PROPOSED AMENDMENTS
TO CHAPTERS 2, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 21, 23, 24, 32, 33, 46, 46, 54, and 55 of the
COMMUNITY DEVELOPMENT CODE

DISCUSSION DRAFT

June 26, 2013

Chapter 32
Water Resource Area Protection

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32.000 WATER RESOURCE AREA (WRA) PROTECTION

32.010 PURPOSES

The purposes of this chapter are to:

A. Comply with Title 13 and Title 3 of Metro's Urban Growth Management Functional Plan while balancing resource protection with property rights and development needs.

B. Protect or improve water quality by filtering sediment and pollutants and absorbing excess nutrients for the protection of public health, safety and the environment and to comply with both state and federal laws and regulations, including the Clean Water Act and the Endangered Species Act.

C. Moderate storm water impacts by slowing, storing, filtering and absorbing storm water and to maintain storm water storage and conveyance to prevent or minimize flooding and erosion for the protection of public health and safety.

D. Prevent erosion and minimize sedimentation of water bodies by protecting root masses along streams that resist erosion and stabilize the stream bank and by protecting vegetation on steep slopes to maintain their stability.

E. Protect and improve the following functions and values of WRAs that enhance the value of fish and wildlife habitat:

1. Natural stream corridors that provide habitat and habitat connectivity for terrestrial wildlife,
2. Microclimate habitats that support species adapted to those conditions,
3. Shade to maintain healthy stream temperatures,
4. Vegetation to absorb and filter pollution and sediment that would otherwise contaminate the water body,
5. Sources of organic material that support the food chain,
6. Recruitment of large wood that enhances the habitat of fish bearing streams, and
7. Moderation of stream flow by storing and delaying storm water runoff, and vegetated areas surrounding wetlands that, together with the wetland, provide vital habitat for birds, amphibians, and other species.

F. Provide mitigation standards and guidance to address water quality values and ecological functions and values lost through development within WRAs.

G. Encourage the use of habitat friendly development practices.

H. Minimize construction of structures and improvements where they are at risk of flooding, to enable natural stream migration and channel dynamics, and protect water resources from the potential harmful impacts of development.

I. Provide for uses and activities in WRA that have negligible impact on such areas. And to provide for other uses that must be located in such areas in a way that will avoid or, when avoidance is not possible, minimize potential impacts.

32.020 APPLICABILITY

A. This chapter applies to all WRAs identified on the WRA Map. It also applies to all verified, unmapped WRAs. The WRA Map shall be amended to include the previously unmapped WRAS.

B. The burden is on the property owner to demonstrate that the requirements of this Chapter are met, or are not applicable to the land, development activity, or other proposed use or alteration of land. The Planning Director may make a determination of applicability based on the WRA Map, field visits, and any other relevant maps, site plans and information, as to:

1. The existence of a WRA,
2. The exact location of the WRA, and/or
3. Whether the proposed development, activity or use is within the WRA boundary.

In cases where the location of the WRA is unclear or disputed, the Planning Director may require a survey, delineation, or sworn statement prepared by a natural resource professional/wetland biologist or specialist that no WRA exist on the site. Any required survey, delineation, or statement shall be prepared at the applicant's sole expense.

32.030 PROHIBITED USES

A. Alteration, development, or use of real property designated as, and within, a WRA is strictly prohibited except as specifically allowed or exempted in this chapter.

Table 32-1: Summary of where development and activities may occur in areas subject to this chapter

Type of Development or Activity	In Water Resource	Water Resource Area
New House, Principal Structure(s)	No	No, except by hardship section 32.100. Geotechnical study may reduce WRA width per table 32-2 (footnote 5).
Additions to Existing House, Principal Structure(s) and replacement in kind. (Replacement in kind does not count against the 500 sq. ft. limit so long as it remains within the existing footprint.)	No	Yes, so long as it gets no closer to the WRA than building footprint that existed Jan. 1, 2006. Max. 500 sq. ft. of addition(s) to side or 500 sq. ft. to rear of building footprint. No limit on vertical additions within existing footprint. (See 32.030 (C)). Geotechnical study may reduce the WRA width per table 32-2 (footnote 5).
New cantilevered decks (over 30-inches), balconies, roof overhangs and pop outs towards the WRA from Existing House or Principal Structure(s)	No	Yes, but only 5 ft. into the WRA. Foundation or supports of structure cannot extend vertically to grade in the WRA. Geotechnical study may reduce the WRA width per table 32-2 (footnote 5).
Decks within 30-inches of grade, at grade patios.	No	Yes, but only to within 50 feet of the water resource or behind the top of slope (ravine), whichever is greater.[1] Geotechnical study may reduce the WRA width per table 32-2 (footnote 5).
New Accessory Structure(s) under 120 sq. ft. and 10 ft tall	No	Yes, but only if it is a minimum of 50 feet from the water resource or behind the top of slope (ravine), whichever is greater.[1]
Repair and maintenance to existing accessory structures	No	Yes, but no increase in footprint or height.
Storm water treatment and detention (e.g. rain gardens, storm outfall/energy dissipaters)	No	Yes, Private and Public facilities including outfall and energy dissipaters are permitted if no reasonable alternatives exist.
Driveways/ streets/ bridges and parking lots	No, unless a WRA crossing is the only available route. No parking lots.	No, unless a WRA crossing is the only available route, or it is part of a hardship application. Parking lots only allowed in hardship cases the maximum distance from water resource.

New Fence(s)	No markers or posts in a water resource.	Yes, but only to within 50 feet of the water resource or behind the top of slope (ravine), whichever is greater.[1] In remainder of a WRA, only City approved property markers or posts every 25 ft. to delineate property.
Demolition of structure and/or removal of impervious surfaces in the WRA	Yes, Restoration and re-vegetation required.	Yes, Restoration and re-vegetation required.
Exterior Lighting	No	No, except on existing buildings, additions or hardship cases but light must be directed away from the WRA and less than 12 ft. high.
Public passive recreation facilities	No, except for bridges and utility crossings.	Yes, but only soft or permeable surface trails, bridges and elevated paths, interpretive facilities and signage. Hard surface ADA trails are allowed in WRA above top of slope associated with well defined ravine WRAs.
Public active recreation facilities	No, except for bridges and utility crossings.	Yes, but natural surface playing fields and playground areas only in WRA above top of slope associated with well defined ravine WRAs.
Grading, fill (see also TDAs)	No, except for bridges and utility crossings.	Yes, after a WRA permit is obtained. Restoration and re-vegetation required.
Temporarily Disturbed Areas (TDA) (e.g. buried utilities)	No, except as allowed by WRA permit.	Yes. Restoration and re-vegetation required.
Removal of existing vegetation or planting new vegetation	No, except invasive plants and hazard trees per 32.030(A) (2) (b) or per 32.100.	Yes, if it is replaced by native vegetation. Exemption 32.030(A) (4) applies,
Realigning water resources	Yes after "Alternate Review" Process	Not applicable

[1] Development to within 50 feet of the water resource applies to Table 32-2 WRA types (A), (C), (D), and (H). Development behind top of slope (ravine) applies to WRA type (B).

32.040 EXEMPTIONS

A. Vegetation Maintenance, Planting and Removal

1. The routine maintenance of any existing WRA, consistent with the provisions of this Chapter such as, but not limited to, removing pollutants, trash, unauthorized fill, and dead or dying vegetation that constitutes a hazard to life or property.
2. Removal of plants identified as nuisance, invasive or prohibited plants, provided that after plant removal, re-vegetation of disturbed areas is performed pursuant to Section 32.100.
3. The planting or propagation of plants identified as native plants on the Portland Plant list.
4. Maintenance of existing gardens, pastures, lawns, and landscape perimeters, including the installation of new irrigation systems within existing gardens, lawns, and landscape perimeters.
5. The use of pesticides and herbicides with applicable state (e.g. Oregon DEQ) permits.

B. Building, Paving, Grading, and Testing

1. Maintenance. Routine repair, maintenance and replacement of legally established above and below ground utilities and related components (including storm water catch basins, intakes, etc.), roads, driveways, paths, trails, fences and manmade water control facilities such as constructed ponds, wastewater facilities, and storm water treatment

facilities that do not expand the disturbed area at grade or footprint, provided re-vegetation of disturbed areas or corridors is performed pursuant to Section 32.100.

2. Trails. The establishment of unpaved trails constructed of non-hazardous, pervious materials with a maximum width of four feet in generalized corridors approved in a Parks or Trails Master Plan, provided that:

    a. The trail is set back from the water resource at least 30 feet, except at stream crossing points or at points were the topography forces the trail closer to the stream.

    b. Foot bridge crossings shall be kept to a minimum. When the stream bank adjacent to the foot bridge is accessible (e.g. due to limited vegetation or topography), fences or railings shall be installed from the foot bridge and extend 15 feet beyond the terminus of the foot bridge to discourage trail users and pets from accessing the stream bank, disturbing wildlife and habitat areas, and causing vegetation loss, stream bank erosion and stream turbidity.

    c. Trails shall be designed to minimize disturbance to existing vegetation, work with natural contours, avoid the fall line on slopes where possible, and avoid areas with evidence of slope failure to ensure that trail runoff does not create channels in the WRA.

3. Site investigations. Temporary and minor clearing outside of wetlands not to exceed 200 square feet per acre or site, whichever is more, provided that no individual area is greater than 200 feet in size, for the purpose of site investigations and pits for preparing soil profiles, provided that such areas are restored to their original condition when the investigation is complete. While such temporary and minor clearing is exempt from the provisions of this chapter, it is subject to all other City codes, including provisions for erosion control and tree removal.

4. Support structures for overhead power or communication lines where the support structures are outside of the WRA.

5. The installation, within the developed portions of street right-of-ways, of new utilities, the maintenance or replacement of existing utilities and street repaving projects.

C. Nonconforming Structures.

1. Expansion of Non-Conforming Structures. Additions to the existing building footprint of a non-conforming structure within, or partially within, the WRA are exempt, and additionally exempt from Chapter 66, Non-Conforming Structures, as long as the addition(s) meets the following restrictions:

    a. Re-vegetation of temporarily disturbed areas will be performed per Section 32.100 after the addition is completed;

    b. There is no net increase in storm water runoff flowing toward the water resource as a result of the addition(s);

    c. The addition (including, decks and other cantilevered designs, etc.) is not closer to the water resource than the existing structure,

d. If it is a lateral addition, it does not extend more than 25 feet laterally from the side of the existing structure,

e. The addition does not increase the footprint of the existing principal structure by more than 500 square feet, at any one time or incrementally.

f. Vertical additions to existing principal structures that comply with the maximum height requirements of the underlying zone are exempt.

2. Repair, Replacement and Removal of Non-Conforming structures:

a. Interior remodeling of a non-conforming structure.

b. Routine repair, maintenance, rehabilitation and replacement of non-conforming structures, accessory structures, utilities and related components, roads, driveways, paths, trails, fences, and manmade water and storm water control facilities that do not expand the disturbed area or footprint. Re-vegetation of temporarily disturbed areas or corridors pursuant to 32.100 is required.

c. Demolition and removal of non-conforming structure's impervious surfaces are exempt as long as the site is restored with native vegetation pursuant to Section 32.100.

D. New Construction Activities allowed in the WRA.

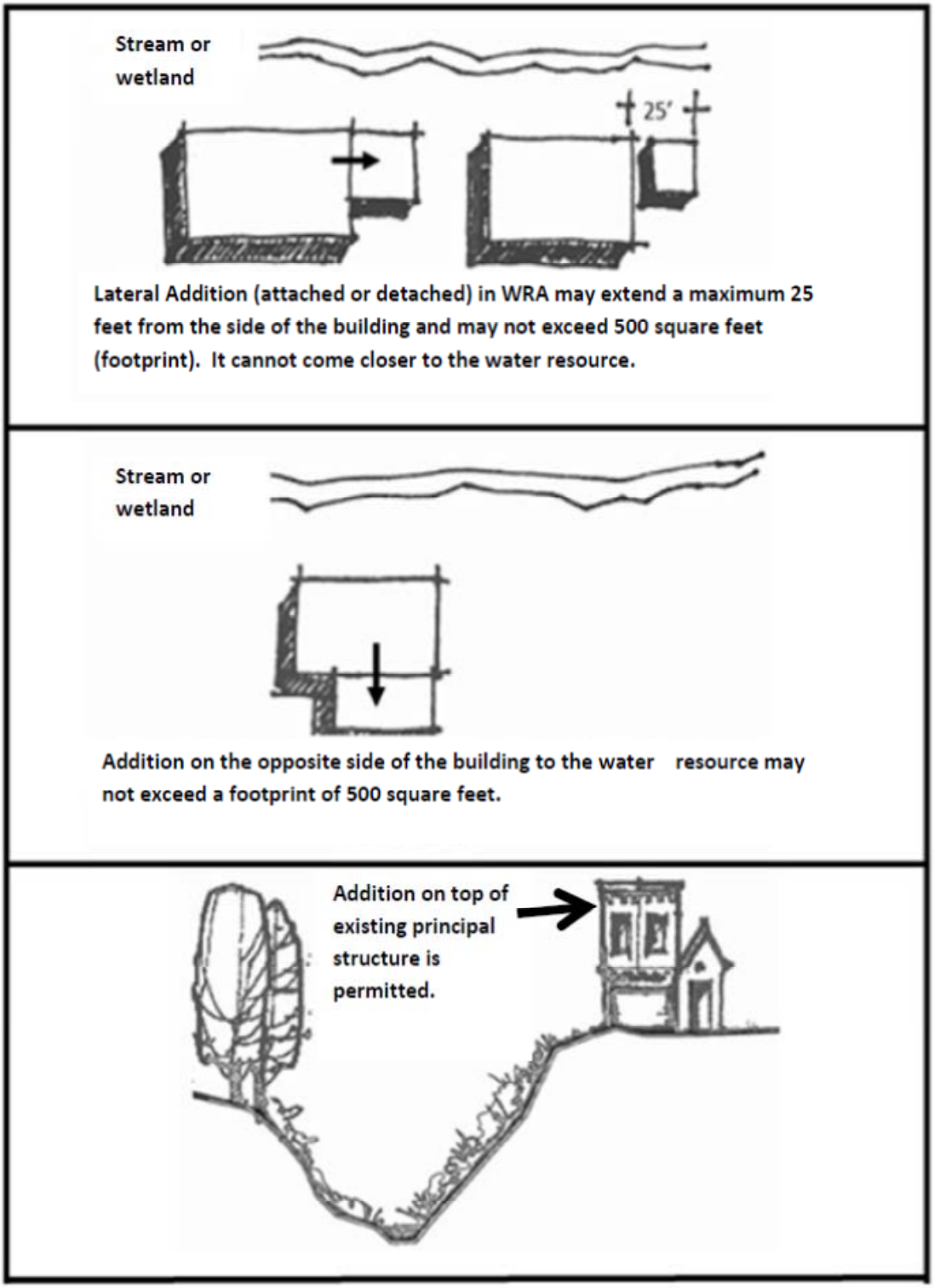
1. Structures shall be located out of the WRA, except that eaves, balconies, decks, "pop outs," and similar additions, may cantilever over the outer boundary of the WRA a maximum of five feet. No vertical supports may extend down to grade within the WRA.

2. Construction of an accessory structure, less than 120 square feet in size and under 10 feet tall, may be constructed to within 50 feet of the water resource or behind the top of slope (ravine), whichever is greater.

3. Construction or repair of a water permeable patio or deck within 30 inches of the original grade or water permeable footpaths may be constructed behind the top of slope (ravine).

4. Fences may be built to within 50 feet of the water resource or behind the top of slope (ravine), whichever is greater.

Figure 32-1



F. Emergency Activities. Actions authorized by the City Manager that must be taken immediately or within a period of time too short to fully comply with this Chapter, to:

1. Prevent immediate danger to life or property,
2. Prevent immediate threat of serious environmental degradation,
3. Restore existing utility service, or
4. Reopen a public thoroughfare to traffic.

However, after the emergency has passed any disturbed area shall be restored, pursuant to Section 32.100.

G. Exempt Areas

1. The Tualatin or Willamette rivers are regulated by Chapter 28 and are not subject to this chapter. However, wetlands and buffers, regardless of their proximity to these rivers, are subject to this chapter. In areas where there is overlap with Chapter 28, this chapter shall prevail.
2. Existing enclosed or piped sections of streams, including any development at right angles to the enclosed or piped sections.
3. Isolated areas. If a topographic feature or legally established road, other linear facility, or barrier physically separates and functionally isolates a portion of the WRA from the main portion of the WRA, including the associated water resource, the approval authority may exclude the isolated area from the WRA and the permitting procedure.

32.050 APPLICATION

A. An application requesting approval for a use or activity regulated by this chapter shall be initiated by the property owner, or the owner's authorized agent, and shall include an application form and the appropriate deposit/or fee as indicated on the master fee schedule.

B. A pre-application conference shall be a prerequisite to the filing of the application.

C. The applicant shall submit maps and diagrams at 11x17 inches and a written narrative addressing the approval criteria and requirements of this Chapter, and any additional copies required by the Planning Director.

D. Where review of soil maps, Department of Geology and Mineral Industries (DOGAMI) maps, or on-site inspection by the City Engineer reveals evidence of slope failures or that WRA slopes are potentially unstable or prone to failure, geotechnical studies may be required to demonstrate that the proposed development will not cause, or contribute to, slope failure or increased erosion or sedimentation in the WRA or adversely impact surface or modify groundwater flow or hydrologic conditions. These geotechnical studies shall include all necessary measures to avoid or correct the potential hazard.

E. Applications proposing that streets or utilities cross water resources, or any other development that modifies the water resource, shall present evidence in the form of adopted utility master plans or transportation master plans, or findings from a registered Oregon civil engineer, certified engineering geologist or similarly qualified professional to demonstrate that the development or improvements are consistent with accepted engineering practices.

F. Site Plan. The applicant shall submit a site plan which contains the following information, as applicable:

1. The name, address, and telephone number of the applicant, the scale (lineal) of the plan, and a north arrow.
2. Property lines, rights-of-way, easements, etc.
3. Topographic information at two foot contour increments identifying both existing grades and proposed grade changes.
4. A slope map delineating slopes 0-25% and over 25%.
5. Boundaries of the WRA, specifically delineating the water resource, and any riparian corridor boundary. If the proposal includes development of a wetland, a wetlands delineation prepared by a professional wetland specialist will be required. The wetland delineation may be required to be accepted or waived through the Department of State Lands (DSL) delineation review process.
6. Location of existing and proposed development, including all existing and proposed structures, accessory structures, any areas of fill or excavation, water resource crossings, alterations to vegetation, or other alterations to the site' s natural state.
7. Identify the location and square footage of previously disturbed areas, areas that are to be temporarily disturbed, and area to be permanently disturbed or developed.
8. When an application proposes development within the WRA, an inventory of vegetation within the WRA, sufficient to categorize the existing condition of the WRA, including:
    a. the type and general quality of groundcover, including the identification of dominant species and any occurrence of non-native, invasive species;
    b. square footage of ground cover; and,
    c. square footage of tree canopy as measured either through aerial photographs or by determining the tree drip lines. Where only a portion of a WRA is to be disturbed, the tree inventory need only apply to the impacted area. The remaining treed area shall be depicted by outlining the canopy cover.
9. Locations of all significant trees as defined by the City Arborist.
10. Identify adopted transportation, utility and other plan documents applicable to this proposal.

G. Construction Management Plan. The applicant shall submit a Construction Management Plan which includes the following:

1. The location of proposed TDAs (site ingress/egress for construction equipment, areas for storage of material, construction activity areas, grading and trenching, etc.) that will subsequently be restored to original grade and replanted with native vegetation, shall be identified, mapped and enclosed with fencing per (3) below.
2. Appropriate erosion control measures consistent with CDC Chapter 31 and a tentative schedule of work.
3. The WRA shall be protected, prior to construction, with an anchored chain link fence (or equivalent approved by the City) at its perimeter that shall remain undisturbed, except as specifically authorized by the approval authority. Additional fencing to delineate approved TDAs may be required. Fencing shall be mapped and identified in the Construction Management Plan and maintained until construction is complete.

H. Mitigation Plan prepared in accordance with the requirements in 32.090.

I. Re-vegetation Plan prepared in accordance with the requirements in 32.100.

J. The Planning Director may modify the submittal requirements per CDC Section 99.035.

K. The following additional requirements apply to applications being submitted under the Alternative Review Process pursuant to CDC 32.070 through 32.080.

1. Identify the affected WRA and describe the functions it performs (see Table 32-4).
2. Provide a scaled map that delineates the proposed WRA boundaries determined to be sufficient to sustain the functions occurring at the site and a narrative that justifies the proposal, consistent with Section 32.080.
3. Identify the recommended WRA boundary at the site with colored tape, survey markers or other easily identified means for field inspection by staff.
4. Consultant Required for Alternate Review Process.
    a. The narrative and analysis required by sections 32.070 and 32.080 shall be prepared and signed by a qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist. The Planning Director shall determine the scope of work and specific products required from the consultant. The Planning Director may require a mitigation plan pursuant to Section 32.090 and/or a re-vegetation plan pursuant to Section 32.100.
    b. The Planning Director may waive the consultant requirement for simple or minor projects if he or she determines that it is not necessary in order to satisfy the requirements of this chapter.

32.060 APPROVAL CRITERIA (STANDARD PROCESS)

No application for development on property containing a WRA shall be approved unless the approval authority finds that the proposed development is consistent with the following approval criteria, or can satisfy the criteria by conditions of approval:

A. WRA Protection/Minimizing Impacts. Development shall be conducted in a manner that will avoid or, if avoidance is not possible, minimize adverse impact on WRAs.

B. Storm Water and Storm Water Facilities.

1. Proposed developments shall be designed to maintain the existing WRAs and utilize them as the primary method of storm water conveyance through the project site unless:
    a. the Surface Water Management Plan calls for alternate configurations (culverts, piping, etc.); or
    b. under Section 32.070, the applicant demonstrates that the relocation of the water resource will not adversely impact the function of the WRA including, but not limited to, circumstances where the WRA is poorly defined or not clearly channelized.

    Re-vegetation, enhancement and/or mitigation of the re-aligned water resource shall be required as applicable.

2. Public and private storm water detention, storm water treatment facilities and storm water outfall or energy dissipaters (e.g. rip rap) may encroach into the WRA if:

    a. accepted engineering practice requires it;

    b. encroachment on significant trees shall be avoided when possible, and any tree loss shall be consistent with the City's Tree Technical Manual and mitigated per Section 32.090;

    c. there shall be no direct outfall into the water resource, and any resulting outfall shall not an erosive effect on the WRA or diminish the stability of slopes; and

    d. there are no reasonable alternatives available.

    A geotechnical report may be required to make the determination regarding slope stability.

3. Roadside storm water conveyance swales and ditches may be extended within rights-of-way located in a WRA. When possible, they shall be located along the side of the road furthest from the water resource. If the conveyance facility must be located along the side of the road closest to the water resource, it shall be located as close to the road/sidewalk as possible and include habitat friendly design features (treatment train, rain gardens, etc.).

4. Storm water detention and/or treatment facilities in the WRA shall be designed without permanent perimeter fencing and shall be landscaped with native vegetation.

5. Access to public storm water detention and/or treatment facilities shall be provided for maintenance purposes. Maintenance driveways shall be constructed to minimum width and use water permeable paving materials. Significant trees, including roots, shall not be disturbed to the degree possible. The encroachment and any tree loss shall be mitigated per Section 32.090. There shall also be no adverse impacts upon the hydrologic conditions of the site.

C. Dedications and Easements Water

1. To protect WRAs from potential disturbance, damage and encroachment caused by human activity, at such time that property is subdivided or developed, the City shall:

    a. Encourage dedication of the land title deed for the WRA to a private trust or conservation group for open space and resource protection purposes, with the exception of known or suspected contaminated sites, or

    b. Encourage applicant to place a restrictive covenant recognizing the limitations on development in the WRA on the land title deed.

    c. The dedication of land or restrictive covenant on the deed, under subsections (C) (1) (a) or (b) above, shall be contingent on the City demonstrating that an essential nexus and rough proportionality exists. Alternately, the applicant may choose to waive the nexus and proportionality requirement. Where appropriate, the City may require that the "right to exclude" be legally relinquished by the property owner.

    d. The City shall not pursue dedications or restrictive covenants from individual property owners in residential zones applying for WRA permits that do not

involve the creation of additional housing or lots.

2. The area appropriate for dedication or a restrictive covenant under Subsection (C) (1) (a) and (b) above should include, at a minimum, the water resource and extend to:

   a. the outer or uphill edge of the WRA when WRA type (A), (C), (E), (F), or (H), shown in Table 32-2 applies; or,

   b. to the distinct top of slope or ravine when protected WRA type (B) in Table 32-2 applies; or,

   c. a smaller area, if any, based on the nexus and proportionality analysis under Subsection(C) (1) (c).

D. WRA Width. Except for the exemptions in Section 32.040, applications that are using the alternate review process of 32.070, or as authorized by the Approval Authority consistent with the provisions of this Chapter, all development is prohibited in the WRA as established in Table 32-2 below:

Table 32-2. Required Width of WRA

Protected WRA Resource (see CDC Chapter 2 Definitions)	Slope Adjacent to Protected Water Resource[1, 4]	Starting Point for Measurements from Water Resource[3]	Width of WRA on each side of the Water Resource[4]
A. Water Resource	0% - 25%	Edge of bankfull stage or OHW-Delineated edge of wetland	65 feet
B. Water Resource (Ravine)	over 25% to a distinct top of slope[2]	Edge of bankfull stage/OHW or Delineated edge of wetland	From water resource to top of slope [2] (30 foot minimum), plus an additional 50 feet[5]
C. Water Resource	over 25% for more than 30 feet, and no distinct top of slope for at least 150 feet	Edge of bankfull stage/OHW or Delineated edge of wetland	200-feet
D. Riparian Corridor	any	Edge of bankfull stage/OHW	100 feet
E. Formerly Closed Drainage Channel Reopened	Variable: see Section 32.050(P)	Edge of bankfull stage/OHW	15 feet
F. Ephemeral Stream	Any	Stream thread or centerline	15-feet with treatment or vegetation (see 32.050(G) (1)).
G. Fish bearing streams per Oregon Department of Fish and Wildlife (ODFW) or 2003-2004 survey	Applies to all that stream section where fish were inventoried and upstream to the first known barrier to fish passage.	Edge of bankfull stage/OHW or Delineated edge of wetland	100 feet when no greater than 25% slope. See B or C above for steeper slopes.
H. Re-aligned Water Resource	See A, B, C, D, F, or G. above	Edge of bankfull stage/OHW; Delineated edge of wetland	See A, B, C, D, F, or G, above

[1] The slope is the average slope in the first 50 feet as measured from bankfull stage or OHW.

[2] Where the protected water resource is confined by a ravine or gully, the top of slope is the location (30 foot minimum) where the slope breaks to less than 15% for at least 50 feet.

[3] At least three slope measurements along the water resource, at no more than 100-foot increments, shall be made for each property for which development is proposed. Depending upon topography, the width of the protected corridor may vary.

[4]Isolated WRA. If a topographic feature or legally established road, other linear facility, or barrier physically separates and functionally isolates a water resource from a portion of the associated WRA, the Planning Director or approval authority may allow the WRA's width to be reduced to the minimum extent needed to exclude the isolated area. The applicant shall provide sufficient information to enable the approval authority to determine whether or not the subject area qualifies under Subsection 32.040(G). If the applicant fails to provide credible information, the planning director or approval authority may require technical review by a qualified professional, at the applicant's expense, to verify and evaluate the information submitted by the applicant.

[5] The 50 foot distance may be reduced to 25 feet if a geotechnical study by a licensed engineer or similar accredited professional demonstrates that the slope is stable and not prone to erosion.

Table 32-3.

Determining the starting point for the measurement of the WRA

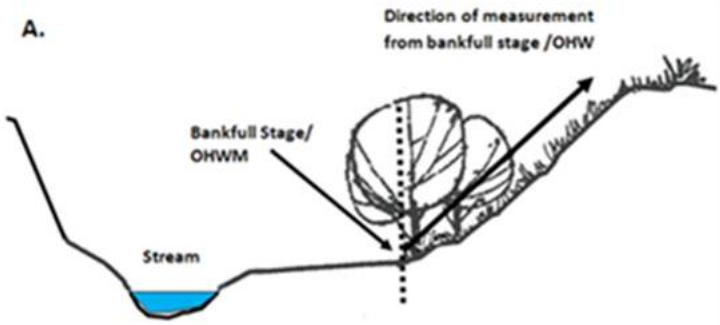
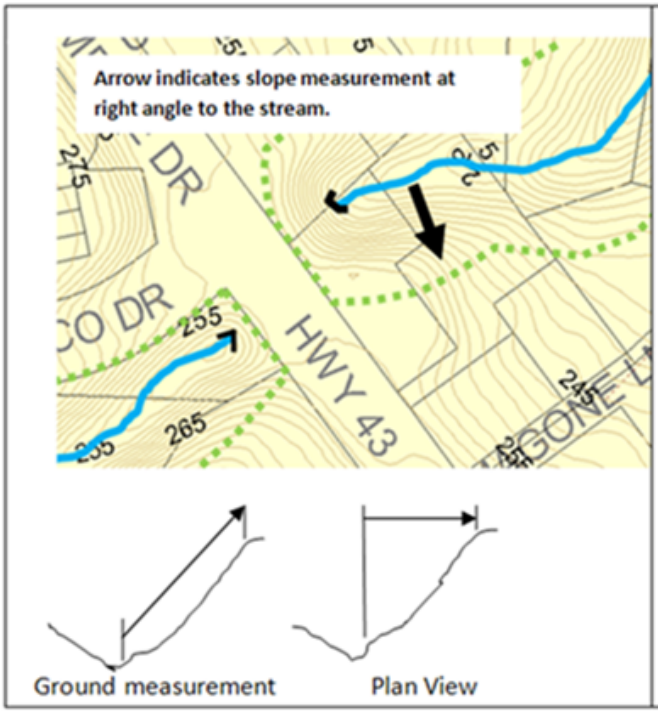
A. 	**The bankfull stage or OHW level of stream systems is typically delineated in the field by:** • **the outer extent of facultative or obligate plants;** • **the litter of branches, twigs and organic debris below and the presence of woody vegetation (e.g., willow and alder species) above;** • **textural change of depositional sediment or changes in the character of the soil (e.g. from silts, sand, cobble and gravel to upland soils);** • **top of the zone of washed or exposed roots;** • **a clear natural line impressed on the bank;** • **a break or change in slope angle.**
B.	**When there are wetlands or wetlands adjacent to a stream the measurement begins at the outer edge of the wetland or the OHW/bankfull stage, whichever is greater.**

Figure 32-2

Determining the appropriate slope and measuring the WRA width:



The slope from the bankfull stage/OHW or outer edge of wetland shall be based on the average slope ("rise over run") in the first 50 feet and measured at right angle to the dominant water feature. Where the water feature terminates, such as by going into a culvert, the transition shall extend not just a right angles, but uphill or downhill from the terminus point. Measurements shall be "Ground Measurement" not "Plan View".

Figure 32-3

Figure 32-4

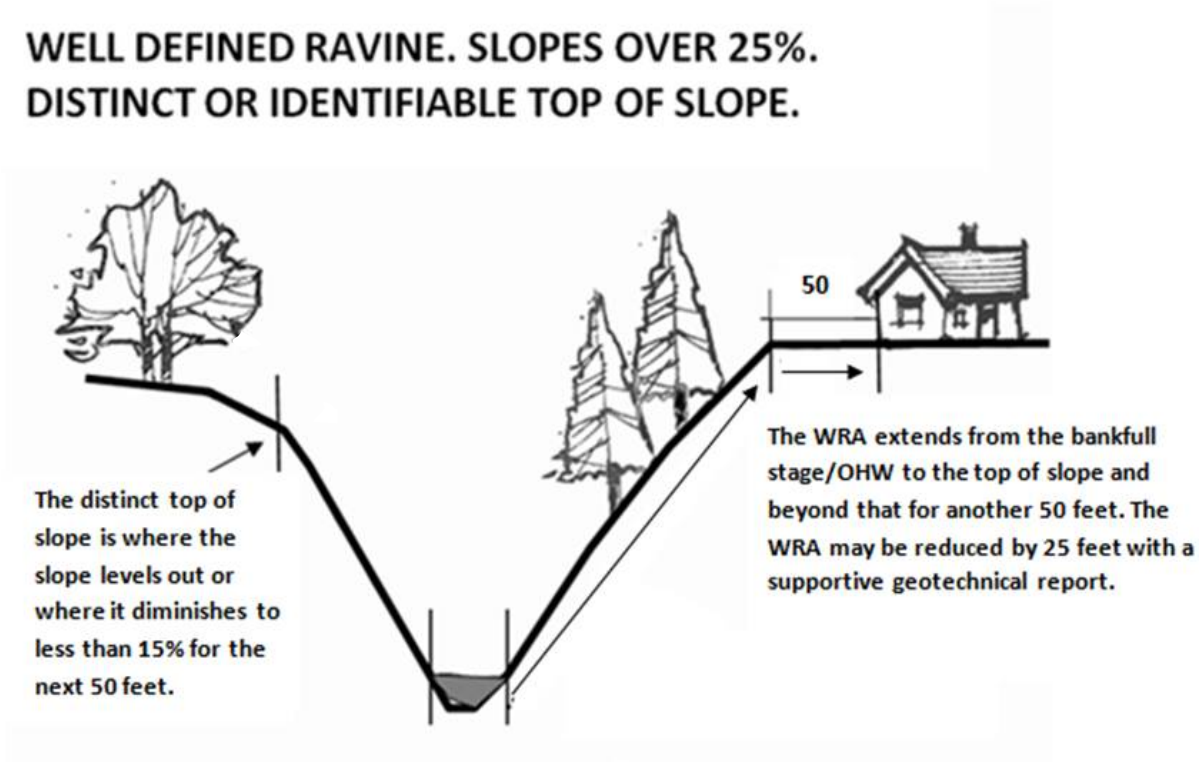


Figure 32-5

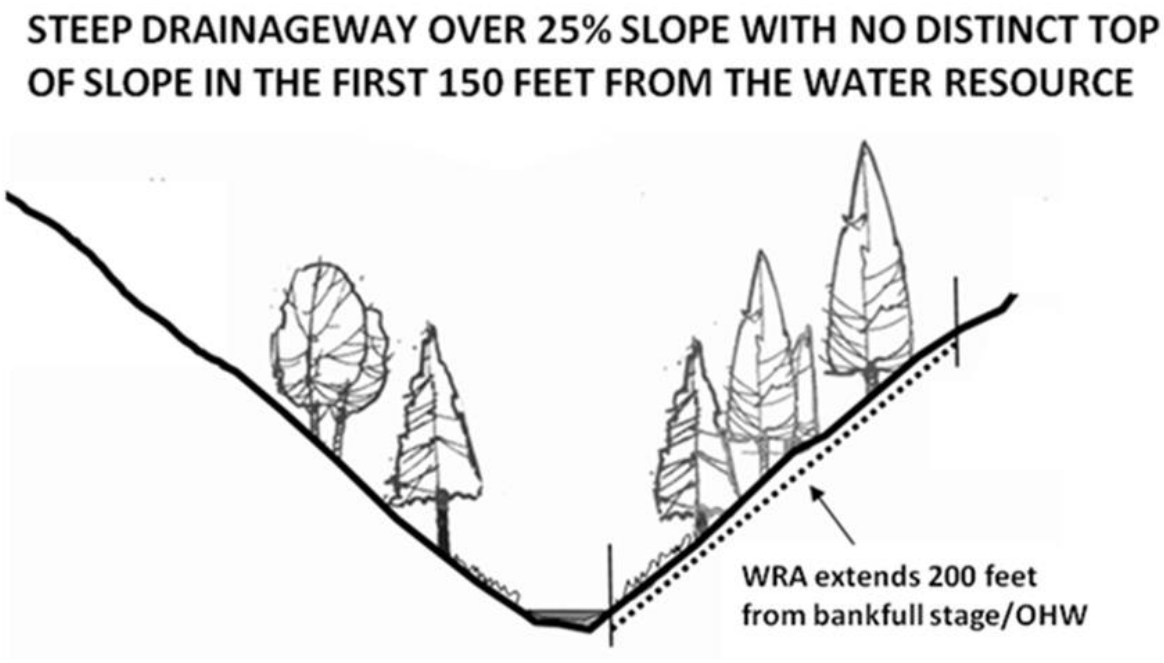
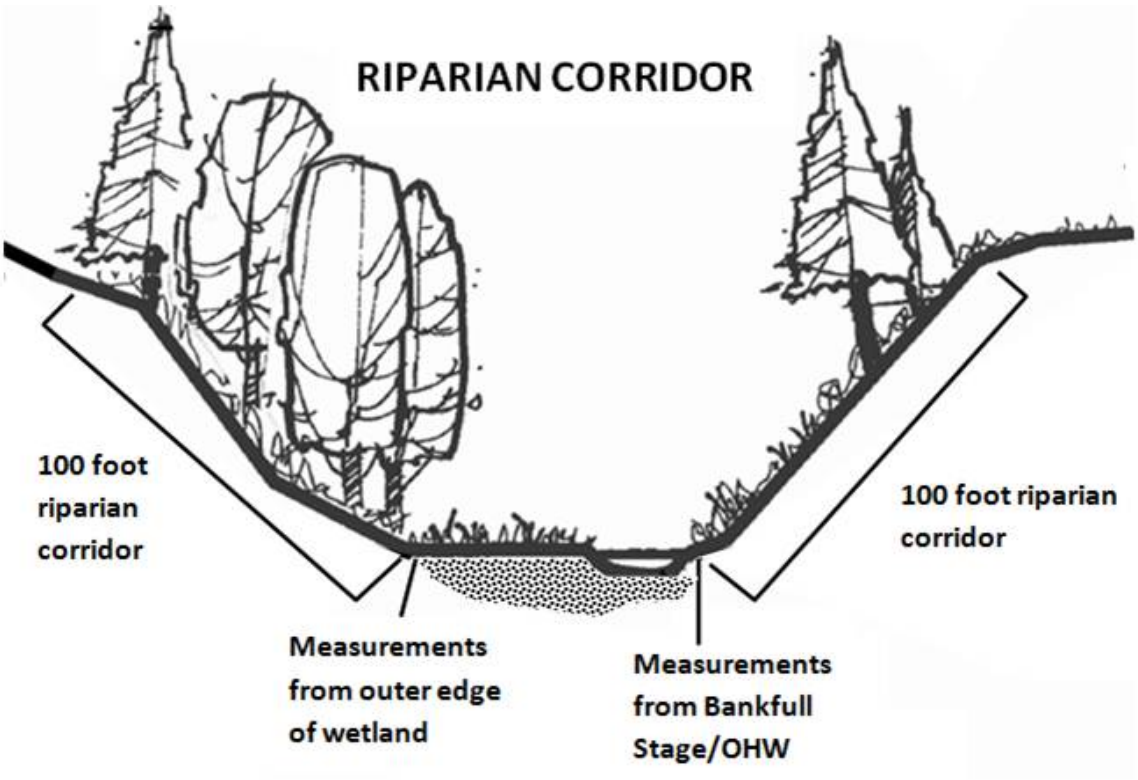


Figure 32-6



E. Roads, Driveways and Utilities

1. New roads, driveways, or utilities shall avoid WRAs unless the applicant demonstrates that no other practical alternative exists. In that case, road design and construction techniques shall minimize impacts and disturbance to the WRA by the following methods:

    a. New roads and utilities crossing riparian habitat areas or streams shall be aligned as close to perpendicular to the channel as possible.

    b. Roads and driveways traversing WRAs shall be of the minimum width possible to comply with applicable road standards and protect public safety. The footprint of grading and site clearing to accommodate the road shall be minimized.

    c. Road and utility crossings shall avoid, where possible:

        i. salmonid spawning or rearing areas,

        ii. stands of mature conifer trees in riparian areas,

        iii. highly erodible soils,

        iv. landslide prone areas,

        v. damage to, and fragmentation of, habitat, and

        vi. wetlands identified on the WRA Map.

2. Crossing of fishing bearing streams and riparian corridors shall use bridges or arch-bottomless culverts or the equivalent that provides comparable fish protection, to allow

passage of wildlife and fish and to retain the natural stream bed.

3. New utilities spanning fish bearing stream sections, riparian corridors, and wetlands shall be located on existing roads/bridges, elevated walkways, conduit, or other existing structures or installed underground via tunneling or boring at a depth that avoids tree roots and does not alter the hydrology sustaining the water resource, unless the applicant demonstrates that it is not physically possible or it is cost prohibitive. Bore pits associated with the crossings shall be restored upon project completion. Dry, intermittent streams may be crossed with open cuts during a time period approved by the City and any agency with jurisdiction.

4. No fill or excavation is allowed within the ordinary high water mark of a water resource, unless all necessary permits are obtained from the City, US Army Corps of Engineers and Oregon Department of State Lands (DSL).

5. Crossings of fish bearing streams shall be aligned, whenever possible, to serve multiple properties and be designed to accommodate conduit for utility lines. The applicant shall, to the extent legally permissible, work with the City to provide for a street layout and crossing location that will minimize the need for additional stream crossings in the future to serve surrounding properties.

F. Passive Recreation.

Low impact or passive outdoor recreation facilities for public use including, but not limited to, the use of multi-use paths, trails, viewing platforms, historical or natural interpretive markers, and benches in the WRA, are subject to the following standards:

1. Trails shall be constructed using non-hazardous, water permeable materials with a maximum width of four feet or the recommended width under the applicable American Association of State Highway and Transportation Officials (AASHTO) standards for the expected type and use, whichever is greater.

2. Paved trails are limited to the area within 20 feet of the outer boundary of the WRA, and such trails must comply with the stormwater provisions of this Chapter.

3. All trails in the WRA shall be set back from the water resource at least 30 feet except at stream crossing points or at points were the topography forces the trail closer to the water resource.

4. Trails shall be designed to minimize disturbance to existing vegetation, work with natural contours, avoid the fall line on slopes where possible, avoid areas with evidence of slope failure and ensure that trail runoff does not create channels in the WRA.

5. Foot bridge crossings shall be kept to a minimum. When the stream bank adjacent to the foot bridge is accessible (e.g. due to limited vegetation or topography), where possible fences or railings shall be installed from the foot bridge and extend 15 feet beyond the terminus of the foot bridge to discourage trail users and pets from accessing the stream bank, disturbing wildlife and habitat areas, and causing vegetation loss, stream bank erosion and stream turbidity. Bridges shall not be made of continuous impervious materials or be treated with toxic substances that could leach into the WRA.

6. Interpretive facilities (including viewpoints) shall be at least 10 feet from the top of the water resource's bankfull flow/OHW or delineated wetland edge and constructed with a fence between users and the resource. Interpretive signs may be installed on footbridges.

G. Daylighting Piped Streams

1. As part of any application, covered or piped stream sections shown on the WRA Map are encouraged to be "daylighted" or opened. Once it is daylighted, the WRA will be limited to 15 feet. Within that WRA, water quality measures are required which may include a storm water treatment system (e.g. vegetated bioswales), continuous vegetative ground cover (e.g. native grasses) at least 15 feet in width that provides year round efficacy, or a combination thereof.
2. The re-opened stream does not have to align with the original piped route but may take a different route on the subject property so long as it makes the appropriate upstream and downstream connections and meet the standards of subsections (G)(3) and (4) below.
3. A re-aligned stream must not create WRAs on adjacent properties not owned by the applicant unless the applicant provides a notarized letter signed by the adjacent property owner(s) stating that the encroachment of the WRA is permitted.
4. The evaluation of proposed alignment and design of the reopened stream shall consider the following factors:
    a. The ability of the reopened stream to safely carry storm drainage through the area without causing significant erosion.
    b. Continuity with natural contours on adjacent properties, slope on site and drainage patterns.
    c. Continuity of adjacent vegetation and habitat values.
    d. The ability of the existing and proposed vegetation to filter sediment and pollutants and enhance water quality.
    e. Provision of water temperature conducive to fish habitat.
5. Any upstream or downstream WRAs or riparian corridors shall not apply to, or overlap, the daylighted stream channel.
6. When a stream is daylighted the applicant shall prepare and record a legal document describing the reduced WRA required by subsections (G) (1) and (5). The document will be signed by a representative of the City and recorded at the applicant's expense to better ensure long term recognition of the reduced WRA and reduced restrictions for the daylighted stream section.

H. The following habitat-friendly development practices shall be incorporated into the design of any improvements or projects in the WRA to the degree possible:

1. Restore disturbed soils to original or higher level of porosity to regain infiltration and storm water storage capacity.
2. Apply a treatment train or series of storm water treatment measures to provide multiple opportunities for storm water treatment and reduce the possibility of system

failure.

3. Incorporate storm water management in road right-of-ways.
4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
5. Use multi-functional open drainage systems in lieu of conventional curb-and-gutter systems.
6. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.
8. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.
9. Use pervious paving materials for driveways, parking lots, sidewalks, patios, and walkways.
10. Reduce sidewalk width to a minimum four feet. Grade the sidewalk so it drains to the front yard of a residential lot or retention area instead of towards the street.
11. Use shared driveways.
12. Reduce width of residential streets and driveways, especially at WRA crossings.
13. Reduce street length, primarily in residential areas, by encouraging clustering.
14. Reduce cul-de-sac radii and use pervious and/or vegetated islands in center to minimize impervious surfaces.
15. Use previously developed areas (PDAs) when given an option of developing PDA vs. non-PDA land.
16. Minimize the building, hardscape and disturbance footprint.
17. Consider multi-story construction over a bigger footprint.

32.070 ALTERNATE REVIEW PROCESS.

This section establishes a review and approval process that applicants can use when there is reason to believe that the width of the WRA prescribed under the standard process (32.0060(D)) is larger than necessary to protect the functions of the water resource at a particular site. It allows a qualified professional to determine what water resources and associated functions (see Table 32-4 below) exist at a site and the WRA width that is needed to maintain those functions.

32.080 APPROVAL CRITERIA (ALTERNATE REVIEW PROCESS)

Applications reviewed under the alternate review process shall meet the following approval criteria:

A. The proposed WRA shall be, at minimum, qualitatively equal, in terms of maintaining the level of functions allowed by the WRA standards of Section 32.060(D).

B. If a WRA is already significantly degraded (e.g., native forest and ground cover have been removed or the site dominated by invasive plants, debris, or development), the approval authority may allow a reduced WRA in exchange for mitigation, if:

1. The proposed reduction in WRA width, coupled with the proposed mitigation, would result in better performance of functions than the standard WRA without such mitigation. The approval authority shall make this determination based on the applicant's proposed mitigation plan and a comparative analysis of ecological functions under existing and enhanced conditions (see Table 32-4).
2. The mitigation project shall include all of the following components as applicable. It may also include other forms of enhancement (mitigation) deemed appropriate by the approval authority.
    a. Removal of invasive vegetation.
    b. Planting native, noninvasive plants (at minimum, consistent with 32.100) that provide improved filtration of sediment, excess nutrients, and pollutants. The amount of enhancement (mitigation) shall meet or exceed the standards of 32.090(C).
    c. Providing permanent improvements to the site hydrology that would improve water resource functions.
    d. Substantial improvements to the aquatic and/or terrestrial habitat of the WRA.

C. Identify and discuss site design and methods of development as they relate to WRA functions.

D. Address the approval criteria of 32.060, with the exception of 32.060(D).

Table 32-4 Ecological functions of WRA.

Ecological function	Landscape features potentially providing the function
Stream flow moderation and/or water storage	A wetland or other water body with a hydrologic connection to a stream or flood area, the presence of fallen trees and density of vegetation in the WRA that slows the flow of storm water and increases its ability to retain sediment and infiltrate storm water, and the porosity of the WRA's surface to enable it to infiltrate storm water.
Sediment or pollution control	Vegetation within 100 feet of a WRA on gentle slopes and up to 200 feet of a WRA if the slope is greater than 25%. The presence of fallen trees and other material that slows the flow of water and increase the ability to retain sediment absorb pollutants and infiltrate storm water; the composition and density of vegetation; slope; and soils.
Bank stabilization	Root masses, existing large rocks or anchored large wood along the stream bank
Large wood recruitment for a fish bearing section of stream	Forest canopy within 50-150 feet of a fish bearing stream
Organic material sources	Forest canopy or woody vegetation within 100 feet of a water resource; or

	within a flood area.
Shade (water temperature moderation) and microclimate	Forest canopy or woody vegetation within 100 feet of the water resource. Roughly 300 feet of continuous canopy for microclimate.
Stream flow that sustains in-stream and adjacent habitats	Seasonal or perennial flow
Other terrestrial habitat	Forest canopy natural vegetation contiguous to and within 100 -300 feet of the water resource.

32.090 MITIGATION PLAN

A. A mitigation plan shall only be required if development is proposed within a WRA (including development of a PDA). (Exempted activities of 32.040 do not require mitigation unless specifically stated. Temporarily Disturbed Areas, including TDAs associated with exempted activities; do not require mitigation, just grade and soil restoration and re-vegetation.) The mitigation plan shall satisfy all applicable provisions of 32.100 "Re-Vegetation Plan".

B. Mitigation shall take place in the following locations, according to the following priorities (1-4):

1. On-site mitigation by restoring, creating or enhancing WRAs.
2. Off-site mitigation in the same sub-watershed will be allowed, but only if the applicant has demonstrated that:
    a. it is not practicable to complete mitigation on-site, for example, there is not enough area on-site, and
    b. the mitigation will provide equal or superior ecological function and value.
3. Off-site mitigation outside the sub-watershed will be allowed, but only if the applicant has demonstrated that:
    a. it is not practicable to complete mitigation on-site, for example, there is not enough area on-site; and,
    b. the mitigation will provide equal or superior ecological function and value.
4. Purchasing mitigation credits though DSL or other acceptable mitigation bank.

C. Amount of Mitigation

1. The amount of mitigation shall be based on the square footage of the permanent disturbance area by the application. For every one square foot of non-PDA disturbed area, on-site mitigation shall require one square foot of WRA to be created, enhanced or restored.
2. For every one square foot of PDA that is disturbed, on-site mitigation shall require one half a square foot of WRA vegetation to be created, enhanced or restored.
3. For any off-site mitigation, including the use of DSL mitigation credits, the requirement shall be for every one square foot of WRA that is disturbed, two square feet of WRA shall be created, enhanced or restored. The DSL mitigation credits program or

mitigation bank shall require a legitimate bid on the cost of on-site mitigation multiplied by two to arrive at the appropriate dollar amount.)

D. The Planning Director may limit or define the scope of the mitigation plan and submittal requirements commensurate with the scale of the disturbance relative to the resource and pursuant to the authority of CDC Chapter 99. The Planning Director may determine that a consultant is required to complete all or a part of the mitigation plan requirements.

E. A mitigation plan shall contain the following information:

1. A list of all responsible parties including, but not limited to, the owner, applicant, contractor, or other persons responsible for work on the development site.
2. A map showing where the specific adverse impacts will occur and where the mitigation activities will occur.
3. A re-vegetation plan for the area(s) to be mitigated that meets the standards of section 32.100.
4. An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting. All in-stream work in fish-bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife.
5. Assurances shall be established to rectify any mitigation actions that are not successful within the first three years. This may include bonding or other surety.

32.100 RE-VEGETATION PLAN REQUIREMENTS

A. In order to achieve the goal of re-establishing forested canopy, native shrub and groundcover and to meet the mitigation requirements of Section 32.090 and vegetative enhancement of 32.080, tree and vegetation plantings are required according to the following standards:

1. All trees, shrubs and ground cover to be planted must be native plants selected from the Portland Plant List.
2. Plant size. Replacement trees must be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees (the one-half inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone which may be one gallon size. Shrubs must be in at least a one-gallon container or the equivalent in ball and burlap and must be at least 12 inches in height.
3. Plant coverage.
    a. Native trees and shrubs are required to be planted at a rate of five trees and 25 shrubs per every 500 square feet of disturbance area (calculated by dividing the number of square feet of disturbance area by 500, and then multiplying that result times five trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be 330 square feet of disturbance area, then 330 divided by 500 equals .66, and .66 times five equals 3.3, so three trees must be planted, and .66 times 25 equals 16.5, so 17 shrubs must be planted). Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to

the native grasses or herbs.

b. Trees shall be planted between eight and 12 feet on-center and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between eight and 10 feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

4. Plant diversity. Shrubs must consist of at least two different species. If 10 trees or more are planted, then no more than 50% of the trees may be of the same genus.

5. Invasive vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.

6. Tree and shrub survival. A minimum survival rate of 80% of the trees and shrubs planted is expected by the third anniversary of the date that the mitigation planting is completed.

7. Monitoring and reporting. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind.

8. To enhance survival of tree replacement and plantings, the following practices are required:

   a. Mulching. Mulch new plantings a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.

   b. Irrigation. Water new plantings one inch per week between June 15th to October 15th, for the three years following planting.

   c. Weed control. Remove, or control, non-native or noxious vegetation throughout maintenance period.

   d. Planting season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.

   e. Wildlife protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

B. When weather or other conditions prohibit planting according to schedule, the applicant shall ensure that disturbed areas are correctly protected with erosion control measures and shall provide the City with funds in the amount of 125% of a bid from a recognized landscaper or nursery which will cover the cost of the plant materials, installation and any follow up maintenance. Once the planting conditions are favorable the applicant shall proceed with the plantings and receive the funds back from the City upon completion, or the City will complete the plantings using those funds.

32.110 HARDSHIP PROVISIONS

The purpose of this section is to ensure that compliance with this chapter does not cause unreasonable hardship. To avoid such instances, the requirements of this chapter may be reduced. Reductions are also allowed when the application of this Chapter would deprive an owner of reasonable use of land. The

decision-making authority may impose such conditions as are deemed necessary to limit any adverse impacts that may result from granting relief.

A. For lots recorded with the County Assessor's Office on, or before, January 1, 2006, that are located completely or, at minimum, 50 percent inside the WRA, development is permitted, consistent with this section. The Maximum Disturbed Area (MDA) of the WRA shall be determined on a per lot basis and shall be the greater of:

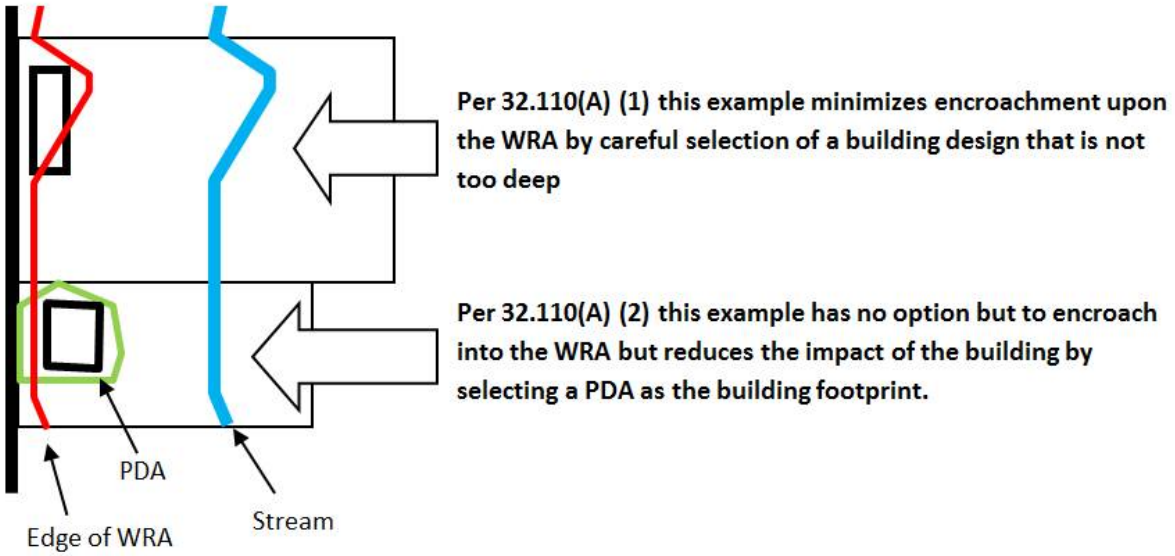
1. 5,000 square feet; or,
2. a maximum of 30% of the total area of the WRA; whichever is greater.

B. The MDA shall be located according to the following priorities (development per Subsection 32.110(A) (1) being the most preferred, while development per Subsection 32.110(A) (2) is the least preferred):

1. Areas where the development will result in the least square footage encroachment into the WRA. The applicant shall demonstrate, through site and building design, that the proposed development is the maximum practical distance from the water resource based on the functional needs of the proposed use.
2. Areas where the development will result in fewer impacts to the function of the WRA and water resource when compared to alternate locations. All things being equal, Previously Disturbed Areas (PDAs) in the WRA shall be developed first and non-PDAs second.

Figure 32-7

MDA location by descending preference



C. The MDA shall include the footprints of all structures and paved surfaces at grade, including sidewalks, driveways, decks and patios. It shall also include graded areas that are not restored to their original grade or replanted with native groundcover.

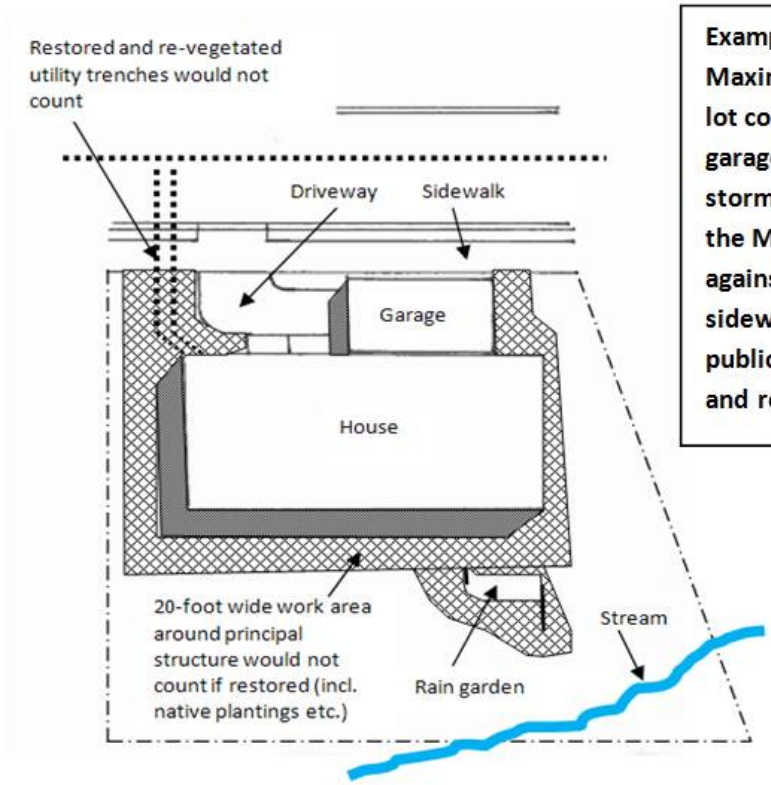
D. The MDA shall not include:

1. Temporarily Disturbed Areas (TDAs) adjacent to an approved structure or development area for the purpose of grading, material storage, construction activity, trenched or buried utilities and other temporary activities so long as these areas are subsequently restored to the original grades and soil permeability, and re-vegetated with native plants per Section 32.100, such that they are at least equal in functional value to the area prior to the initiation of the permitted activity;
2. Bay windows and similar cantilevered elements (including decks, etc.) of the principal or secondary structure so long as they do not extend more than five feet towards the WRA from the vertical plane of the house, and have no vertical supports from grade;
3. PDAs on the property that are not built upon or used;
4. The installation of public streets and public utilities that are specifically required to meet either the Transportation System Plan or a Utility Master Plan so long as all trenched public utilities are subsequently restored to the original grades and soil permeability, and revegetated with native plants per Section 32.100, such that they are at least equal in functional value to the area prior to the initiation of the permitted activity. All areas displaced by streets shall be mitigated for.

Table 32-5 MDA Calculation Summary:

Type of development	Square footage included in MDA calculation?
All structures	YES
Paved surfaces incl. patios and driveways (water permeable or non-water permeable)	YES
TDAs/Graded areas that are restored or re-vegetated with native vegetation	NO
PDA's that are built upon or used as part of the application.	YES
PDA's that are not built upon or used as part of the application.	NO
TDAs/All utility trenches and buried utilities restored or re-vegetated with native vegetation	NO
Storm water detention or treatment pond	YES
Rain garden or bioswale with the native plantings as part of re-vegetation plan	NO
Storm water outfall, energy dissipaters (at, or above, grade)	YES
Non-native landscaping	YES

Figure 32-8



Example of the applicability of the Maximum Disturbed Area (MDA) on a lot completely within the WRA. The garage, house, sidewalk, driveway and stormwater outfall would count against the MDA. Examples not counting against MDA: a vegetated rain garden, sidewalks and driveway portions in the public ROW and TDAs such as backfilled and revegetated utility trenches.

E. Development allowed under Section 32.110(A) shall be subject to the following conditions:

1. The minimum width of the WRA shall be 15 feet on each side of a wetland or as measured from bankfull stage or the edge of a delineated wetland, whichever is greater.
2. Setbacks required by the underlying zoning district may be reduced up to 50% where necessary to avoid construction within the WRA, as long as the development would otherwise meet the standards of this Chapter. However, front loading garages shall be setback a minimum of 18 feet, while side loading garages shall be setback a minimum of three feet.
3. Landscaping and parking requirements may be reduced for hardship properties but only if all or part of the WRA is dedicated pursuant to CDC 32.060(C) or if a restrictive deed covenant is established. These reductions shall be permitted outright and, to the extent that the practices are inconsistent with other provisions or standards of the West Linn CDC, this section is given precedence so that no variance is required. The allowable reductions include:
    a. Elimination of landscaping for the parking lot interior.[1]
    b. Elimination of the overall landscape requirement (e.g. 20% for commercial uses).[1]
    c. Elimination of landscaping between parking lots and perimeter non-residential properties. [1]

d. Landscaping between parking lots and the adjacent right-of-way may be reduced to 8 feet. This 8-foot wide landscaped strip may be used for vegetated storm water detention or treatment.

e. A 25% reduction in total required parking is permitted to minimize or avoid intrusion into the WRA.

f. Adjacent improved street frontage with curb and sidewalk may be counted towards the parking requirement at a rate of one parking space per 20 lineal feet of street frontage adjacent to the property, subject to City Engineer approval based on the street width and classification.

g. The current compact and full sized parking mix may be modified to allow up to 100% compact spaces and no full sized spaces. However, any required ADA compliant spaces shall be provided.

[1] Bioswales and rain gardens shall be installed and sized as needed to address treatment and detention requirements.

4. The applicant must demonstrate that the developed area minimizes impacts to the WRA when compared to developing other areas of the lot or lots, consistent with 32.110(B) (1) to (2).

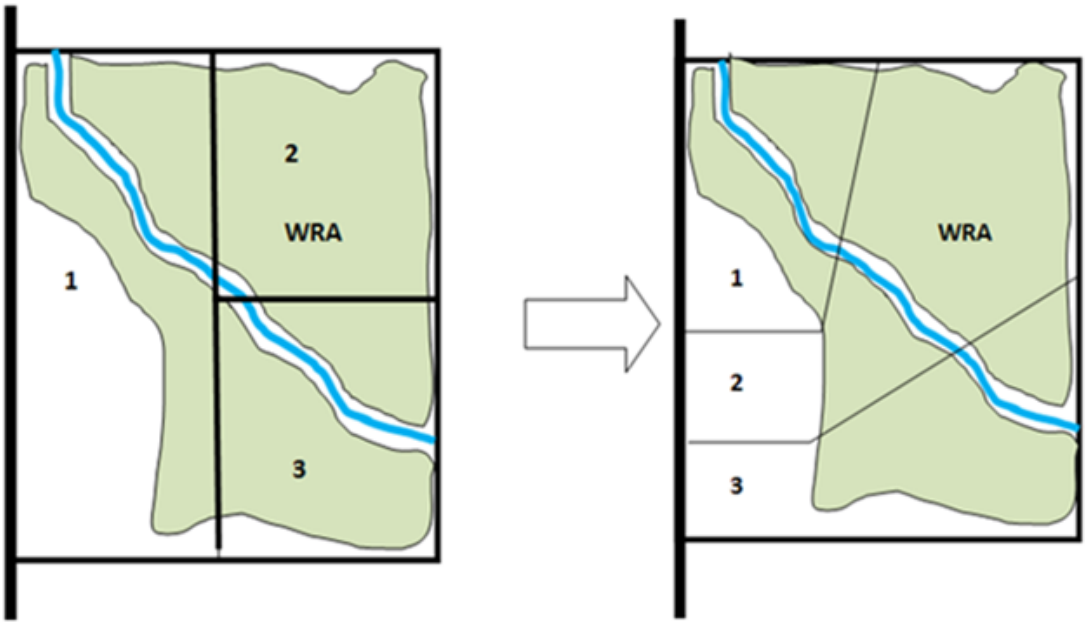
F.

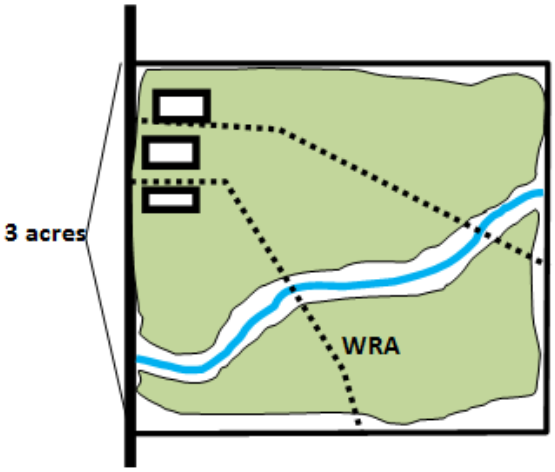
1. The right to obtain a hardship allowance is based on the existence of a lot of record prior to January 1, 2006. The lot of record may have been modified from its original platted configuration but must meet the minimum lot size and dimensional standards of the base zone or qualify as a non-conforming lot of record prior to January 1, 2006.

2. If the 30% allowance yields enough square footage to produce additional lots, consistent with the minimum lot size provisions of the base zone, then the additional homes may be allowed on the lot in the least constrained areas per 32.110(B) or transferred to an adjacent lot that is under the same ownership that is equally or less constrained by WRA provisions. (For example, if the underlying zoning is R-10 and the property owner owns a three acre parcel completely in the WRA then 3 acres X .30 = 39,204 square feet divided by 10,000 = 3.9 which rounds down to 3 homes/lots.)

Figure32- 9

Transferring MDA from constrained lots 2 and 3 to the west edge of lot 1 which is out of the WRA. In this case, the transfer is accomplished by a lot line adjustment.





3 acre parcel (in the R-10 zone and all WRA) X .30= 39,204 square feet divided by 10,000 square foot minimum lot size = 3.9 homes/lots which rounds down to 3 homes/lots which can be established in the least constrained area per 32.090(B). (Dashed line shows the subsequent partition.)

a. Where a property owner owns multiple platted lots of record where each lot could be built upon under the hardship provisions, the property owner may either use the MDA for each lot on an individual lot by lot basis or may transfer 100% of the cumulative MDA of all the lots to those lots that are further away from, or less impactful upon, the WRA.

b. To transfer the MDA density for residential and non-residential projects, the provisions of Chapter 24: a Planned Unit Development shall not apply. However, if the applicant declines to use these hardship provisions, the applicant retains the option to develop the site pursuant to Chapter 24, as applicable.

c. Lots can be reconfigured by lot line adjustment, subdivision or partition per Chapter 85: Land Division.

d. The base zone's dimensional requirements of minimum lot size, lot width, depth and lot coverage shall not apply. All lots shall be functional and proportionately dimensioned. The setbacks of 32.110(E) (2) or the base zone shall apply, whichever is less.

e. Portions of the lot(s) outside the MDA and inside the WRA shall have a recorded conservation easement acknowledging the presence of the WRA, that the allowable development density of the lot has been used and that no further development shall occur on this property unless approved through this chapter. The easement shall not be modified or removed unless both the City and property owner agree to it.

3. PDAs that are not built upon as part of the development proposal will not count in the MDA (e.g. existing access driveways). Conversely, PDAs that are built upon as part of the development proposal will count in the MDA.

4. The square footage of access driveways in public ROWs or streets in public ROWs or other lots that are not on the lot being developed do not count against the MDA on the lot being developed.

G. Any further modification of the standards of this chapter or the underlying zone shall require approval of a Variance pursuant to CDC Chapter 75.

Related Proposed Amendments to CDC Chapter 02, DEFINITIONS

(Deletions and Additions will be subsequently noted)

Section 02.030 SPECIFIC WORDS AND TERMS

Bankfull Stage: The level of stream flow where water reaches or exceeds the top of channel or otherwise inundates the adjacent floodplain on a frequency of approximately every 1.5 to 2 years. This is sometimes known as Ordinary High Water (OHW). In some high gradient or incised streams, the 1.5 to 2 year floods may be restricted to the deepened channel. Conversely, in low gradient streams, where the grades adjacent to the streams are in the 0-15% range, the bankfull stage/OHW is likely to be at the outer edge of adjacent floodplain areas. The bankfull stage or OHW level of stream systems is typically delineated in the field by:

- the outer extent of facultative or obligate plants;
- the upper elevation of float debris (litter of branches, twigs and organic material);
- the lower elevation of woody vegetation (e.g., willow and alder species);
- textural change of depositional sediment or changes in the character of the soil (e.g. from silts, sand, cobble and gravel to upland soils);
- top of the zone of washed or exposed roots;
- a clear natural line impressed on the bank; or
- a break or change in slope angle.

For the purpose of this code, the terms "bankfull stage" and "OHW" may be used interchangeably and are illustrated and further defined in Table 32-3.

Channel: The channel is the physical confine of a stream within the "bankfull stage" and "OHW."

Development: Any manmade change defined as the construction of buildings or other structures, mining, dredging, paving, filling, grading or site clearing, and grubbing in amounts greater than 10 cubic yards on any lot or excavation. Within the flood management area, this term shall also include storage of equipment or materials. Within the Willamette and Tualatin River Protection Areas, this term shall also include any change of use or intensification of the use of land or water, including construction of structures (such as houses, structures, docks and associated pilings or piers), significant grading, or removal or addition of vegetation and groundcover unless specifically exempted per CDC 28.040. Development shall not include grading, site clearing, grubbing or filling where it is part of a submitted land use application that includes the restoration of grades and replanting the affected area with native vegetation per a re-vegetation plan. This definition is distinct and separate from Previously Disturbed Areas (PDAs) and Temporarily Disturbed Areas (TDAs).

Disturbance: For the purpose of this code, the terms "disturbance" and "development" may be used interchangeably.

Disturbed Areas: Areas that have been subjected to disturbance or development. For the purpose of this code, the terms "disturbance" and "development" may be used interchangeably.

Enhancement: See "Mitigation".

Ephemeral Streams: A stream or reach of a stream which flows only in direct response to precipitation and whose channel are always above groundwater or water table levels. Ephemeral streams typically drain sub basins of under 20 acres, have slopes of less than 10 percent as measured laterally from the stream thread and often traverse surficially with no recognizable drainage channel.

Functions and values: Ecological functions describe the numerous functions that WRAs perform including water quality improvement, floodwater storage, terrestrial or aquatic habitat, aquifer recharge etc. WRA values express the relative efficacy of the resource in meeting specific functions.

Intermittent Streams: A stream that flows only during certain times of the year when it receives water from springs or surface sources such as precipitation. The term may be restricted to a stream that flows continuously during periods of at least one month; also may be a stream that does not flow continuously as when water losses from evaporation or seepage exceed the available stream flow. For the purpose of this code, intermittent and perennial streams are protected identically.

Large Wood (recruitment): Large wood comprises trees that have fallen down in the WRA due to chronic mortality, disease, windstorms, landslides, erosion, flooding, etc., which in turn may provide aquatic and terrestrial habitat opportunities, modify stream velocities, channel depths and flow patterns

and stabilize banks in the WRA. "Large wood recruitment" describes forested WRAs of sufficient size that have the potential to supply these trees which ultimately become "large wood".

Maximum Disturbed Area (MDA): The MDA, as measured in square feet, is the maximum area within a WRA that can be disturbed in hardship cases under CDC Chapter 32, Water Resource Areas.

Mitigation: Mitigation is creating, restoring or enhancing WRAs (including wetlands) to replace or compensate for the WRA lost. Creation entails constructing a WRA in an area that never supported WRAs historically. Restoration entails re-establishing WRA hydrology and vegetation to sites that have lost most of their function and value such as a site that was historically a WRA but dried out by draining or filling. Enhancement entails improving an existing but degraded WRA by correcting the conditions that cause it to be degraded. This might include providing more water to the site or the removal of invasive plant species and replacement with appropriate native plant material and trees.

Passive-oriented recreation and parks: The focus is upon unstructured play, relaxation, environmental interpretation, family picnics and similar activities. Support facilities, such as covered picnic, play structures or playing fields, etc. are discouraged or limited. Restrooms, trails and interpretive facilities would be appropriate.

Previously Disturbed Areas (PDA): Areas, such as old driveways, trails, gardens, graded areas, old abandoned structural foundations, storm water outfalls and intakes, manholes, utilities, etc. that existed and were altered or modified before January 1, 2006, typically as a result of clearing, grubbing, grading, excavation or construction whereby the topography, ground cover and vegetation have been modified from their original or natural state and not re-established or returned to their natural state. The burden shall be on the applicant to date the PDA through photographs or other credible evidence. The PDA definition applies to Chapter 32 and is distinct and separate from Temporarily Disturbed Areas (TDAs) and Maximum Disturbed Areas (MDAs).

Principal Structure: The structure that represents the main use of the property; to which all other structures on the property serve an incidental or subordinate purpose.

Reasonable Use: Uses, similar in size, intensity and type, to uses allowed on other properties in the City, that have the same zoning designation as the subject property.

Riparian corridor: An area within and adjacent to a WRA on the West Linn WRA map for its vegetative, forested and habitat values.

Soil infiltration: The process by which water on the surface enters the soil and replenishes below ground water tables.

Slope determination (for WRAs): Slope (e.g. rise over run) is the average slope in the first 50 feet as measured at right angle from the OHW mark, the edge of bankfull stage or outer edge of wetland.

Stream: A body of water with a current or flow confined within the OHW mark or the edge of bankfull stage. (See also ephemeral stream or water resource.)

Stream centerline or thread: The starting point of measurement for ephemeral streams which often lack an identifiable bankfull stage or OHW mark.

Temporarily Disturbed Areas (TDA): Area impacted by clearing, grubbing, grading, excavation, storage of building materials, building equipment, construction activity or other temporary activity whereby the area is modified from its original state but is subsequently fully restored in terms of grades and re-vegetated. TDAs will not have any new structures or other physical improvements built on them, but they may have buried utilities approved consistent with Chapter 32. The TDA definition is distinct and

separate from disturbed areas, PDAs and MDAs. TDA's shall not include significant trees or wetlands that cannot be replicated in a timely way through restoration.

Type II lands. Lands which have constraints that are sufficient to preclude most standard types of development. Constraints in these areas generally do not constitute a health or safety hazard, but require the use of non-standard technical design criteria. Type II lands exist in the following areas:

Slope: All lands with slopes between 25 and 35 percent.

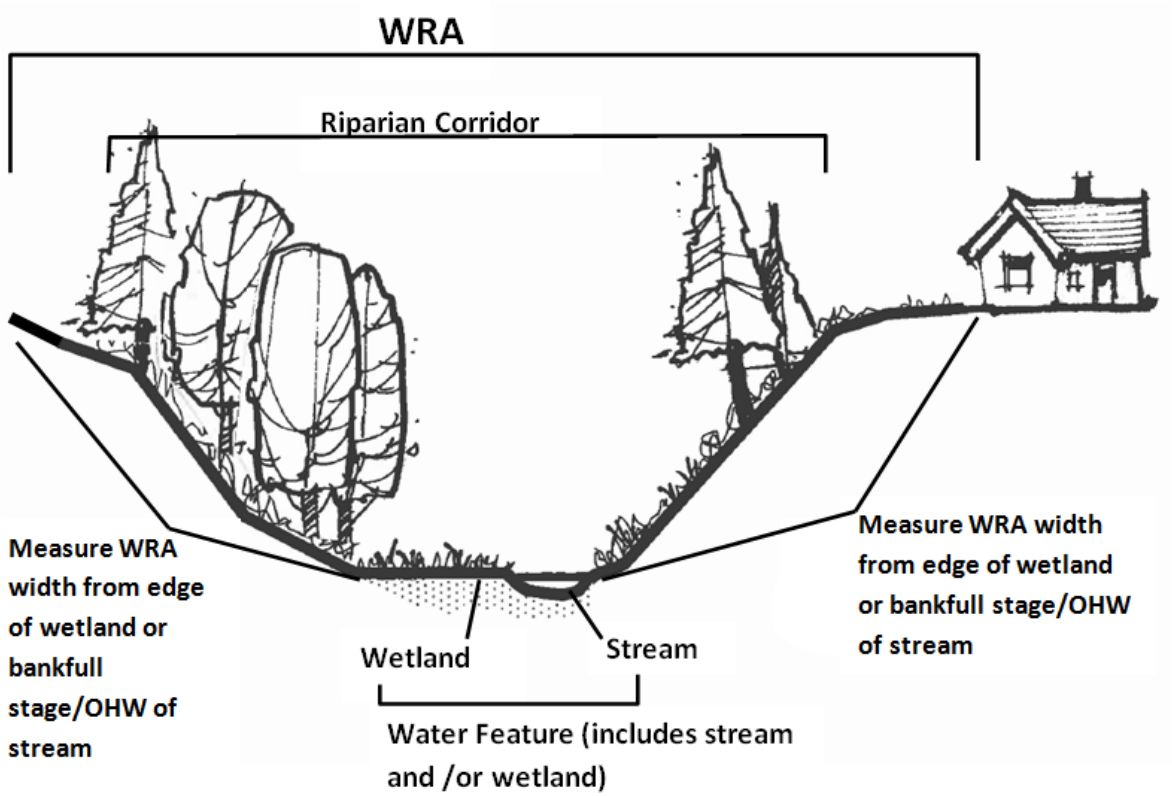
Water Resource Areas

Geology: All known mineral and aggregate deposits.

"Unhealthy or disturbed state": defines an area of a WRA that is dominated by non-native vegetation and/or grading which is an appropriate candidate for restoration to its natural condition.

Water resource: Any stream or wetland identified on the West Linn WRA Map.

Water resource area (WRA): Any water resource or riparian area identified in the West Linn - WRA map and the adjacent area of varying widths, established pursuant to Chapter 32, in which development activities are restricted in order to protect the functions and values of the associated water resource. (see graphic below)



Wetlands: Those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are also defined by the sub-categories of "high quality wetlands" and "locally significant wetlands".

Related Proposed Amendments to CDC Chapter 24, PLANNED UNIT DEVELOPMENT

24.070 EXEMPTIONS FROM PLANNED UNIT DEVELOPMENT REQUIREMENTS

A planned unit development (PUD) shall not apply in cases where all the following conditions exist:

A. No density transfer is proposed pursuant to provisions of this chapter.

B. No development, construction, or grading will take place on Type I and II lands.

C. All the Type I and II lands shall be dedicated to the City as open space, or protected by easement with appropriate delineation.

D. Development, including land division and lot line adjustments, under the hardship provisions of Chapter 32.

Related Proposed Amendments to CDC Chapter 33, STORMWATER QUALITY AND DETENTION

33.040 APPROVAL CRITERIA

The Planning Director and City Engineer shall make written findings with respect to the following criteria when approving, approving with conditions or denying applications for storm water detention permits and storm water quality permits.

A. Storm water quality facilities shall meet non-point source pollution control standards required by the Public Works Design Standards.

B. Design of storm water detention and pollution reduction facilities and related detention and water quality calculations shall meet Public Works Design Standards and shall be prepared by a professional engineer licensed to practice in the State of Oregon.

C. Soil stabilization techniques, erosion control, and adequate improvements to accommodate the intended drainage through the drainage basin shall be used. Storm drainage shall not be diverted from its natural watercourse unless no feasible alternatives exist. Interbasin transfers of storm drainage will not be permitted.

D. Storm water detention and treatment facilities. may be installed in Water Resource Areas (WRAs) per section 32.060(B) and consistent with Habitat Friendly provisions of 32.060(H).

E. Storm water detention and treatment facilities shall be vegetated with plants from the Metro's Native Plant List as described in CDC 32.100(A).

F. Projects must either stockpile existing topsoil for reuse on the site or import topsoil, rather than amend subsoils. Soil amendments are allowed only where the applicant can demonstrate they are the only practical alternative for enabling the soil to support healthy plantings, promoting better storm water treatment, or improving soil infiltration capacity (where appropriate).

G. Interim erosion control measures, such as mulching, shall be placed immediately upon completion of grading of the facilities.

Related Proposed Amendments to CDC Chapter, 46 OFF-STREET PARKING, LOADING AND RESERVOIR AREAS

46.090 MINIMUM OFF-STREET PARKING SPACE REQUIREMENTS

J. Development in Water Resource Areas may reduce the required number of parking spaces by up to 25%. Adjacent improved street frontage with curb and sidewalk may also be counted towards the parking requirement at a rate of one parking space per 20 lineal feet of street frontage adjacent to the property.

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

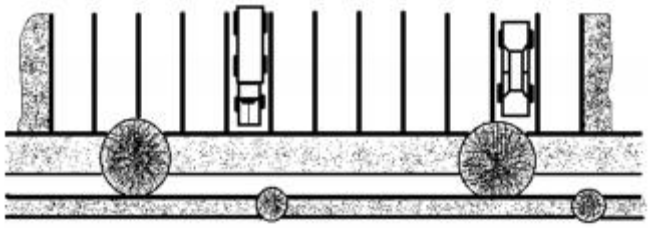
A. Design standards.

1. "One standard parking space" means a minimum for a parking stall of eight feet in width and 16 feet in length. These stalls shall be identified as "compact." To accommodate larger cars, 50 percent of the required parking spaces shall have a minimum dimension of nine feet in width and 18 feet in length (nine feet by 18 feet). When multi-family parking stalls back onto a main driveway, the stalls shall be nine feet by 20 feet. Parking for development in Water Resource Areas may have 100% compact spaces.

…

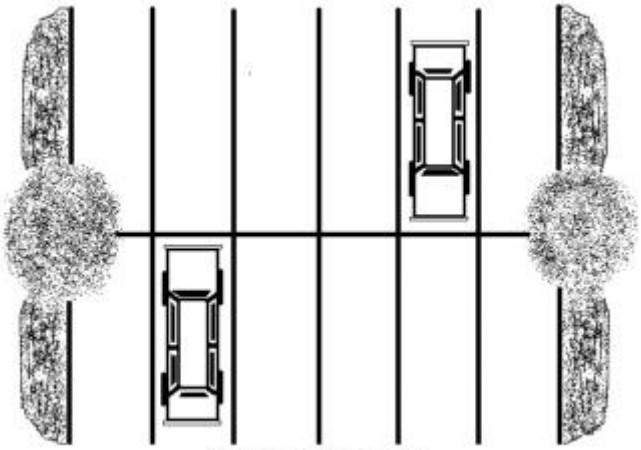
19. Areas of the parking lot improved with asphalt or concrete surfaces shall be designed into areas of 12 or less spaces through the use of defined landscaped area. Groups of 12 or less spaces are defined as:

a. Twelve spaces in a row, provided there are no abutting parking spaces, as in the case when the spaces are abutting the perimeter of the lot; or



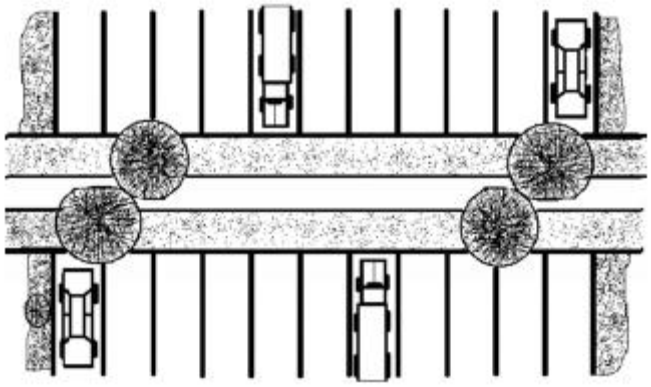
12 SPACES IN A ROW

b. Twelve spaces in a group with six spaces abutting together; or



6 SPACES X 2 = 12

c. Two groups of twelve spaces abutting each other, but separated by a 15-foot wide landscape area including a six-foot-wide walkway.



12 SPACES X2 WITH LANDSCAPING

d. Parking areas improved with a permeable parking surface may be designed using the configurations shown in subsections (A)(19)(a), (b) and (c) of this section except that groups of up to 18 spaces are allowed.

e. The requirements of this chapter relating to total parking lot landscaping, landscaping buffers, perimeter landscaping, and landscaping the parking lot islands and interior may be waived or reduced pursuant to CDC 32.110(E)(3) in a WRA application without a variance being required.

Related Proposed Amendments to CDC Chapter 54, LANDSCAPING

54.020 APPROVAL CRITERIA

G. Landscaping requirements in Water Resource Areas (WRAs).

Pursuant to CDC 32.110(E)(3) the requirements of this chapter relating to total site landscaping, landscaping buffers, landscaping around parking lots, and landscaping the parking lot interior may be waived or reduced in a WRA application without a variance being required.

Related Proposed Amendments to CDC Chapter 55, DESIGN REVIEW

55.100 APPROVAL STANDARDS – CLASS II DESIGN REVIEW

I. Public facilities. An application may only be approved if adequate public facilities will be available to provide service to the property prior to occupancy.

1. Streets. Sufficient right-of-way and slope easement shall be dedicated to accommodate all abutting streets to be improved to the City's Improvement Standards and Specifications. The City Engineer shall determine the appropriate level of street and traffic control improvements to be required, including any off-site street and traffic control improvements, based upon the transportation analysis submitted. The City Engineer's determination of developer obligation, the extent of road improvement and City's share, if any, of improvements and the timing of improvements shall be made based upon the City's systems development charge ordinance and capital improvement program, and the rough proportionality between the impact of the development and the street improvements.

   In determining the appropriate sizing of the street in commercial, office, multi-family, and public settings, the street should be the minimum necessary to accommodate anticipated traffic load and needs and should provide substantial accommodations for pedestrians and bicyclists. Road and driveway alignment should consider and mitigate impacts on adjacent properties and in neighborhoods in terms of increased traffic loads, noise, vibrations, and glare.

   The realignment or redesign of roads shall consider how the proposal meets accepted engineering standards, enhances public safety, and favorably relates to adjacent lands and land uses. Consideration should also be given to selecting an alignment or design that minimizes or avoids hazard areas and loss of significant natural features (drainageways, wetlands, heavily forested areas, etc.) unless site mitigation can clearly produce a superior landscape in terms of shape, grades, and reforestation, and is fully consistent with applicable code restrictions regarding resource areas.

   Streets shall be installed per Chapter 85 CDC standards. The City Engineer has the authority to require that street widths match adjacent street widths. Sidewalks shall be installed per CDC 85.200(A) (3) for commercial and office projects, and CDC 85.200(A) (16) and 92.010(H) for residential projects, and applicable provisions of this chapter. Where streets bisect or traverse Water Resource Areas (WRAs) the street width shall be reduced to the minimum standard of 20 feet (two 10-foot travel lanes) plus four foot wide curb flush sidewalks or alternate configurations which are appropriate to site conditions, minimize WRA disturbance or are consistent with an adopted Transportation System Plan. The street design shall also be consistent with Habitat Friendly provisions of section 32.060(H).

   Based upon the City Manager's or Manager's designee's determination, the applicant shall construct or cause to be constructed, or contribute a proportionate share of the

costs, for all necessary off-site improvements identified by the transportation analysis commissioned to address CDC 55.125 that are required to mitigate impacts from the proposed development. Proportionate share of the costs shall be determined by the City Manager or Manager's designee, who shall assume that the proposed development provides improvements in rough proportion to identified impacts of the development.

CHANGES TO ZONING DISTRICTS

08.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 08.070 shall apply with the exception of (1), (2), (3) and (4) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

09.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 09.070 shall apply with the exception of (1), (2), (3) and (4) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

10.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 10.070 shall apply with the exception of (1), (2), (3) and (4) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

11.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 10.070 shall apply with the exception of (1), (2), (3) and (4) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

12.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 12.070 shall apply with the exception of (A), (B), (C) and (D) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

13.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 13.070 shall apply with the exception of (A), (B), (C) and (D) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

14.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 14.070 shall apply with the exception of (A), (B), (C) and (D) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

15.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 15.070 shall apply with the exception of (A), (B) and (C) whereby there shall be no specific lot size, average minimum lot width or lot depth but that the lot shape shall be functional and generally proportionate.

16.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 16.070 shall apply with the exception of (A), (B), (C) and (D) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

19.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 19.070 shall apply with the exception of (A) (1-3) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

21.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 21.070 shall apply with the exception of (A) (1-3) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.

23.075 DIMENSIONAL REQUIREMENTS FOR PROPERTY DEVELOPED UNDER HARDSHIP PROVISIONS OF WRA CHAPTER 32:

The dimensional requirements of 23.070 shall apply with the exception of (A) (1-3) whereby there shall be no specific lot size, average minimum lot frontage, width or lot depth but that the lot shape shall be functional and generally proportionate.