface waters from any
95 source.

96 (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as
97 defined in paragraph (a)(2) of this definition and are akin to a river of liquid
98 and flowing mud on the surfaces of normally dry land areas, as when earth is
99 carried by a current of water and deposited along the path of the current.

100 (b) The collapse or subsidence of land along the shore of a lake or other body of
101 water as a result of erosion or undermining caused by waves or currents of water
102 exceeding anticipated cyclical levels or suddenly caused by an unusually high
103 water level in a natural body of water, accompanied by a severe storm, or by an
104 unanticipated force of nature, such as flash flood or an abnormal tidal surge, or
105 by some similarly unusual and unforeseeable event which results in flooding as
106 defined in paragraph (a)(1) of this definition.

107 **Flood elevation study:** an examination, evaluation and determination of flood hazards
108 and, if appropriate, corresponding water surface elevations, or an examination,
109 evaluation and determination of mudslide (i.e., mudflow) and/or flood-related
110 erosion hazards.

111 **Flood Insurance Rate Map (FIRM):** The official map of a community, on which the Federal
112 Insurance Administrator has delineated both the special hazard areas and the
113 risk premium zones applicable to the community. A FIRM that has been made
114 available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

115 **Flood Insurance Study (FIS):** See "Flood elevation study."

116 **Floodway:** The channel of a river or other watercourse and the adjacent land areas that
117 must be reserved in order to discharge the base flood without cumulatively
118 increasing the water surface elevation more than a designated height. Also
119 referred to as "Regulatory Floodway."

120 **Functionally Dependent Use:** A use which cannot perform its intended purpose unless it
121 is located or carried out in proximity to water. The term includes only docking
122 facilities, port facilities that are necessary for the loading and unloading of cargo
123 or passengers, and ship building and ship repair facilities, but does not include
124 long-term storage or related manufacturing facilities.

125 **Green Infrastructure:** Use of natural or human-made hydrologic features to manage
126 water and provide environmental and community benefits. Green infrastructure
127 uses management approaches and technologies that use, enhance, and/or
128 mimic the natural hydrologic cycle processes of infiltration, evapotranspiration,
129 and reuse. At a large scale, it is an interconnected network of green space that
130 conserves natural systems and provides assorted benefits to human populations.
131 At a local scale, it manages stormwater by infiltrating it into the ground where it is
132 generated using vegetation or porous surfaces, or by capturing it for later reuse.
133 Green infrastructure practices can be used to achieve no net loss of pervious
134 surface by creating infiltration of stormwater in an amount equal to or greater
135 than the infiltration lost by the placement of new impervious surface.

136 **Habitat Restoration Activities:** Activities with the sole purpose of restoring habitats that
137 have only temporary impacts and long-term benefits to habitat. Such projects
138 cannot include ancillary structures such as a storage shed for maintenance
139 equipment, must demonstrate that no rise in the BFE would occur as a result of
140 the project and obtain a CLOMR and LOMR, and have obtained any other
141 required permits (e.g., CWA Section 404 permit).

142 **Hazard Trees:** Standing dead, dying, or diseased trees or ones with a structural defect
143 that makes it likely to fail in whole or in part and that present a potential hazard
144 to a structure or as defined by the community.

145 **Highest adjacent grade:** The highest natural elevation of the ground surface prior to
146 construction next to the proposed walls of a structure.

147 **Historic structure:** Any structure that is:

148 (a) Listed individually in the National Register of Historic Places (a listing maintained
149 by the Department of Interior) or preliminarily determined by the Secretary of the
150 Interior as meeting the requirements for individual listing on the National
151 Register;

152 (b) Certified or preliminarily determined by the Secretary of the Interior as
153 contributing to the historical significance of a registered historic district or a
154 district preliminarily determined by the Secretary to qualify as a registered
155 historic district;

156 (c) Individually listed on a state inventory of historic places in states with historic
157 preservation programs which have been approved by the Secretary of Interior; or

158 (d) Individually listed on a local inventory of historic places in communities with
159 historic preservation programs that have been certified either:

160 (1) By an approved state program as determined by the Secretary of the Interior
161 or

162 (2) Directly by the Secretary of the Interior in states without approved programs.

163 **Hydraulically Equivalent Elevation:** A location (e.g., a site where no net loss standards are
164 implemented) that is approximately equivalent to another (e.g., the impacted
165 site) relative to the same 100-year water surface elevation contour or base flood
166 elevation. This may be estimated based on a point that is along the same
167 approximate line perpendicular to the direction of flow.

168 **Hydrologically Connected:** The interconnection of groundwater and surface water such
169 that they constitute one water supply and use of either results in an impact to
170 both.

171 **Impervious Surface:** A surface that cannot be penetrated by water and thereby prevents
172 infiltration and increases the amount and rate of surface water runoff, leading to
173 erosion of stream banks, degradation of habitat, and increased sediment loads
174 in streams. Such surfaces can accumulate large amounts of pollutants that are
175 then “flushed” into local water bodies during storms and can also interfere with
176 recharge of groundwater and the base flows to water bodies.

177 **Low Impact Development:** An approach to land development (or redevelopment) that
178 works with nature to manage stormwater as close to its source as possible. It
179 employs principles such as preserving and recreating natural landscape features
180 and minimizing effective imperviousness to create functional and appealing site
181 drainage that treats stormwater as a resource rather than a waste product. Low
182 Impact Development refers to designing and implementing practices that can be
183 employed at the site level to control stormwater and help replicate the
184 predevelopment hydrology of the site. Low impact development helps achieve no
185 net loss of pervious surface by infiltrating stormwater in an amount equal to or
186 greater than the infiltration lost by the placement of new impervious surface. LID
187 is a subset of green infrastructure.

188 **Lowest floor:** The lowest floor of the lowest enclosed area (including basement). An
189 unfinished or flood resistant enclosure, usable solely for parking of vehicles,
190 building access or storage in an area other than a basement area is not
191 considered a building’s lowest floor, provided that such enclosure is not built so
192 as to render the structure in violation of the applicable non-elevation design
193 requirements of this ordinance.

194 **Manufactured dwelling:** A structure, transportable in one or more sections, which is built
195 on a permanent chassis and is designed for use with or without a permanent
196 foundation when attached to the required utilities. The term "manufactured
197 dwelling" does not include a "recreational vehicle" and is synonymous with
198 “manufactured home.”

199 **Manufactured dwelling park or subdivision:** A parcel (or contiguous parcels) of land
200 divided into two or more manufactured dwelling lots for rent or sale.

201 **Mean Higher-High Water:** The average of the higher-high water height of each tidal day
202 observed over the National Tidal Datum Epoch.

203 **Mean sea level:** For purposes of the National Flood Insurance Program, the National
204 Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood
205 Elevations shown on a community's Flood Insurance Rate Map are referenced.

206 **New construction:** For floodplain management purposes, “new construction” means
207 structures for which the “start of construction” commenced on or after the effective
208 date of a floodplain management regulation adopted by **COMMUNITY NAME** and
209 includes any subsequent improvements to such structures.

210 **No Net Loss:** A standard where adverse impacts must be avoided or offset through
211 adherence to certain requirements so that there is no net change in the function

212 from the existing condition when a development application is submitted to the state,
213 tribal, or local jurisdiction. The floodplain functions of floodplain storage, water
214 quality, and vegetation must be maintained.

215 **Offsite:** Mitigation occurring outside of the project area.

216 **Onsite:** Mitigation occurring within the project area.

217 **Ordinary High Water Mark:** The line on the shore established by the fluctuations of water
218 and indicated by physical characteristics such as a clear, natural line impressed
219 on the bank; shelving; changes in the character of soil; destruction of terrestrial
220 vegetation; the presence of litter and debris; or other appropriate means that
221 consider the characteristics of the surrounding areas.

222 **Qualified Professional:** Appropriate subject matter expert that is defined by the
223 community.

224 **Reach:** A section of a stream or river along which similar hydrologic conditions exist, such
225 as discharge, depth, area, and slope. It can also be the length of a stream or river
226 (with varying conditions) between major tributaries or two stream gages, or a
227 length of river for which the characteristics are well described by readings at a
228 single stream gage.

229 **Recreational vehicle:** A vehicle which is:

- 230 (a) Built on a single chassis;
- 231 (b) 400 square feet or less when measured at the largest horizontal projection;
- 232 (c) Designed to be self-propelled or permanently towable by a light duty truck; and
- 233 (d) Designed primarily not for use as a permanent dwelling but as temporary living
234 quarters for recreational, camping, travel, or seasonal use.

235 **Riparian:** Of, adjacent to, or living on, the bank of a river, lake, pond, or other water body.

236 **Riparian Buffer Zone (RBZ):** The outer boundary of the riparian buffer zone is measured
237 from the ordinary high water line of a fresh waterbody (lake; pond; ephemeral,
238 intermittent, or perennial stream) or mean higher-high water line of a marine
239 shoreline or tidally influenced river reach to 170 feet horizontally on each side of
240 the stream or 170 feet inland from the MHHW. The riparian buffer zone includes
241 the area between these outer boundaries on each side of the stream, including
242 the stream channel. Where the RBZ is larger than the special flood hazard area,
243 the no net loss standards shall only apply to the area within the special flood
244 hazard area.

245 **Riparian Buffer Zone Fringe:** The area outside of the RBZ and floodway but still within the
246 SFHA.

247 **Silviculture:** The art and science of controlling the establishment, growth, composition,
248 health, and quality of forests and woodlands.

249 **Special flood hazard area:** See “Area of special flood hazard” for this definition.

250 **Start of construction:** Includes substantial improvement and means the date the building
251 permit was issued, provided the actual start of construction, repair,
252 reconstruction, rehabilitation, addition, placement, or other improvement was
253 within 180 days from the date of the permit. The actual start means either the
254 first placement of permanent construction of a structure on a site, such as the
255 pouring of slab or footings, the installation of piles, the construction of columns,
256 or any work beyond the stage of excavation; or the placement of a manufactured
257 dwelling on a foundation. Permanent construction does not include land
258 preparation, such as clearing, grading, and filling; nor does it include the
259 installation of streets and/or walkways; nor does it include excavation for a
260 basement, footings, piers, or foundations or the erection of temporary forms; nor
261 does it include the installation on the property of accessory buildings, such as
262 garages or sheds not occupied as dwelling units or not part of the main structure.
263 For a substantial improvement, the actual start of construction means the first
264 alteration of any wall, ceiling, floor, or other structural part of a building, whether
265 or not that alteration affects the external dimensions of the building.

266 **Structure:** For floodplain management purposes, a walled and roofed building, including
267 a gas or liquid storage tank, that is principally above ground, as well as a
268 manufactured dwelling.

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

272 **Substantial improvement:** Any reconstruction, rehabilitation, addition, or other
273 improvement of a structure, the cost of which equals or exceeds 50 percent of
274 the market value of the structure before the "start of construction" of the
275 improvement. This term includes structures which have incurred "substantial
276 damage," regardless of the actual repair work performed. The term does not,
277 however, include either:

278 (a) Any project for improvement of a structure to correct existing violations of state or
279 local health, sanitary, or safety code specifications which have been identified by
280 the local code enforcement official and which are the minimum necessary to
281 assure safe living conditions; or

282 (b) Any alteration of a "historic structure," provided that the alteration will not
283 preclude the structure's continued designation as a "historic structure."

284 **Undeveloped Space:** The volume of flood capacity and fish-accessible/egress-able
285 habitat from the existing ground to the Base Flood Elevation that is undeveloped. Any
286 form of development including, but not limited to, the addition of fill, structures, concrete

287 structures (vaults or tanks), pilings, levees and dikes, or any other development that
288 reduces flood storage volume and fish accessible/egress-able habitat must achieve no
289 net loss.

290 **Variance:** A grant of relief by **COMMUNITY NAME** from the terms of a floodplain
291 management regulation.

292 **Violation:** The failure of a structure or other development to be fully compliant with the
293 community’s floodplain management regulations. A structure or other
294 development without the elevation certificate, other certifications, or other
295 evidence of compliance required in this ordinance is presumed to be in violation
296 until such time as that documentation is provided.

297 **3.0 GENERAL PROVISIONS**

298 **3.1 LANDS TO WHICH THIS ORDINANCE APPLIES**

299 This ordinance shall apply to all special flood hazard areas within the jurisdiction of
300 **COMMUNITY NAME**.

301 **3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS**

302 The special flood hazard areas identified by the Federal Insurance Administrator in a
303 scientific and engineering report entitled “The Flood Insurance Study (FIS) for “**EXACT**
304 **TITLE OF FLOOD INSURANCE STUDY FOR COMMUNITY**”, dated **DATE (MONTH DAY, FOUR**
305 **DIGIT YEAR)**, with accompanying Flood Insurance Rate Maps (FIRMs) **LIST ALL EFFECTIVE**
306 **FIRM PANELS HERE (UNLESS ALL PANELS ARE BEING REPLACED THROUGH A NEW**
307 **COUNTY_WIDE MAP THAT INCORPORATES ALL PREVIOUS PANELS/VERSIONS, IN THAT**
308 **SITUATION PANELS DO NOT NEED TO BE INDIVIDUALLY LISTED)** are hereby adopted by
309 reference and declared to be a part of this ordinance. The FIS and FIRM panels are on
310 file at **INSERT THE LOCATION (I.E. COMMUNITY PLANNING DEPARTMENT LOCATED IN**
311 **THE COMMUNITY ADMINISTRATIVE BUILDING)**.

312 **3.3 COORDINATION WITH STATE OF OREGON SPECIALTY CODES**

313 Pursuant to the requirement established in ORS 455 that the **COMMUNITY NAME**
314 administers and enforces the State of Oregon Specialty Codes, the **COMMUNITY NAME**
315 does hereby acknowledge that the Oregon Specialty Codes contain certain provisions
316 that apply to the design and construction of buildings and structures located in special
317 flood hazard areas. Therefore, this ordinance is intended to be administered and
318 enforced in conjunction with the Oregon Specialty Codes.

319 **3.4 COMPLIANCE AND PENALTIES FOR NONCOMPLIANCE**

320 **3.4.1 COMPLIANCE**

321 All development within special flood hazard areas is subject to the terms of this
322 ordinance and required to comply with its provisions and all other applicable
323 regulations.

324 **3.4.2 PENALTIES FOR NONCOMPLIANCE**

325 No structure or land shall hereafter be constructed, located, extended,
326 converted, or altered without full compliance with the terms of this ordinance and
327 other applicable regulations. Violations of the provisions of this ordinance by
328 failure to comply with any of its requirements (including violations of conditions
329 and safeguards established in connection with conditions) shall constitute a
330 (INFRACTION TYPE (I.E. MISDEMEANOR) AND PENALTIES PER STATE/LOCAL LAW
331 ASSOCIATED WITH SPECIFIED INFRACTION TYPE (I.E. ANY PERSON WHO
332 VIOLATES THE REQUIREMENTS OF THIS ORDINANCE SHALL UPON CONVICTION
333 THEREOF BE FINED NOT MORE THAN A SPECIFIED AMOUNT OF MONEY...)
334 Nothing contained herein shall prevent the COMMUNITY NAME from taking such
335 other lawful action as is necessary to prevent or remedy any violation.

336 **3.5 ABROGATION AND SEVERABILITY**

337 **3.5.1 ABROGATION**

338 This ordinance is not intended to repeal, abrogate, or impair any existing
339 easements, covenants, or deed restrictions. However, where this ordinance and
340 another ordinance, easement, covenant, or deed restriction conflict or overlap,
341 whichever imposes the more stringent restrictions shall prevail.

342 **3.5.2 SEVERABILITY**

343 This ordinance and the various parts thereof are hereby declared to be
344 severable. If any section clause, sentence, or phrase of the Ordinance is held to
345 be invalid or unconstitutional by any court of competent jurisdiction, then said
346 holding shall in no way effect the validity of the remaining portions of this
347 Ordinance.

348 **3.6 INTERPRETATION**

349 In the interpretation and application of this ordinance, all provisions shall be:

- 350 A. Considered as minimum requirements;
- 351 B. Liberally construed in favor of the governing body; and
- 352 C. Deemed neither to limit nor repeal any other powers granted under state statutes.

353 **3.7 WARNING AND DISCLAIMER OF LIABILITY**

354 **3.7.1 WARNING**

355 The degree of flood protection required by this ordinance is considered
356 reasonable for regulatory purposes and is based on scientific and engineering
357 considerations. Larger floods can and will occur on rare occasions. Flood heights
358 may be increased by man-made or natural causes. This ordinance does not imply

359 that land outside the areas of special flood hazards or uses permitted within
360 such areas will be free from flooding or flood damages.

361 **3.7.2 DISCLAIMER OF LIABILITY**

362 This ordinance shall not create liability on the part of the **COMMUNITY NAME**, any
363 officer or employee thereof, or the Federal Insurance Administrator for any flood
364 damages that result from reliance on this ordinance or any administrative
365 decision lawfully made hereunder.

366 **4.0 ADMINISTRATION**

367 **4.1 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR**

368 The **INDIVIDUAL JOB TITLE** is hereby appointed to administer, implement, and enforce
369 this ordinance by granting or denying development permits in accordance with its
370 provisions. The Floodplain Administrator may delegate authority to implement these
371 provisions.

372 [Additional Recommended Language Provided in Appendix B](#)

373 **4.2 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR**

374 Duties of the floodplain administrator, or their designee, shall include, but not be limited
375 to:

376 **4.2.1 PERMIT REVIEW**

377 Review all development permits to:

- 378 A. Determine that the permit requirements of this ordinance have been
379 satisfied;
- 380 B. Determine that all other required local, state, and federal permits have been
381 obtained and approved;
- 382 C. Determine if the proposed development is located in a floodway.
 - 383 i. If located in the floodway assure that the floodway provisions of this
384 ordinance in section **5.2.4** are met; and
 - 385 ii. Determine if the proposed development is located in an area where
386 Base Flood Elevation (BFE) data is available either through the Flood
387 Insurance Study (FIS) or from another authoritative source. If BFE data
388 is not available then ensure compliance with the provisions of sections
389 **5.1.7**; and

426 Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or
427 obtained in accordance with section 5.1.7.

428 G. All floodproofing certificates required under this ordinance.

429 H. All variance actions, including justification for their issuance.

430 I. All hydrologic and hydraulic analyses performed as required under section
431 5.2.4.

432 J. All Substantial Improvement and Substantial Damage calculations and
433 determinations as required under section 4.2.4.

434 K. Documentation of how no net loss standards have been met (see Section
435 6.0)

436 L. All records pertaining to the provisions of this ordinance.

437 **4.2.3 REQUIREMENT TO NOTIFY OTHER ENTITIES AND SUBMIT NEW TECHNICAL**
438 **DATA**

439 **4.2.3.1 COMMUNITY BOUNDARY ALTERATIONS**

440 The Floodplain Administrator shall notify the Federal Insurance Administrator in
441 writing whenever the boundaries of the community have been modified by
442 annexation or the community has otherwise assumed authority or no longer has
443 authority to adopt and enforce floodplain management regulations for a
444 particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and
445 Flood Insurance Rate Maps (FIRM) accurately represent the community's
446 boundaries. Include within such notification a copy of a map of the community
447 suitable for reproduction, clearly delineating the new corporate limits or new
448 area for which the community has assumed or relinquished floodplain
449 management regulatory authority.

450 **4.2.3.2 WATERCOURSE ALTERATIONS**

451 A. Notify adjacent communities, the Department of Land Conservation and
452 Development, and other appropriate state and federal agencies, prior to
453 any alteration or relocation of a watercourse, and submit evidence of
454 such notification to the Federal Insurance Administration. This
455 notification shall be provided by the applicant to the Federal Insurance
456 Administration as a Letter of Map Revision (LOMR) along with either:

457 i. A proposed maintenance plan to assure the flood carrying
458 capacity within the altered or relocated portion of the
459 watercourse is maintained; or

460 ii. Certification by a registered professional engineer that the
461 project has been designed to retain its flood carrying capacity
462 without periodic maintenance.

463 B. The applicant shall be required to submit a Conditional Letter of Map
464 Revision (CLOMR) when required under section 4.2.3.3. Ensure
465 compliance with all applicable requirements in sections 4.2.3.3 and
466 5.1.1.

467 **4.2.3.3 REQUIREMENT TO SUBMIT NEW TECHNICAL DATA**

468 A. A community's base flood elevations may increase or decrease resulting
469 from physical changes affecting flooding conditions. As soon as
470 practicable, but not later than six months after the date such
471 information becomes available, a community shall notify the Federal
472 Insurance Administrator of the changes by submitting technical or
473 scientific data in accordance with Title 44 of the Code of Federal
474 Regulations (CFR), Section 65.3. The community may require the
475 applicant to submit such data and review fees required for compliance
476 with this section through the applicable FEMA Letter of Map Change
477 (LOMC) process.

478 B. The Floodplain Administrator shall require a Conditional Letter of Map
479 Revision prior to the issuance of a floodplain development permit for:

480 i. Proposed floodway encroachments that increase the base flood
481 elevation; and

482 ii. Proposed development which increases the base flood elevation
483 by more than one foot in areas where FEMA has provided base
484 flood elevations but no floodway.

485 C. An applicant shall notify FEMA within six (6) months of project
486 completion when an applicant has obtained a Conditional Letter of Map
487 Revision (CLOMR) from FEMA. This notification to FEMA shall be
488 provided as a Letter of Map Revision (LOMR).

489 [Additional Recommended Language Provided in Appendix B](#)

490 **4.2.4 SUBSTANTIAL IMPROVEMENT AND SUBSTANTIAL DAMAGE ASSESSMENTS**
491 **AND DETERMINATIONS**

492 Conduct Substantial Improvement (SI) (as defined in section 2.0) reviews for all
493 structural development proposal applications and maintain a record of SI
494 calculations within permit files in accordance with section 4.2.2. Conduct
495 Substantial Damage (SD) (as defined in section 2.0) assessments when
496 structures are damaged due to a natural hazard event or other causes. Make SD
497 determinations whenever structures within the special flood hazard area (as
498 established in section 3.2) are damaged to the extent that the cost of restoring

499 the structure to its before damaged condition would equal or exceed 50 percent
500 of the market value of the structure before the damage occurred.

501 **4.3 ESTABLISHMENT OF DEVELOPMENT PERMIT**

502 **4.3.1 FLOODPLAIN DEVELOPMENT PERMIT REQUIRED**

503 A development permit shall be obtained before construction or development
504 begins within any area horizontally within the special flood hazard area
505 established in section 3.2. The development permit shall be required for all
506 structures, including manufactured dwellings, and for all other development, as
507 defined in section 2.0, including fill and other development activities.

508 **4.3.2 APPLICATION FOR DEVELOPMENT PERMIT**

509 Application for a development permit may be made on forms furnished by the
510 Floodplain Administrator and may include, but not be limited to, plans in
511 duplicate drawn to scale showing the nature, location, dimensions, and
512 elevations of the area in question; existing or proposed structures, fill, storage of
513 materials, drainage facilities, and the location of the foregoing. Specifically, the
514 following information is required:

- 515 A. In riverine flood zones, the proposed elevation (in relation to mean sea
516 level), of the lowest floor (including basement) and all attendant utilities of
517 all new and substantially improved structures; in accordance with the
518 requirements of section 4.2.2.
- 519 B. In coastal flood zones (V zones and coastal A zones), the proposed elevation
520 in relation to mean sea level of the bottom of the lowest structural member
521 of the lowest floor (excluding pilings and columns) of all structures, and
522 whether such structures contain a basement.
- 523 C. Proposed elevation in relation to mean sea level to which any non-
524 residential structure will be floodproofed.
- 525 D. Certification by a registered professional engineer or architect licensed in
526 the State of Oregon that the floodproofing methods proposed for any non-
527 residential structure meet the floodproofing criteria for non-residential
528 structures in section 5.2.3.3.
- 529 E. Description of the extent to which any watercourse will be altered or
530 relocated.
- 531 F. Base Flood Elevation data for subdivision proposals or other development
532 when required per sections 4.2.1 and 5.1.6.
- 533 G. Substantial improvement calculation for any improvement, addition,
534 reconstruction, renovation, or rehabilitation of an existing structure.

535 H. The amount and location of any fill or excavation activities proposed.

536 **4.4 VARIANCE PROCEDURE**

537 The issuance of a variance is for floodplain management purposes only. Flood insurance
538 premium rates are determined by federal statute according to actuarial risk and will not
539 be modified by the granting of a variance.

540 **4.4.1 CONDITIONS FOR VARIANCES**

541 A. Generally, variances may be issued for new construction and substantial
542 improvements to be erected on a lot of one-half acre or less in size
543 contiguous to and surrounded by lots with existing structures constructed
544 below the base flood level, in conformance with the provisions of sections
545 **4.4.1 (C) and (E), and 4.4.2**. As the lot size increases beyond one-half acre,
546 the technical justification required for issuing a variance increases.

547 B. Variances shall only be issued upon a determination that the variance is the
548 minimum necessary, considering the flood hazard, to afford relief.

549 C. Variances shall not be issued within any floodway if any increase in flood
550 levels during the base flood discharge would result.

551 D. Variances shall only be issued upon:

552 i. A showing of good and sufficient cause;

553 ii. A determination that failure to grant the variance would result in
554 exceptional hardship to the applicant; and,

555 iii. A determination that the granting of a variance will not result in
556 increased flood heights, additional threats to public safety,
557 extraordinary public expense, create nuisances, cause fraud on or
558 victimization of the public, or conflict with existing laws or
559 ordinances.

560 E. Variances may be issued by a community for new construction and
561 substantial improvements and for other development necessary for the
562 conduct of a functionally dependent use provided that the criteria of section
563 **4.4.1 (B) – (D)** are met, and the structure or other development is protected
564 by methods that minimize flood damages during the base flood and create
565 no additional threats to public safety.

566 F. **Variances shall not be issued unless it is demonstrated that the**
567 **development will not result in net loss of the following proxies for the three**
568 **floodplain functions in the SFHA: undeveloped space; pervious surface; or**
569 **trees 6 inches dbh or greater (see Section 6.0 and associated options in**
570 **Table 1).**

571 [Additional Optional Language Provided in Appendix B.](#)

572 **4.4.2 VARIANCE NOTIFICATION**

573 Any applicant to whom a variance is granted shall be given written notice that the
574 issuance of a variance to construct a structure below the Base Flood Elevation
575 will result in increased premium rates for flood insurance and that such
576 construction below the base flood elevation increases risks to life and property.
577 Such notification and a record of all variance actions, including justification for
578 their issuance shall be maintained in accordance with section 4.2.2.

579 **5.0 PROVISIONS FOR FLOOD HAZARD REDUCTION**

580 **5.1 GENERAL STANDARDS**

581 In all special flood hazard areas, the **no net loss standards (see Section 6.0) and the**
582 following standards shall be adhered to:

583 **5.1.1 ALTERATION OF WATERCOURSES**

584 Require that the flood carrying capacity within the altered or relocated portion of
585 said watercourse is maintained. Require that maintenance is provided within the
586 altered or relocated portion of said watercourse to ensure that the flood carrying
587 capacity is not diminished. Require compliance with sections 4.2.3.2 and
588 4.2.3.3.

589 **5.1.2 ANCHORING**

590 A. All new construction and substantial improvements shall be anchored to
591 prevent flotation, collapse, or lateral movement of the structure resulting
592 from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

593 B. All manufactured dwellings shall be anchored per section 5.2.3.4.

594 **5.1.3 CONSTRUCTION MATERIALS AND METHODS**

595 A. All new construction and substantial improvements shall be constructed
596 with materials and utility equipment resistant to flood damage.

597 B. All new construction and substantial improvements shall be constructed
598 using methods and practices that minimize flood damage.

599 **5.1.4 UTILITIES AND EQUIPMENT**

600 **5.1.4.1 WATER SUPPLY, SANITARY SEWER, AND ON-SITE WASTE**
601 **DISPOSAL SYSTEMS**

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

604 B. New and replacement sanitary sewage systems shall be designed to
605 minimize or eliminate infiltration of flood waters into the systems and
606 discharge from the systems into flood waters.

607 C. On-site waste disposal systems shall be located to avoid impairment to
608 them or contamination from them during flooding consistent with the
609 Oregon Department of Environmental Quality.

610 **5.1.4.2 ELECTRICAL, MECHANICAL, PLUMBING, AND OTHER**
611 **EQUIPMENT**

612 Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and
613 other equipment and service facilities shall be elevated at or above the base
614 flood level (ANY COMMUNITY FREEBOARD REQUIREMENT) or shall be designed
615 and installed to prevent water from entering or accumulating within the
616 components and to resist hydrostatic and hydrodynamic loads and stresses,
617 including the effects of buoyancy, during conditions of flooding. In addition,
618 electrical, heating, ventilating, air- conditioning, plumbing, duct systems, and
619 other equipment and service facilities shall:

620 A. If replaced as part of a substantial improvement shall meet all the
621 requirements of this section.

622 B. Not be mounted on or penetrate through breakaway walls.

623 **5.1.5 TANKS**

624 A. Underground tanks shall be anchored to prevent flotation, collapse and
625 lateral movement under conditions of the base flood.

626 B. Above-ground tanks shall be installed at or above the base flood level
627 (COMMUNITY FREEBOARD REQUIREMENT) or shall be anchored to prevent
628 flotation, collapse, and lateral movement under conditions of the base flood.

629 C. In coastal flood zones (V Zones or coastal A Zones) when elevated on
630 platforms, the platforms shall be cantilevered from or knee braced to the
631 building or shall be supported on foundations that conform to the
632 requirements of the State of Oregon Specialty Code.

633 **5.1.6 SUBDIVISION PROPOSALS AND OTHER PROPOSED DEVELOPMENTS**

634 A. All new subdivision proposals and other proposed new developments
635 (including proposals for manufactured dwelling parks and subdivisions)
636 greater than 50 lots or 5 acres, whichever is the lesser, shall include within
637 such proposals Base Flood Elevation data.

638 B. All new subdivision proposals and other proposed new developments
639 (including proposals for manufactured dwelling parks and subdivisions)
640 shall:

641 i. Be consistent with the need to minimize flood damage.

642 ii. Have public utilities and facilities such as sewer, gas, electrical, and
643 water systems located and constructed to minimize or eliminate
644 flood damage.

645 iii. Have adequate drainage provided to reduce exposure to flood
646 hazards.

647 iv. Comply with no net loss standards in section 6.0.

648 **5.1.7 USE OF OTHER BASE FLOOD ELEVATION DATA**

649 A. When Base Flood Elevation data has not been provided in accordance with
650 section 3.2 the local floodplain administrator shall obtain, review, and
651 reasonably utilize any Base Flood Elevation data available from a federal,
652 state, or other source, in order to administer section 5.0. All new subdivision
653 proposals and other proposed new developments (including proposals for
654 manufactured dwelling parks and subdivisions) must meet the requirements
655 of section 5.1.6.

656 B. Base Flood Elevations shall be determined for development proposals that
657 are 5 acres or more in size or are 50 lots or more, whichever is lesser in any
658 A zone that does not have an established base flood elevation.
659 Development proposals located within a riverine unnumbered A Zone shall
660 be reasonably safe from flooding; the test of reasonableness includes use of
661 historical data, high water marks, FEMA provided Base Level Engineering
662 data, and photographs of past flooding, etc... where available. (REFERENCE
663 TO ANY OF THIS TYPE OF INFORMATION TO BE USED FOR REGULATORY
664 PURPOSES BY YOUR COMMUNITY, I.E. BASE LEVEL ENGINEERING DATA,
665 HIGH WATER MARKS, HISTORICAL OR OTHER DATA THAT WILL BE
666 REGULATED TO. THIS MAY BE NECESSARY TO ENSURE THAT THE
667 STANDARDS APPLIED TO RESIDENTIAL STRUCTURES ARE CLEAR AND
668 OBJECTIVE. IF UNCERTAIN SEEK LEGAL ADVICE, AT A MINIMUM REQUIRE
669 THE ELEVATION OF RESIDENTIAL STRUCTURES AND NON-RESIDENTIAL
670 STRUCTURES THAT ARE NOT DRY FLOODPROOFED TO BE 2 FEET ABOVE
671 HIGHEST ADJACENT GRADE). Failure to elevate at least two feet above
672 grade in these zones may result in higher insurance rates.

673 **5.1.8 STRUCTURES LOCATED IN MULTIPLE OR PARTIAL FLOOD ZONES**

674 In coordination with the State of Oregon Specialty Codes:

- 675 A. When a structure is located in multiple flood zones on the community's
676 Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive
677 flood zone shall apply.

- 678 B. When a structure is partially located in a special flood hazard area, the
679 entire structure shall meet the requirements for new construction and
680 substantial improvements.

681 [Additional Recommended Language Provided in Appendix B.](#)

682 **5.2 SPECIFIC STANDARDS FOR RIVERINE (INCLUDING ALL NON-COASTAL) FLOOD**
683 **ZONES**

684 These specific standards shall apply to all new construction and substantial
685 improvements in addition to the General Standards contained in section 5.1 of this
686 ordinance **and the no net loss standards (see Section 6.0).**

687 **5.2.1 FLOOD OPENINGS**

688 All new construction and substantial improvements with fully enclosed areas
689 below the lowest floor (excluding basements) are subject to the following
690 requirements. Enclosed areas below the Base Flood Elevation, including crawl
691 spaces shall:

- 692 A. Be designed to automatically equalize hydrostatic flood forces on walls by
693 allowing for the entry and exit of floodwaters;

- 694 B. Be used solely for parking, storage, or building access;

- 695 C. Be certified by a registered professional engineer or architect or meet or
696 exceed all of the following minimum criteria:
 - 697 i. A minimum of two openings;

 - 698 ii. The total net area of non-engineered openings shall be not less than
699 one square inch for each square foot of enclosed area, where the
700 enclosed area is measured on the exterior of the enclosure walls;

 - 701 iii. The bottom of all openings shall be no higher than one foot above
702 grade;

 - 703 iv. Openings may be equipped with screens, louvers, valves, or other
704 coverings or devices provided that they shall allow the automatic
705 flow of floodwater into and out of the enclosed areas and shall be
706 accounted for in the determination of the net open area; and,

 - 707 v. All additional higher standards for flood openings in the State of
708 Oregon Residential Specialty Codes Section R322.2.2 shall be
709 complied with when applicable.

710 **5.2.2 GARAGES**

- 711 A. Attached garages may be constructed with the garage floor slab below the
712 Base Flood Elevation (BFE) in riverine flood zones, if the following
713 requirements are met:
- 714 i. If located within a floodway the proposed garage must comply with
715 the requirements of section 5.2.4;
 - 716 ii. The floors are at or above grade on not less than one side;
 - 717 iii. The garage is used solely for parking, building access, and/or
718 storage;
 - 719 iv. The garage is constructed with flood openings in compliance with
720 section 5.2.1 to equalize hydrostatic flood forces on exterior walls by
721 allowing for the automatic entry and exit of floodwater;
 - 722 v. The portions of the garage constructed below the BFE are
723 constructed with materials resistant to flood damage;
 - 724 vi. The garage is constructed in compliance with the standards in
725 section 5.1; and,
 - 726 vii. The garage is constructed with electrical, and other service facilities
727 located and installed so as to prevent water from entering or
728 accumulating within the components during conditions of the base
729 flood.
- 730 B. Detached garages must be constructed in compliance with the standards
731 for appurtenant structures in section 5.2.3.6 or non-residential structures in
732 section 5.2.3.3 depending on the square footage of the garage.

733 **5.2.3 FOR RIVERINE (NON-COASTAL) SPECIAL FLOOD HAZARD AREAS WITH**
734 **BASE FLOOD ELEVATIONS**

735 In addition to the general standards listed in section 5.1 the following specific
736 standards shall apply in Riverine (non-coastal) special flood hazard areas with
737 Base Flood Elevations (BFE): Zones A1-A30, AH, and AE.

738 **5.2.3.1 BEFORE REGULATORY FLOODWAY**

739 In areas where a regulatory floodway has not been designated, no new
740 construction, substantial improvement, or other development (including fill)
741 shall be permitted within Zones A1-30 and AE on the community's Flood
742 Insurance Rate Map (FIRM), unless it is demonstrated that the cumulative effect
743 of the proposed development, when combined with all other existing and
744 anticipated development, will not increase the water surface elevation of the
745 base flood more than one foot at any point within the community and will not

746 result in the net loss of flood storage volume. **When determined that structural**
747 **elevation is not possible and where the placement of fill cannot meet the above**
748 **standard, impacts to undeveloped space must adhere to the no net loss**
749 **standards in section 6.1.C.**

750 **5.2.3.2 RESIDENTIAL CONSTRUCTION**

- 751 A. New construction, conversion to, and substantial improvement of any
752 residential structure shall have the lowest floor, including basement,
753 elevated at or above the Base Flood Elevation (BFE) (ADDITIONAL
754 FREEBOARD FOR YOUR COMMUNITY – RECOMMEND MINIMUM OF 1FT
755 ABOVE BFE).
- 756 B. Enclosed areas below the lowest floor shall comply with the flood
757 opening requirements in section 5.2.1.

758 **5.2.3.3 NON-RESIDENTIAL CONSTRUCTION**

- 759 A. New construction, conversion to, and substantial improvement of any
760 commercial, industrial, or other non-residential structure shall:
- 761 i. Have the lowest floor, including basement elevated at or above
762 the Base Flood Elevation (BFE) (ANY ADDITIONAL FREEBOARD
763 REQUIREMENTS FOR YOUR COMMUNITY); or
- 764 ii. Together with attendant utility and sanitary facilities:
- 765 a. Be floodproofed so that below the base flood level the
766 structure is watertight with walls substantially
767 impermeable to the passage of water;
- 768 b. Have structural components capable of resisting
769 hydrostatic and hydrodynamic loads and effects of
770 buoyancy; and,
- 771 c. Be certified by a registered professional engineer or
772 architect that the design and methods of construction
773 are in accordance with accepted standards of practice
774 for meeting provisions of this section based on their
775 development and/or review of the structural design,
776 specifications and plans. Such certifications shall be
777 provided to the Floodplain Administrator as set forth
778 section 4.2.2.
- 779 B. Non-residential structures that are elevated, not floodproofed, shall
780 comply with the standards for enclosed areas below the lowest floor in
781 section 5.2.1.

- 782 C. Applicants floodproofing non-residential buildings shall be notified that
783 flood insurance premiums will be based on rates that are one (1) foot
784 below the floodproofed level (e.g. a building floodproofed to the base
785 flood level will be rated as one (1) foot below.

786 **5.2.3.4 MANUFACTURED DWELLINGS**

- 787 A. Manufactured dwellings to be placed (new or replacement) or
788 substantially improved that are supported on solid foundation walls
789 shall be constructed with flood openings that comply with section 5.2.1;
- 790 B. The bottom of the longitudinal chassis frame beam shall be at or above
791 Base Flood Elevation;
- 792 C. Manufactured dwellings to be placed (new or replacement) or
793 substantially improved shall be anchored to prevent flotation, collapse,
794 and lateral movement during the base flood. Anchoring methods may
795 include, but are not limited to, use of over-the-top or frame ties to
796 ground anchors (Reference FEMA’s “Manufactured Home Installation in
797 Flood Hazard Areas” guidebook for additional techniques), and;
- 798 D. Electrical crossover connections shall be a minimum of twelve (12)
799 inches above Base Flood Elevation (BFE).

800 **5.2.3.5 RECREATIONAL VEHICLES**

801 Recreational vehicles placed on sites are required to:

- 802 A. Be on the site for fewer than 180 consecutive days, and
- 803 B. Be fully licensed and ready for highway use, on its wheels or jacking
804 system, is attached to the site only by quick disconnect type utilities and
805 security devices, and has no permanently attached additions; or
- 806 C. Meet the requirements of section 5.2.3.4, including the anchoring and
807 elevation requirements for manufactured dwellings.

808 **5.2.3.6 APPURTENANT (ACCESSORY) STRUCTURES**

809 Relief from elevation or floodproofing requirements for residential and non-
810 residential structures in Riverine (Non-Coastal) flood zones may be granted for
811 appurtenant structures that meet the following requirements:

- 812 A. Appurtenant structures located partially or entirely within the floodway
813 must comply with requirements for development within a floodway
814 found in section 5.2.4;
- 815 B. Appurtenant structures must only be used for parking, access, and/or
816 storage and shall not be used for human habitation;

- 817 C. In compliance with State of Oregon Specialty Codes, appurtenant
818 structures on properties that are zoned residential are limited to one-
819 story structures less than 200 square feet, or 400 square feet if the
820 property is greater than two (2) acres in area and the proposed
821 appurtenant structure will be located a minimum of 20 feet from all
822 property lines. Appurtenant structures on properties that are zoned as
823 non-residential are limited in size to 120 square feet;

- 824 D. The portions of the appurtenant structure located below the Base Flood
825 Elevation must be built using flood resistant materials;

- 826 E. The appurtenant structure must be adequately anchored to prevent
827 flotation, collapse, and lateral movement of the structure resulting from
828 hydrodynamic and hydrostatic loads, including the effects of buoyancy,
829 during conditions of the base flood;

- 830 F. The appurtenant structure must be designed and constructed to
831 equalize hydrostatic flood forces on exterior walls and comply with the
832 requirements for flood openings in section 5.2.1;

- 833 G. Appurtenant structures shall be located and constructed to have low
834 damage potential;

- 835 H. Appurtenant structures shall not be used to store toxic material, oil, or
836 gasoline, or any priority persistent pollutant identified by the Oregon
837 Department of Environmental Quality unless confined in a tank installed
838 in compliance with section 5.1.5; and,

- 839 I. Appurtenant structures shall be constructed with electrical, mechanical,
840 and other service facilities located and installed so as to prevent water
841 from entering or accumulating within the components during conditions
842 of the base flood.

843 **5.2.4 FLOODWAYS**

844 Located within the special flood hazard areas established in section 3.2 are
845 areas designated as floodways. Since the floodway is an extremely hazardous
846 area due to the velocity of the floodwaters which carry debris, potential
847 projectiles, and erosion potential, the following provisions apply:

- 848 A. Prohibit encroachments, including fill, new construction, substantial
849 improvements, and other development within the adopted regulatory
850 floodway unless:
 - 851 i. Certification by a registered professional civil engineer is provided
852 demonstrating through hydrologic and hydraulic analyses performed
853 in accordance with standard engineering practice that the proposed
854 encroachment shall not result in any increase in flood levels within
855 the community during the occurrence of the base flood discharge; or

856 ii. A community may permit encroachments within the adopted
857 regulatory floodway that would result in an increase in base flood
858 elevations, provided that conditional approval has been obtained by
859 the Federal Insurance Administrator through the Conditional Letter
860 of Map Revision (CLOMR) application process, all requirements
861 established under 44 CFR 65.12 are fulfilled, and the
862 encroachment(s) comply with the no net loss standards in section
863 6.0.

864 B. If the requirements of section 5.2.4 (A) are satisfied, all new construction,
865 substantial improvements, and other development shall comply with all
866 other applicable flood hazard reduction provisions of section 5.0 and 6.0.

867 **5.2.5 STANDARDS FOR SHALLOW FLOODING AREAS**

868 Shallow flooding areas appear on FIRMs as AO zones with depth designations or
869 as AH zones with Base Flood Elevations. For AO zones the base flood depths
870 range from one (1) to three (3) feet above ground where a clearly defined
871 channel does not exist, or where the path of flooding is unpredictable and where
872 velocity flow may be evident. Such flooding is usually characterized as sheet flow.
873 For both AO and AH zones, adequate drainage paths are required around
874 structures on slopes to guide floodwaters around and away from proposed
875 structures.

876 **5.2.5.1 STANDARDS FOR AH ZONES**

877 Development within AH Zones must comply with the standards in sections 5.1,
878 5.2, and 5.2.5.

879 **5.2.5.2 STANDARDS FOR AO ZONES**

880 In AO zones, the following provisions apply in addition to the requirements in
881 sections 5.1 and 5.2.5:

882 A. New construction, conversion to, and substantial improvement of
883 residential structures and manufactured dwellings within AO zones shall
884 have the lowest floor, including basement, elevated above the highest
885 grade adjacent to the building, at minimum to or above the depth
886 number specified on the Flood Insurance Rate Maps (FIRM)
887 (COMMUNITY FREEBOARD REQUIREMENT) (at least two (2) feet if no
888 depth number is specified). For manufactured dwellings the lowest floor
889 is considered to be the bottom of the longitudinal chassis frame beam.

890 B. New construction, conversion to, and substantial improvements of non-
891 residential structures within AO zones shall either:

892 i. Have the lowest floor (including basement) elevated above the
893 highest adjacent grade of the building site, at minimum to or
894 above the depth number specified on the Flood Insurance Rate

- 895 Maps (FIRMS) (COMMUNITY FREE BOARD REQUIREMENT) (at
896 least two (2) feet if no depth number is specified); or
- 897 ii. Together with attendant utility and sanitary facilities, be
898 completely floodproofed to or above the depth number specified
899 on the FIRM (COMMUNITY FREEBOARD REQUIREMENT) or a
900 minimum of two (2) feet above the highest adjacent grade if no
901 depth number is specified, so that any space below that level is
902 watertight with walls substantially impermeable to the passage
903 of water and with structural components having the capability of
904 resisting hydrostatic and hydrodynamic loads and the effects of
905 buoyancy. If this method is used, compliance shall be certified
906 by a registered professional engineer or architect as stated in
907 section 5.2.3.3(A)(4).
- 908 C. Recreational vehicles placed on sites within AO Zones on the
909 community's Flood Insurance Rate Maps (FIRM) shall either:
- 910 i. Be on the site for fewer than 180 consecutive days, and
- 911 ii. Be fully licensed and ready for highway use, on its wheels or
912 jacking system, is attached to the site only by quick disconnect
913 type utilities and security devices, and has no permanently
914 attached additions; or
- 915 iii. Meet the elevation requirements of section 5.2.5.2(A), and the
916 anchoring and other requirements for manufactured dwellings of
917 section 5.2.3.4.
- 918 D. In AO zones, new and substantially improved appurtenant structures
919 must comply with the standards in section 5.2.3.6.
- 920 E. In AO zones, enclosed areas beneath elevated structures shall comply
921 with the requirements in section 5.2.1.

922 **5.3 SPECIFIC STANDARDS FOR COASTAL HIGH HAZARD FLOOD ZONES**

923 Located within special flood hazard areas established in section 3.2 are Coastal High
924 Hazard Areas, designated as Zones V1-V30, VE, V, or coastal A zones as identified on the
925 FIRMs as the area between the Limit of Moderate Wave Action (LiMWA) and the Zone V
926 boundary. These areas have special flood hazards associated with high velocity waters
927 from surges and, therefore, in addition to meeting all provisions of this ordinance and the
928 State of Oregon Specialty Codes, the following provisions shall apply in addition to the
929 general standards provisions in section 5.1.

930 **5.3.1 DEVELOPMENT STANDARDS**

931 A. All new construction and substantial improvements in Zones V1-V30 and VE,
932 V, and coastal A zones (where base flood elevation data is available) shall
933 be elevated on pilings and columns such that:

934 i. The bottom of the lowest horizontal structural member of the lowest
935 floor (excluding the pilings or columns) is elevated a minimum of
936 one foot above the base flood level; and

937 ii. The pile or column foundation and structure attached thereto is
938 anchored to resist flotation, collapse and lateral movement due to
939 the effects of wind and water loads acting simultaneously on all
940 building components. Water loading values used shall be those
941 associated with the base flood. Wind loading values used shall be
942 those specified by the State of Oregon Specialty Codes;

943 B. A registered professional engineer or architect shall develop or review the
944 structural design, specifications and plans for the construction, and shall
945 certify that the design and methods of construction to be used are in
946 accordance with accepted standards of practice for meeting the provisions
947 of this section.

948 C. Obtain the elevation (in relation to mean sea level) of the bottom of the
949 lowest horizontal structural member of the lowest floor (excluding pilings
950 and columns) of all new and substantially improved structures and whether
951 or not such structures contain a basement. The floodplain administrator
952 shall maintain a record of all such information in accordance with section
953 **4.2.2.**

954 D. Provide that all new construction and substantial improvements have the
955 space below the lowest floor either free of obstruction or constructed with
956 non- supporting breakaway walls, open wood lattice-work, or insect
957 screening intended to collapse under wind and water loads without causing
958 collapse, displacement, or other structural damage to the elevated portion
959 of the building or supporting foundation system.

960 For the purpose of this section, a breakaway wall shall have a design safe
961 loading resistance of not less than 10 and no more than 20 pounds per
962 square foot. Use of breakaway walls which exceed a design safe loading
963 resistance of 20 pounds per square foot (either by design or when so
964 required by local or state codes) may be permitted only if a registered
965 professional engineer or architect certifies that the designs proposed meet
966 the following conditions:

967 i. Breakaway wall collapse shall result from water load less than that
968 which would occur during the base flood; and

969 ii. Such enclosed space created by breakaway walls shall be useable
970 solely for parking of vehicles, building access, or storage. Such
971 space shall not be used for human habitation.

972 iii. Walls intended to break away under flood loads shall have flood
973 openings that meet or exceed the criteria for flood openings in
974 section **5.2.1**.

975 E. The elevated portion of the building and supporting foundation system shall
976 not be subject to collapse, displacement, or other structural damage due to
977 the effects of wind and water loads acting simultaneously on all building
978 components (structural and nonstructural). Maximum water loading values
979 to be used in this determination shall be those associated with the base
980 flood. Maximum wind loading values used shall be those specified by the
981 State of Oregon Specialty Codes.

982 F. Prohibit the use of fill for structural support of buildings.

983 G. All new construction shall be located landward of the reach of mean high
984 tide.

985 H. Prohibit man-made alteration of sand dunes which would increase potential
986 flood damage.

987 I. All structures, including but not limited to residential structures, non-
988 residential structures, appurtenant structures, and attached garages shall
989 comply with all the requirements of section **5.3.1** Floodproofing of non-
990 residential structures is prohibited.

991 **5.3.1.1 MANUFACTURED DWELLING STANDARDS FOR COASTAL HIGH**
992 **HAZARD ZONES**

993 All manufactured dwellings to be placed (new or replacement) or substantially
994 improved within Coastal High Hazard Areas (Zones V, V1-30, VE, or Coastal A)
995 shall meet the following requirements:

996 A. Comply with all of the standards within section **5.3**

997 B. The bottom of the longitudinal chassis frame beam shall be elevated to
998 a minimum of one foot above the Base Flood Elevation (BFE); and

999 C. Electrical crossover connections shall be a minimum of 12 inches above
1000 the BFE.

1001 **5.3.1.2 RECREATIONAL VEHICLE STANDARDS FOR COASTAL HIGH**
1002 **HAZARD ZONES**

1003 Recreational Vehicles within Coastal High Hazard Areas (Zones V, V1-30, VE, or
1004 Coastal A) shall either:

- 1005 A. Be on the site for fewer than 180 consecutive days, and
- 1006 B. Be fully licensed and ready for highway use, on wheels or jacking
- 1007 system, is attached to the site only by quick disconnect type utilities and
- 1008 security devices, and has no permanently attached additions.

5.3.1.3 TANK STANDARDS FOR COASTAL HIGH HAZARD ZONES

Tanks shall meet the requirements of section 5.1.5 and 6.0.

6.0 STANDARDS FOR PROTECTION OF SFHA FLOODPLAIN FUNCTIONS

The standards described below apply to all special flood hazard areas as defined in Section 2.0.

6.1 NO NET LOSS STANDARDS

A. No net loss of the three proxies for the floodplain functions mentioned in Section 1 is required for development in the special flood hazard area that would reduce undeveloped space, increase impervious surface, or result in a loss of trees that are 6-inches dbh or greater. No net loss can be achieved by first avoiding negative effects to floodplain functions to the degree possible, then minimizing remaining effects, then replacing and/or otherwise compensating for, offsetting, or rectifying the residual adverse effects to the three floodplain functions. Prior to the issuance of any development authorization, the applicant shall:

- i. Demonstrate a legal right by the project proponent to implement the proposed activities to achieve no net loss (e.g., property owner agreement);

- ii. Demonstrate that financial assurances are in place for the long-term maintenance and monitoring of all projects to achieve no net loss;

- iii. Include a management plan that identifies the responsible site manager, stipulates what activities are allowed on site, and requires the posting of signage identifying the site as a mitigation area.

B. Compliance with no net loss for undeveloped space or impervious surface is preferred to occur prior to the loss of habitat function but, at a minimum, shall occur concurrent with the loss. To offset the impacts of delay in implementing no net loss, a 25 percent increase in the required minimum area is added for each year no net loss implementation is delayed.

C. No net loss must be provided within, in order of preference: 1) the lot or parcel that floodplain functions were removed from, 2) the same reach of the waterbody where the development is proposed, or 3) the special flood hazard area within the same hydrologically connected area as the proposed development. Table 1 presents the no net loss ratios, which increase based on the preferences listed above.

1040 **6.1.1 UNDEVELOPED SPACE**

1041 A. Development proposals shall not reduce the fish-accessible and egress-able
1042 undeveloped space within the special flood hazard area.

1043 B. A development proposal with an activity that would impact undeveloped
1044 space shall achieve no net loss of fish-accessible and egress-able space.

1045 C. Lost undeveloped space must be replaced with fish-accessible and egress-
1046 able compensatory volume based on the ratio in Table 1 and at the same
1047 flood level at which the development causes an impact (i.e., plus or minus 1
1048 foot of the hydraulically equivalent elevation).

1049 i. Hydraulically equivalent sites must be found within either the
1050 equivalent 1-foot elevations or the same flood elevation bands of
1051 the development proposal. The flood elevation bands are identified
1052 as follows:

1053 (1) Ordinary High Water Mark to 10-year,

1054 (2) 10-year to 25-year,

1055 (3) 25-year to 50-year,

1056 (4) And 50-year to 100-year

1057 ii. Hydrologically connected to the waterbody that is the flooding source;

1058 iii. Designed so that there is no increase in velocity; and

1059 iv. Designed to fill and drain in a manner that minimizes anadromous
1060 fish stranding to the greatest extent possible.

1061 **6.1.2 IMPERVIOUS SURFACES**

1062 Impervious surface mitigation shall be mitigated through any of the following
1063 options:

1064 A. Development proposals shall not result in a net increase in impervious
1065 surface area within the SFHA, or

1066 B. use low impact development or green infrastructure to infiltrate and treat
1067 stormwater produced by the new impervious surface, as documented by a
1068 qualified professional, or

1069 C. If prior methods are not feasible and documented by a qualified
1070 professional stormwater retention is required to ensure no increase in peak
1071 volume or flow and to maximize infiltration, and treatment is required to

1072 minimize pollutant loading. See section 6.2.C for stormwater retention
1073 specifications.

1074 **6.1.3 TREES**

1075 A. Development proposals shall result in no net loss of trees 6-inches dbh or
1076 greater within the special flood hazard area. This requirement does not
1077 apply to silviculture where there is no development.

1078 i. Trees of or exceeding 6-inches dbh that are removed from the RBZ,
1079 Floodway, or RBZ-fringe must be replaced at the ratios in Table 1.

1080 ii. Replacement trees must be native species that would occur naturally
1081 in the Level III ecoregion of the impact area.

1082 **6.2 STORMWATER MANAGEMENT**

1083 Any development proposal that cannot mitigate as specified in 6.1.2(A)-(B) must include
1084 the following:

1085 A. Water quality (pollution reduction) treatment for post-construction
1086 stormwater runoff from any net increase in impervious area; and

1087 B. Water quantity treatment (retention facilities) unless the outfall discharges
1088 into the ocean.

1089 C. Retention facilities must:

1090 i. Limit discharge to match the pre-development peak discharge rate
1091 (i.e., the discharge rate of the site based on its natural groundcover
1092 and grade before any development occurred) for the 10-year peak
1093 flow using a continuous simulation for flows between 50 percent of
1094 the 2-year event and the 10-year flow event (annual series).

1095 ii. Treat stormwater to remove sediment and pollutants from impervious
1096 surfaces such that at least 80 percent of the suspended solids are
1097 removed from the stormwater prior to discharging to the receiving
1098 water body.

1099 iii. Be designed to not entrap fish and drain to the source of flooding.

1100 iv. Be certified by a qualified professional.

1101 D. Stormwater treatment practices for multi-parcel facilities, including
1102 subdivisions, shall have an enforceable operation and maintenance
1103 agreement to ensure the system functions as designed. This agreement will
1104 include:

- 1105 i. Access to stormwater treatment facilities at the site by the
1106 **COMMUNITY TYPE (e.g., city, county)** for the purpose of inspection
1107 and repair.
- 1108 ii. A legally binding document specifying the parties responsible for the
1109 proper maintenance of the stormwater treatment facilities. The
1110 agreement will be recorded and bind subsequent purchasers and
1111 sellers even if they were not party to the original agreement.
- 1112 iii. For stormwater controls that include vegetation and/or soil
1113 permeability, the operation and maintenance manual must include
1114 maintenance of these elements to maintain the functionality of the
1115 feature.
- 1116 iv. The responsible party for the operation and maintenance of the
1117 stormwater facility shall have the operation and maintenance
1118 manual on site and available at all times. Records of the
1119 maintenance and repairs shall be retained and made available for
1120 inspection by the **COMMUNITY TYPE (e.g., city, county)** for five years

1121 **6.3 ACTIVITIES EXEMPT FROM NO NET LOSS STANDARDS**

1122 The following activities are not subject to the no net loss standards in Section 6.1;
1123 however, they may not be exempt from floodplain development permit requirements.

1124 A. Normal maintenance of structures, such as re-roofing and replacing siding,
1125 provided there is no change in the footprint or expansion of the roof of the
1126 structure;

1127 B. Normal street, sidewalk, and road maintenance, including filling potholes,
1128 repaving, and installing signs and traffic signals, that does not alter
1129 contours, use, or alter culverts. Activities exempt do not include expansion
1130 of paved areas;

1131 C. Routine maintenance of landscaping that does not involve grading,
1132 excavation, or filling;

1133 D. Routine agricultural practices such as tilling, plowing, harvesting, soil
1134 amendments, and ditch cleaning that does not alter the ditch configuration
1135 provided the spoils are removed from special flood hazard area or tilled into
1136 fields as a soil amendment;

1137 E. Routine silviculture practices that do not meet the definition of
1138 development, including harvesting of trees as long as root balls are left in
1139 place and forest road construction or maintenance that does not alter
1140 contours, use, or alter culverts;

1141 F. Removal of noxious weeds and hazard trees, and replacement of non-native
1142 vegetation with native vegetation;

- 1143 G. Normal maintenance of above ground utilities and facilities, such as
- 1144 replacing downed power lines and utility poles provided there is no net
- 1145 change in footprint;

- 1146 H. Normal maintenance of a levee or other flood control facility prescribed in
- 1147 the operations and maintenance plan for the levee or flood control facility.
- 1148 Normal maintenance does not include repair from flood damage, expansion
- 1149 of the prism, expansion of the face or toe or addition of protection on the
- 1150 face or toe with rock armor.

- 1151 I. Habitat restoration activities.

6.4 RIPARIAN BUFFER ZONE (RBZ)

- 1153 A. The Riparian Buffer Zone is measured from the ordinary high-water line of a
- 1154 fresh waterbody (lake; pond; ephemeral, intermittent, or perennial stream)
- 1155 or mean higher-high water of a marine shoreline or tidally influenced river
- 1156 reach to 170 feet horizontally on each side of the stream or inland of the
- 1157 MHHW. The riparian buffer zone includes the area between these outer
- 1158 boundaries on each side of the stream, including the stream channel.

- 1159 B. Habitat restoration activities in the RBZ are considered self-mitigating and
- 1160 are not subject to the no net loss standards described above.

- 1161 C. Functionally dependent uses are only subject to the no net loss standards for
- 1162 development in the RBZ. Ancillary features that are associated with but do
- 1163 not directly impact the functionally dependent use in the RBZ (including
- 1164 manufacturing support facilities and restrooms) are subject to the beneficial
- 1165 gain standard in addition to no net loss standards.

- 1166 D. Any other use of the RBZ requires a greater offset to achieve no net loss of
- 1167 floodplain functions, on top of the no net loss standards described above,
- 1168 through the beneficial gain standard.

- 1169 E. Under FEMA's beneficial gain standard, an area within the same reach of
- 1170 the project and equivalent to 5% of the total project area within the RBZ
- 1171 shall be planted with native herbaceous and shrub vegetation and
- 1172 designated as open space.
- 1173

1174 **Table 1 No Net Loss Standards**

Basic Mitigate Ratios	Undeveloped Space (ft³)	Impervious Surface (ft²)	Trees (6" < dbh ≤ 20")	Trees (20" < dbh ≤ 39")	Trees (39" < dbh)
RBZ and Floodway	2:1*	1:1	3:1*	5:1	6:1
RBZ-Fringe	1.5:1*	1:1	2:1*	4:1	5:1

Mitigation multipliers					
Mitigation onsite to Mitigation offsite, same reach	100%	100%	100%	100%	100%
Mitigation onsite to Mitigation offsite, different reach, same watershed (5th field)	200% *	200%*	200%*	200%	200%

1175 Notes:

- 1176 1. Ratios with asterisks are indicated in the BiOp
- 1177 2. Mitigation multipliers of 100% result in the required mitigation occurring at the same value
- 1178 described by the ratios above, while multipliers of 200% result in the required mitigation
- 1179 being doubled.
- 1180 a. For example, if only 500 ft² of the total 1000 ft² of required pervious surface
- 1181 mitigation can be conducted onsite and in the same reach, the remaining 500 ft² of
- 1182 required pervious surface mitigation occurring offsite at a different reach would
- 1183 double because of the 200% multiplier.
- 1184 3. RBZ impacts must be offset in the RBZ, on-site or off-site.
- 1185 4. Additional standards may apply in the RBZ (See 6.4 Riparian Buffer Zone)

National Flood Hazard Layer FIRMMette



123°4'51"W 45°13'28"N



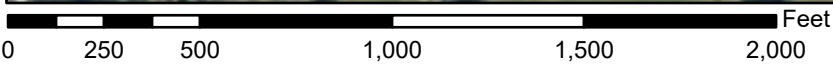
CITY OF DAYTON
410252

41071C0427D
eff. 3/1/2010

T4S R3W S17
AREA OF MINIMAL FLOOD HAZARD
Zone X

T4S R3W S16

41071C0429D
eff. 3/2/2010



1:6,000 92

123°4'13"W 45°13'2"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X	Future Conditions 1% Annual Chance Flood Hazard Zone X	Area with Reduced Flood Risk due to Levee. See Notes. Zone X	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X	Effective LOMRs	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer	Levee, Dike, or Floodwall

OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation	Coastal Transect	Base Flood Elevation Line (BFE)	Limit of Study	Jurisdiction Boundary	Coastal Transect Baseline	Profile Baseline	Hydrographic Feature

MAP PANELS	Digital Data Available	No Digital Data Available	Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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