

Decision Table M: Willamette River – Miscellaneous Code Amendments Part 1

This table contains all remaining edits to Proposed Draft Volume 2A, Part 2, code section 33.475. Generally, the edits include:

- Changes to the exemptions for maintenance/repair/replacement of structures below ordinary high water, new signs and soil amendments;
- Clarifications regarding landscaping disturbance areas;
- Clarifications to river-related uses associated with marine passenger docks; and
- Other minor edits.

Contents of Decision Packet x:

- Decision Table M
- Memo M

Items Marked for PSC Discussion:

None

Ref #	Comment	Commenter(s)	Topic	Proposed draft	Request(s)	Staff recommendation	Staff rationale	Discuss?	PSC decision
M1 and Memo Page 6	20885	Susie Lahsene, Port of Portland	Existing Development in the River Environmental Overlay Zone	Zoning code 33.475.040.B.2.d exempts maintenance, alterations, repair and replacement of existing development and structures located above the ordinary high water mark from the river environmental overlay zone regulations. Development and structures below the ordinary high water mark are not exempted.	Allow as an exemption, the replacement of piles, which are located below ordinary high water.	Proposed amendment to allow maintenance, alterations, repair and replacement of existing development and structure located both above and below the ordinary high water mark.	This is consistent with the regulations throughout the rest of the City and the existing Greenway, which allow all existing development and structures to be maintained, repaired and replaced.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M2 and Memo Page 8 And Page 54	20324	Staci Monroe, BDS	Landscaping Standards	Zoning code 33.475.040.B.2.f exempts removal of structure and debris, application of soil amendments and placement of temporary erosion measure that are required by the landscaping standard, 33.475.220.	The code is not clear that the actions are exempt only when done as part of meeting the landscaping standard.	Proposed amendment to: 1. Move the application of soil amendment to a standard in the river environmental overlay zone subsection, 33.475.440; 2. Retain the exemption for structures and debris only if above the ordinary high water mark; and 3. Move installation of temporary erosion control to a separate exemption.	1. Applying soil to amend the quality of the planting medium in the river environmental overlay zone will be reviewed through a plan check. Qualifications, copied from the landscaping standard, such as depth of medium and when the applications can occur (e.g., not when the ground is frozen) are be added. 2. Removal of structures and debris above OHWM in the river e-zone will improve the quality of the natural resources. 3. Temporary erosion control is necessary for many reasons to prevent erosion and sediment leaving the site and entering the water.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M3 and Memo Page 8	20324	Staci Monroe, BDS	Exemption for Structures on Docks	Zoning code 33.475.040.B.2.j exempts structures located on an existing dock, wharf or pier including on any gangway that provides access to the dock, wharf or pier.	The code is not clear if this applies to new or existing structures.	Proposed amended to clarify that the exemption applies to new or alternations to existing structures.	The intent of the code was to allow new and alternations to existing structures on existing wharf, docks and piers; however, the code was not clear.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other

Ref #	Comment	Commenter(s)	Topic	Proposed draft	Request(s)	Staff recommendation	Staff rationale	Discuss?	PSC decision
M4 and Memo Page 12	20324	Staci Monroe, BDS	Planting Disturbance Areas	<p>Zoning code 33.475.040.B.2.o and .p exempt some development from the new River Environmental overlay zone requirements, provided disturbance areas are replanted to the standards of 33.475.220.</p> <p>Zoning code 33.475.220 is the landscaping standard that applies to the land riverward of the river setback.</p>	<p>1. Exemptions refer to 33.475.220 for replanting of temporary disturbance areas, but if that area is more than 50 ft landward of the top-of-bank there is no planting requirement?</p> <p>2. Be consistent between the exemptions with regards to what plant is required. Some require replanting to 33.475.220 and others just require replanting to previous conditions.</p>	<p>1. Proposed amendments to the exemptions that require temporary disturbance areas more 100 square feet in size to meet the landscaping standards of Table 475-1 if within the river setback, and the subarea 3 standards of Table 475-1 if outside of the river setback.</p> <p>2. Proposed amended to the exemptions to require that temporary disturbance areas less than 100 square feet in size must be planted with three shrubs and seeded with a grass/forbs mix.</p>	<p>1. The subarea 3 requirements are intended to be compatible with Central City urban development and visibility and safety related to the Greenway Trail. The requirement is for tree densities equal to that of the other subareas and ground cover, but no shrub cover is required in subarea 3.</p> <p>2. Typically, when there is ground disturbance that is exempt from the River Environmental overlay zone requirements, then any temporary disturbance must be replanted to meet the landscaping standards of Table 475-1. However, when the exemption specifies that the temporary disturbance be less than 100 square feet, then the landscaping standards of Table 475-1 cannot be met if the applicant chooses to plant a medium or large size tree. Therefore, for temporary disturbances that are required to be less than 100 square feet, the applicant may plant the area with shrubs and seed with grasses and forbs; no trees are required.</p>	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M5 and Memo Page 12	20885	Susie Lahsene, Port of Portland	Signs in the River Environmental Overlay Zone	<p>Zoning code 33.475.040.B.2 does not exempt signs from the regulations of the River Environmental overlay zone.</p>	<p>Allow signs, including navigation markers and warning signs, in the river.</p>	<p>Proposed amendment to exempt signs from the River Environmental overlay zone regulations.</p>	<p>This is consistent with the existing Greenway regulations, which exempts signs. Signs are important for wayfinding along the Greenway Trail, information about resource enhancement projects, stormwater facilities, river navigation and public safety.</p>	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M6 and Memo Page 14	20324	Staci Monroe, BDS	Contamination Clean Up	<p>Zoning code 33.475.040.C explains when the regulations of 33.475.500, Removal or Remediation of Hazardous Substances, apply. 33.475.500 applies to actions to remove or remediate hazardous substances that have been approved or selected under Oregon or federal clean up law.</p>	<p>Clarify that 33.475.500 only applies to the portion of the site where the removal or remediation action is being performed. Outside of that area, the rest of the site is subject to the other regulations of the chapter including 33.475.220, landscaping standards.</p>	<p>Proposed amendment to clarify that the regulations of 33.475.500 only apply within the portions of the site where clean up actions are proposed.</p> <p>Outside of the removal and remediation areas, all other relevant regulations and procedures of 33.475 apply.</p>	<p>It was always the intent that 33.475.500 would apply strictly to the area where clean-up actions are being performed. This amendment clarifies that intent.</p>	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other

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M7 and Memo Page 14	20324	Staci Monroe, BDS	Property Line Adjustments	Zoning code 33.475.050 addresses property line adjustments such that this action does not result in a property that is in more than one river overlay zone, unless the second overlay is in the River Environmental overlay zone.	1. Clarify if this is a standard or regulation. 2. Clarify if an adjustment is allowed. 3. Move this to a different location in the code. It's odd placement between exemption and permit requirements. Why not place it in the development standards section, like how 33.430 has standards for PLAs?	Proposed amendment to code subsection to clarify that adjustments are prohibited and move it to 33.475.260. The subsection would relocate from the chapter's General section to the River General Overlay Zone section.	1. It makes sense to clarify that adjustments are prohibited with property line adjustments. The goal of this regulation is not to create properties along the river without river frontage. 2. It also makes sense to move the code subsection out of the General section and into the River General Overlay Zone development standards section, since this would apply to all properties in the Central Reach (Map 475-1).	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M8 and Memo Page 14	20324	Staci Monroe, BDS	Site Plan – Existing Conditions	Zoning code 33.475.060.B.1 is the information required to be shown on the existing conditions site plan. (Note – In the PSC Amended Proposed Draft, .060 is now .050.)	1. Add top of bank 2. Change 3" tree to 6" tree. There are no standards or exemptions to apply to 3" trees. If keeping 3" trees in this section, please add commentary to explain.	1. Proposed amendment to add showing the top of bank on the existing conditions site plan. 2. Proposed amendments to require trees 1.5 inches in diameter or larger to be shown on the site plan.	1. Adding the top of bank to the existing conditions requirement addresses a clerical error. 2. The second amendment reflects the decision by PSC at the November work session to require replacement of trees 1.5 inches or larger in diameter.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M9 and Memo Page 22		BPS	River-Related	Zoning code 33.475.215 limits the size of development for river-related uses associated with a marine passenger dock.		Proposed amendment to update the purpose statement to be clear that the size limitation within the river setback is only for river-related associated with a marine passenger dock and reason for limitation.	River-related development is typically allowed in the river setback. This limitation is specific to development associated with a marine passenger dock. The intent is to make sure that river setback is not dominated by a structure and that there is room for river-dependent uses, natural resources, recreation and public access.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M10 and Memo Page 32	20324	Staci Monroe, BDS	Exterior Lighting	Zoning Code 33.475.230.C requirements do not apply to Tom McCall Waterfront Park or public rights-of-way. However, the list of where exterior lights are allowed states both the park and rights-of-way.	Remove a and b from the list of where exterior lights are allowed	Proposed amendments to rewrite this standard to be clear where exterior lighting is and is not allowed and where it is exempt from the standard.	The amendment clarifies the standard and removes duplication under 33.475.230. C.1. As Governor Tom McCall Waterfront Park and public rights-of-way are exempt from this requirement per the beginning statement under 33.475.230.C.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other

Ref #	Comment	Commenter(s)	Topic	Proposed draft	Request(s)	Staff recommendation	Staff rationale	Discuss?	PSC decision
M11 and Memo Page 38	20324	Staci Monroe, BDS		Zoning code 33.475.440.B is the standards for new utilities and upgrades to existing utilities including stormwater conveyance facilities.	<p>This section is unclear. A semi-colon or other punctuation needed in the sentence to break up what new utility line includes. If it is all inclusive, then the standards below should be simplified to just refer to new utility line.</p> <ul style="list-style-type: none"> • New utility line is listed in both standard 1 and 2 so it is unclear where the disturbance area is allowed. • Why would a new public utility line be limited to 10-foot wide disturbance area but an upgrade would be allowed to disturb a 15 feet area. The pipe width could be the same. • Does standard 3 only apply to a new line but not an upgrade? Shouldn't all lines be limited? • Standard 5 disturbance areas – if they extend beyond 50 feet from top of bank, how does 33.475.220 Landscaping get applied? If the landscaping regulations of 33.475.220 apply anyway, why is this standard needed? • Should standard 6 also include exempting B.5? 	<p>Proposed amendments to:</p> <ol style="list-style-type: none"> 1. Clarify that the standards apply to both new and upgrades to existing utilities including stormwater facilities. 2. Simplify the standard by allowing the disturbance area to be no more than 15 feet wide. 3. Simplify that the disturbance area needs to be above top-of-bank. 4. Update the landscaping requirements to specify that the subarea 3 standards apply outside of the river setback. 	<p>These amendments do not change the intent of the standard. They clarify the standard and make it more workable for staff performing a plan check.</p> <p>The one substantive change is to simplify the standard by making the disturbance area for any utility line (private, public, new or upgrade) 15 feet in width.</p>	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M12 and Memo Page 42	20324 20701 20846	Staci Monroe, BDS Michael Jordan, BES Mike Abbate, PPR		Zoning Code 33.475.440.E is the standards for trails. Trails must be setback 10 feet from the top of bank of the Willamette River or a stream and 30 feet from a wetland or other water body.	Setback distance to a wetland is listed in both standard E.1 and E.2. Please clarify which setback distance(s) should be used.	Proposed amendment to delete a wetland or other water body from E.1 and maintain both in the standard for E.2.	The Greenway Trail is allowed to be located nearer to streams than other types of disturbance in the river environmental overlay zone. This is to facilitate completion of the Greenway Trail in the Central City.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other

Ref #	Comment	Commenter(s)	Topic	Proposed draft	Request(s)	Staff recommendation	Staff rationale	Discuss?	PSC decision
M13 and Memo Page 42-44	20324	Staci Monroe, BDS	Landscaping Requirements in the River Environmental Overlay Zone	Zoning codes 33.475.440.E, E, F, and G are standards for trails, public viewing areas, view corridors and resource enhancement. All four require that temporary disturbance areas be planted to meet the landscaping standards of 33.475.220.	All have a standard to plant temporary disturbance areas to meet 33.475.220. Not clear what to apply if the temporary disturbance area extends beyond 50 feet from top of bank. If these sites are already subject to the landscaping standards, are these standards necessary?	Proposed amendments to the standards to require that temporary disturbance areas meet the landscaping standards of Table 475-1 if within the river setback, and the subarea 3 standards of Table 475-1 if outside of the river setback.	The subarea 3 requirements are intended to be compatible with upland, Central City urban development and visibility and safety related to the Greenway Trail. The requirement is for tree densities equal to that of the other subareas and ground cover, but no shrub cover is required in subarea 3.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M14 and Memo Page 44	20324	Staci Monroe, BDS	Site Investigative Work	Zoning code 33.475.440.H provides standards for site investigative work that is temporary and doesn't disturb more than 100 square feet of ground. Zoning Code 33.475.040.B.2.r is an exemption that is written nearly the same as the standard.	What does "site investigative work mean? Test pits and access? Please clarify.	1. Proposed amendment to 33.475.440.H to clarify that site investigative work includes test pits and that the disturbance limitation is per test pit or monitoring station. 2. Proposed amendment to 33.475.040.B.2.r to delete this exemption.	1. Test pits may be dug to test for soil contamination or cultural resources or other investigative work. 2. The exemption is duplicative and has nearly the same requirements. The standard requires a plan check to make sure the actions meet the requirements.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M15 and Memo Page 52		BPS	Mitigation Standards	Zoning code 33.475.440.K.7 requires that for larger mitigation sites a diversity of trees and shrubs to be planted.	Simplify the requirement and make it consistent with the landscaping standards.	Proposed amendment to replace the current diversity standards with the 33.475.220.D landscaping requirement for plant diversity	The proposed mitigation planting standard says if more than 10 trees are used then no more than 50% of the trees can be the same species and no more than 25% of the total plants may be the same genus. The proposed landscaping standard requires that for planting areas over 600 square feet, at least two different tree species and sizes and three different shrub species be used. Both result in at least two different tree species being used. However the landscaping standard approach is much more simple to implement.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M16 and Memo Page 56-60		BPS	Correcting Violations	Zoning code 33.475.450.B.2 provides options for correcting violations of this chapter. The remedy is to plant the disturbed area with one tree, six shrubs and eight other ground cover plants for every 200 square feet.	Make consistent with landscaping, resource enhancement and mitigation standards.	Proposed amendment to make correcting violations consistent with the landscaping, resource enhancement and mitigation standards.	Unlike other sections of this chapter, the option does not reference the landscaping planting options that allow flexibility for choosing planting density based on tree size.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other

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M17 and Memo Page 62	20324 20701	Staci Monroe, BDS Michael Jordan, BES	Contamination Clean Up	Zoning code 33.475.500.E states that a supplemental site plan is required to receive a determination letter from the city.	Remove the reference to “determining substantial conformance with standards”, as these are not standards, they are regulations.	Proposed amendment to remove E.	The intent of this code section is to consolidate the substantive requirements of the River Environmental overlay zone. This is to make it easier for the Oregon Department of Environmental Quality to determine if an applicant is meeting the substantive requirements of the local jurisdiction, and is therefore exempt from local land use procedures. The City of Portland does not have a formal role in the process between ODEQ and the applicant. Per 33.475.500.C.2 if an applicant wants to obtain a permit, they may elect to do so even if otherwise exempted by the state.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M18 and Memo Page 62		BPS	Contamination Clean Up	Zoning code 33.475.500.F.1.b.[3] and Table 475-4 specifies the planting requirements for contamination clean-up actions.	Make the standards for planting consistent with the landscaping, resource enhancement and mitigation standards throughout the rest of the Chapter	Proposed amendments to: 1. Update Table 475-4 to be consistent with Table 475-3 for planting density. 2. Update [3] to be consistent with other standards for planting density.	These amendments simply make this section consistent with other sections of the Chapter.	<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M19	20324	Staci Monroe, BDS BPS	33.475 Typos		Multiple typos and clerical errors throughout 33.475.	Proposed amendments to fix typos and clerical errors.		<input type="checkbox"/>	<input type="checkbox"/> Support staff rec. <input type="checkbox"/> Other
M20		BPS	33.475 Commentary		Update the commentary.	Proposed amendments to make the commentary consistent with amended zoning code.		<input type="checkbox"/>	



Bureau of Planning and Sustainability

Innovation. Collaboration. Practical Solutions.

MEMO

DATE: December 28, 2016

TO: Planning and Sustainability Commission

FROM: Mindy Brooks, City Planner, Central City 2035

CC: Susan Anderson, Director; Joe Zehnder, Chief Planner; Sallie Edmunds, Central City Planning Manager

SUBJECT: **Attachment to Decision Table M: Willamette River – Miscellaneous Code Amendments**

Amendments to Proposed Draft CC2035 Volume 2A, Part 2, zoning code chapter 33.475 based on public testimony and requests from the Planning and Sustainability Commission. The amendments are shown in two highlighted colors that correspond with decision tables summarizing the amendments:

- **Gray highlighted text** shows amendments approved by the PSC on November 16, 2016. Those amendments were summarized in Decision Table G – Willamette River: Environment and Decision Table H – Willamette River: Open Space and Development.
- **Yellow highlighted text** identifies new amendments summarized in Decision Table M – Willamette River: Miscellaneous Code Amendments. These amendments are the subject of the January 10, 2017 PSC work session.

At the PSC work session, staff will be asking the commissioners to approve all of the amendments to 33.475 because the amendments are easier to understand when set in context of the entire code chapter. This zoning code chapter will come back to PSC with the full CC2035 package for a final vote in the spring.



Commentary

Chapter 33.475 is a new chapter and is not underlined for ease of reading

New Chapter 33.475 River Overlay Zones

This new chapter establishes the development regulations for sites within the Willamette Greenway boundary in the Central Reach, except for sites within the South Waterfront Subdistrict and sites zoned industrial. The City is updating the *Willamette Greenway Plan* (1988) for the Central Reach as part of **the** Central City 2035 Plan. Volume 1 of the proposed draft contains the policy framework for this regulatory update. Overall, it calls for a multifunctional river and riverfront area with a broad array of uses and functions that promote, protect, and enhance opportunities for recreation, commerce, natural resources, transportation and scenic appreciation in the urban center of our city.

The greenway regulations for **the** South Waterfront Subdistrict are found in 33.510.253. In the future, as river planning for the North and South reaches is completed, Chapter 475 will be updated **specifically for those areas** and will replace Chapter 440 Greenway Overlay Zones in its entirety. **Industrially** zoned sites will be included in the update of the **industrial** North Reach **Plan that focuses on the working harbor industrial district. because** Central Reach sites zoned industrial share common characteristics with those in the North Reach.

River **Oo**verlay **Zz**ones replaces Greenway **Oo**verlay **Zz**ones' terminology of 33.440. In the Central Reach, the applicable river overlay zones are River General and River Environmental.

33.475 River Overlay Zones

475

Sections:

General

- 33.475.010 Purpose
- 33.475.020 River Overlay Zones
- 33.475.030 Where These Regulations Apply
- 33.475.040 When These Regulations Apply
- 33.475.050 Property Line Adjustments
- 33.475.060 Supplemental Permit Application Requirements

River General Overlay Zone

- 33.475.200 Use Regulations
- 33.475.210 River Setback
- 33.475.215 Marine Passenger Docks and Marine Passenger Terminals
- 33.475.220 Landscaping
- 33.475.230 Exterior Lighting
- 33.475.240 Public Viewpoints
- 33.475.250 Nonconforming Uses and Development
- 33.475.260 Property Line Adjustments

River Environmental Overlay Zone

- 33.475.400 Use Regulations
- 33.475.410 Environmental Report
- 33.475.420 Review Procedures
- 33.475.430 Prohibitions
- 33.475.440 Development Standards
- 33.475.450 Corrections to Violations of River Environmental Overlay Zone Development Standards

Clean Up of Contaminated Sites

- 33.475.500 Removal or Remediation of Hazardous Substances

Map 475-1 Central Reach River Overlay Boundary

Map 475-2 Willamette River Top of Bank

Map 475-3 Landscaping Requirements at Governor Tom McCall Waterfront Park and Public Beaches

Commentary

33.475.0210.A. Purpose

The River General and River Environmental overlay zones exist or are proposed along all of the Greenway Boundary within the Central Reach. The River General overlay zone covers entire sites and includes development standards for the river setback, landscaping and lighting. There are no use restrictions outside of the river setback area in the River General overlay zone. Instead, the base zones governs the allowed uses including urban scale residential, commercial, mixed-use development and open space/recreation uses that bring people to the riverfront, meeting the purpose of the River General overlay zone.

The River Environmental overlay zone overlaps the River General overlay zone. The River Environmental overlay zone is applied to high or medium ranked riparian corridors and wildlife habitat as identified in the Central Reach Natural Resources Inventory. Those natural resources include the river, riverbank and riparian areas within at least 50 feet of the top of bank. The width of the riparian area may ~~very be wider than 50 feet from the top of bank~~ depending on the natural resources present including floodplain and riparian vegetation ~~it may be wider than 50 feet from top of bank~~. This is consistent with best available science, including Metro's Title 13 Nature in Neighborhoods Program and City of Portland's Natural Resources Inventory, which has documented that the absolute minimum width of a protected riparian corridor around rivers, streams and wetlands should be 50 feet. Low ranking resources are not included in the River Environmental overlay zone.

Federal regulations related to the floodway and floodplain may change in the near future and result in necessary changes to the requirements of this section.

33.475.020.B. Map Symbols

This subsection provides the map symbols for River General and River Environmental overlay zones. The River General overlay zone has a map symbol g* to differentiate it from the River General overlay zones that exist in the other reaches and outside of the boundary of these regulations in the Central Reach.

There are code section spaces between the River g* and River e regulations that are placeholders for the other river overlay zones that will be included in this chapter in the future. In the North and South reaches of the Willamette River, there are the River Industrial and River Recreational overlay zones. When the City updates the Willamette Greenway Plan for the North and South reaches, the regulations from 33.440 will be replaced by 33.475. The final 33.475 will have the following sections:

- 33.475.100 River Industrial Overlay Zone (future - not included)
- 33.475.200 River General Overlay Zone (included)
- 33.475.300 River Recreational Overlay Zone (future- not included)
- 33.475.400 River Environmental Overlay Zone (included)
- 33.475.500 Clean Up of Contaminated Sites (included)

The River Environmental overlay zone will be applied ~~in addition to sites~~ along with one of the other River Overlay Zones. It is not a freestanding overlay zone.

33.475.010 Purpose

The River Overlay Zones generally promote the protection, conservation, restoration, enhancement and maintenance of the economic, natural, scenic, and recreational qualities of lands along the central reach of the Willamette River. This purpose is achieved by applying regulations that control development of land, change of use and intensification of use. The regulations reflect the desired character of the central reach of the Willamette River—a character that includes:

- A healthy river and watershed;
- A thriving riverfront with regional gathering spaces, active and passive recreational uses, maritime and commercial activities, and a welcoming mixed-use community; and
- Multi-modal access to, along and in the river.

The River Overlay Zones also implement the City’s responsibilities under ORS 390.310 to 390.368.

33.475.020 River Overlay Zones

A. Purpose. The River Overlay Zones implement the land use pattern identified in the River Plan/Central Reach. There are two River Overlay Zones each with their own purpose:

1. River General. The River General overlay zone allows for uses and development that are consistent with the base zoning and allows for public use and enjoyment of the riverfront.
2. River Environmental. The River Environmental overlay zone protects, conserves and enhances important natural resource functions and values while allowing environmentally sensitive development. The purpose is to limit the impacts from development and vegetation maintenance on the natural resources and functional values contained within the overlay zone. The environmental regulations encourage flexibility and innovation in site planting and provide for development that is carefully designed to be sensitive to the site’s protected resources. Mitigation is required for unavoidable impacts and is intended to have no net loss of natural resource features or functions over time. The River Environmental overlay zone applies to specific natural resource areas identified in a detailed study titled *Central Reach Natural Resources Protection Plan (2015)*. This overlay zone always applies in combination with one of the other River Overlay zones.

B. Map symbols. The River Overlay Zones are shown on the official zoning maps with the following symbols:

<u>Overlay Zone</u>	<u>Map Symbol</u>
River General	g*
River Environmental	e

Commentary

33.475.030 and 33.475.040 Where and When These Regulations Apply

These sections clarify where and when the regulations in this chapter apply to uses and development that occur on the land and in the water. Map 475-1 depicts the area within which the river overlay zones and regulations of this chapter apply in the Central Reach minus South Waterfront (see 33.510.253) and sites zoned industrial. The latter will continue to meet the regulations of 33.440 Greenway Overlay Zones until such time ~~that the North Reach Plan is~~ as new regulations are adopted and those new regulations apply.

33.475.040.B.2 Exemptions

Some development and activities that occur within the River Environmental overlay zone will be exempt from regulation. The activities that are exempt from the regulations are important for the continued operation of existing facilities and they have little or no impact on resources or the activity is adequately regulated by a state or federal agency. Examples include operation, maintenance, repair and replacement of existing structures and improvements, alterations that do not change the footprint of a building, and placement of a certain number of piles and dolphins. The majority of the recommended exemptions mirror the levels of development and alteration that are currently exempt from the regulations of the Environmental Overlay zones or are exempt from Greenway Review.

33.475.030 Where These Regulations Apply

The regulations of this chapter apply to the land and the water within the Central Reach portion of the Willamette Greenway Plan boundary shown on Map 475-1 and designated on the Official Zoning Maps with the River General (g*) and the River Environmental (e) overlay zones. The regulations of this chapter do not apply to the River General (g) overlay zone located within the Greenway Overlay ~~zZones~~ boundary shown on Map 440-1. See Chapter 33.440, Greenway Overlay ~~zZones~~ for regulations that apply to the River General (g) overlay zone within the Greenway Overlay ~~zZones~~ boundary.

33.475.040 When These Regulations Apply

- A. River General Overlay Zone.** The regulations in Sections 33.475.200 through 33.475.230 apply to any changes to land or development in the River General (g*) overlay zone including rights-of-way.
- B. River Environmental Overlay Zone.** The regulations in 33.475.400 through 33.475.450 apply in the River Environmental (e) overlay zone as follows:
 1. Unless exempted by Paragraph B.2., the regulations apply to:
 - a. Development;
 - b. Removing, cutting, mowing, clearing, burning or poisoning native trees or plants;
 - c. Changing topography, grading, excavation or filling; and
 - b. Resource Enhancement.
 2. Exemptions. The following items are exempt from the River Environmental overlay zone regulations:
 - a. Change of ownership;
 - b. Temporary emergency procedures necessary for the protection of life, health, safety, or property;
 - c. Changes to the interior of a building where there are no exterior alterations;
 - d. Operation, maintenance, alterations, repair, and replacement of existing structures, exterior improvements, irrigation system, stormwater facilities, non-potable water systems, roads, utilities, public trails and paths, public viewpoints, public interpretive facilities, and erosion control measures ~~that are located above the ordinary high water mark~~. Alterations, repair and replacement is not exempt whenever total square footage, building coverage or utility size is increased;

Commentary

33.475.040.B.2.e.

Under the current greenway regulations all dredging, channel maintenance and removal of gravel/materials from the river is exempt from greenway review. This narrows the exemption because dredging in or near shallow water and beaches could have significant detrimental impacts on the habitat that the shallow water provides. Beaches and shallow water play important roles in the life cycle of aquatic species, including salmon, and impacts to these areas should be avoided and mitigated if the impacts can't be avoided. The exemption language allows dredging in the main federal navigation channel and dredging in waters more than 35 feet deep without having to meet development standards or go through River Review. Shallow water is identified as water between the ordinary high water mark (OHWM) zero and 20 feet below the OHWM. deep, however using 35 feet as the trigger for review is appropriate because the area between 20 and 35 feet deep represents an area of concern where the impacts of dredging could affect the habitat in the more shallow water areas.

Maintenance dredging that occurs outside the main river channel that and has been approved by the U.S. Army Corps of Engineers will continue to be exempt from the River Environmental overlay zone regulations.

33.475.040.B.2.f

The River General overlay zone requires landscaping and that landscaping standard requires removal of structures and debris prior to planting vegetation. If the structures or debris are located above the ordinary high water mark (OHWM), then removal is exempt from the regulations of 33.475.400. If the structures or debris are located below the OHWM, then the regulations of 33.475.400 must be met.

33.475.040.B.2.g.

The River General overlay zone requires landscaping and that landscaping requires removal of structures and debris and amending the soil prior to planting vegetation. If the landscaping standard is met, then it is exempt from the River Environmental overlay zone requirements.

- e. Dredging, channel maintenance, and the removal of materials from the river as follows:
- (1) Dredging, channel maintenance, and the removal of material within the federal navigation channel.
 - (2) Dredging, channel maintenance, and the removal of materials outside the federal navigation channel as follows:
 - Dredging and the removal of materials in waters that are 35 feet deep or deeper; or
 - Channel, slip and berth maintenance that has been approved by the U.S. Army Corps of Engineers.
 - (3) The placement of dredged materials within the River Environmental overlay zone is not exempt.
- f. Removal of structures and debris, application of soil amendments, placement of temporary erosion control measures, and planting of vegetation as required by 33.475.220 Landscaping Standards. Removal of structures is not exempt if the structure is located above below the ordinary high water mark of the Willamette River, streams or drainageways or located within 30 feet of a wetland;
- g. Installation of temporary erosion control measures;
- gh. Alterations to buildings that do not change the building footprint and do not require adjustments to site-related development standards;
- hi. Continued maintenance of existing gardens, lawns, and other planted areas, including the installation of new plants except those listed on the *Nuisance Plants List*;
- ij. Changes to existing disturbance areas to accommodate outdoor activities such as events, play areas and gardens as long as plantings do not include plants on the *Nuisance Plants List* and no trees six or more inches in diameter are removed;
- jk. Structures Development located on an existing dock, wharf, or pier, including A dock, wharf, or pier includes the on any gangway that provides access to the dock, wharf or pier;

Commentary

33.475.040.B.2.I

Removal of non-native vegetation with handheld equipment and thinning of small trees allows for basic maintenance to ensure survivability of native vegetation within the ~~River~~ Environmental overlay zone. Disturbance areas must be replanted to meet the landscaping standards of Table 475-1. Because the ~~River~~ Environmental overlay zone may extend landward of the river setback, outside of the river setback the subarea 3 landscaping standards apply. This will ensure a consistent approach to planting trees throughout the ~~River~~ Environmental overlay zone.

It is possible that after the thinning of trees and removal of non-native vegetation, the remaining vegetation already meets the landscaping standards of Table 475-1. In this situation, no additional planting is required.

33.475.040.B.2.Im

In the Central City maintenance of vegetation is needed to prevent invasive and non-native vegetation from taking over native vegetation. This exemption is intended to allow ~~light weight~~ lightweight equipment, such as a small utility vehicle with attachments to be used to maintain invasive vegetation. Equipment specifications will need to be available to demonstrate compliance with this exemption.

This allowance permits ~~light weight~~ lightweight utility vehicle use that is needed for efficient vegetation management without creating significant soil compaction. The ground pressure of no more than 7.5 psi was chosen based on a typical ~~light weight~~ lightweight utility vehicle's wheel to ground pressure. Small riding lawn mowers and augers for drilling planting holes are typical types of equipment that would be allowed, provided the wheel to ground pressure is no more than 7.5 psi. For a comparable ground pressure, a typical human footprint has a ground pressure of 8.7 to 11.6 psi.

kl. Removal or pruning of vegetation that is not listed as native on the *Portland Plant List* or trees 1.5 inches in diameter or smaller. The removal or pruning may not be done with equipment other than handheld equipment. Temporary disturbance located within and riverward of the river setback is replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1.

Removal and trimming of vegetation if the following are met:

(1) All vegetation removal activities must be surrounded or protected to prevent erosion and sediment from leaving the site or negatively impacting resources on the site;

(2) The removal or trimming is conducted with handheld equipment or equipment with a wheel surface-to-ground pressure of no more than 7.5 psi;

(3) Any temporary disturbance area is planted to meet the landscaping standards of 33.475.220; and

(4) The vegetation that is proposed for removal or trimming is one of the following:

- Vegetation listed on the *Nuisance Plant List*;
- Dead, dying or dangerous trees or portions of trees when they pose an immediate danger, as determined by the City Forester or certificate arborist;
- Vegetation located within a designated view corridor. Tree removal is not exempt. View corridors are shown on Map 480-1; or
- Vegetation located within 10 feet of an existing structure. Tree removal is not exempt.

lm. Planting of native vegetation listed on the *Portland Plant List* when planted with hand held equipment or equipment with a wheel surface-to-ground pressure of no more than 7.5 psi;

mn. Public street and sidewalk improvements meeting all of the following:

- (1) Improvements must be within an existing public right-of-way used by truck or automobile traffic; and
- (2) Streets and sidewalks must not exceed the minimum width standards of the Bureau of Transportation Engineering.

no. Groundwater monitoring wells constructed to the standards of the Oregon Water Resources Department and water quality monitoring stations, where access is by foot only;

Commentary

33.475.040.B.2.p and q

Typically, when ground disturbance is exempt from the River Environmental overlay zone requirements, temporary disturbances must be replanted to meet the landscaping standards of Table 475-1. However, when the exemption specifies that the temporary disturbance be less than 100 square feet in size, the landscaping standards of Table 475-1 cannot be met if the applicant chooses to plant a medium or large canopy tree. Therefore, for temporary disturbances required to be less than 100 square feet in size the applicant can replant the area with shrubs and seed with grasses and forbs; no trees are required.

- oq.** Installation of security cameras provided that no more than 100 square feet of ground surface is disturbed landward of top of bank, no ground is disturbed riverward of the top of bank, no native trees are ~~not~~ removed, and any disturbed area is planted with three shrubs per 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre ~~restored to pre-construction conditions;~~
- oq.** Utility service using a single utility pole or where no more than 100 square feet of ground surface is disturbed landward of the top of bank, no ground is disturbed riverward of top of bank, no more than 100 square feet of ground surface is disturbed landward of the top of bank of water bodies, and disturbance area is planted with three shrubs per 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre ~~planted to meet the landscaping standards of 33.475.220;~~
- or.** Utilities installed above or below developed portions of the public right-of-way, and stormwater management facilities within the public right-of-way so long as there is no ground disturbed riverward of top of bank;
- r.** ~~Temporary site investigative work including soil tests, land surveys, groundwater and water quality monitoring stations when all of the following are met:~~
- ~~(1) The work is conducted using hand-held equipment or equipment with a wheel surface to ground pressure of no more than 7.5 psi;~~
- ~~(2) The disturbance is temporary; and~~
- ~~(3) No trees are removed;~~
- s.** Signs;
- st.** Installation of fencing in the following situations:
- (1) Fencing on an existing paved surface;
 - (2) Fencing around stormwater facilities that meet the Stormwater Management Manual; or
 - (3) Temporary fencing to protect resource enhancement project planting areas, prevent access to hazardous material spill areas or contaminated sites, or to close off or control the use of illegal trails. The fence must be removed within five years;
- tu.** Installation of signage provided no trees over six inches in diameter are removed; and
- uv.** Removal of trash, provided that native vegetation is not removed or damaged. This includes removal of trash from the river bed, or from the water. Removal of trash does not include the removal or remediation of hazardous substances.

Commentary

33.475.040.C Removal or Remediation of Hazardous Substances

The requirements of 33.475.500 only apply in areas where the removal or remediation actions are implemented. Outside of the removal or remediation action areas, all other procedures and regulations of this Chapter, including the landscaping standards, must be met.

33.475.050 Property Line Adjustments

In the past, property line adjustments have been approved that resulted in eliminating river frontage. The proposed regulations ensure that property line adjustments do not create more than one river overlay zone on the site with the exception of the River Environmental overlay zone, which is intended to coincide with other river overlay zones. The river overlay zones each have a different purpose and use regulations. River 'g' overlay zone is the one exception since it does not have specific use regulations.

33.475.0650 Supplemental Permit Application Requirements

This section details the information required when a permit for development or exterior alteration is sought for sites within River Overlay Zones. The list has been updated from the Greenway Overlay Zones chapter, 33.440.345.

- C. **Removal or Remediation of Hazardous Substances.** The regulations in 33.475.500 apply to actions to remove or remediate hazardous substances that have been approved or selected under Oregon or federal cleanup law. The regulations in 33.475.500 only apply to the portion(s) of the site where the removal or remediation actions will occur; other portions of the site outside of the removal or remediation area(s) must meet all other applicable regulations and procedural requirements of this chapter. Remedial actions within City rights of way and actions not approved or selected by a state or federal cleanup authority must meet all other applicable regulations and procedural requirements of this chapter and may not use 33.475.500. The applicant conducting the removal or remediation action may choose to meet the regulations and procedural requirements of this chapter, or may choose to meet the regulations of 33.475.500 or all other applicable regulations of this chapter.

33.475.050 Property Line Adjustments

Property Line Adjustments may not result in a property a property that is in more than one river overlay zone, unless the second overlay is the River Environmental overlay zone.

33.475.0650 Supplemental Permit Application Requirements

The following information is required when a permit for development or exterior alteration in the River Overlay Zones is reviewed for compliance with this chapter.

- A. **Site Plan.** A Five copies of a site plan are required and at a scale between one inch to 50 feet and one inch to ten feet. must be provided Copies of the site plans must show the entire site, be drawn accurately to scale, must show all property lines with dimensions, a north arrow, and a date. Additional site plans that show only a portion of the site may also be submitted. And All copies must be suitable for reproduction on paper no smaller than 8.5 x 11 inches and no larger than 36 x 48 inches. The scale of the drawing must be between 1 inch = 50 feet, and 1 inch = 10 feet. Ground elevations must be shown by contour lines at 2-foot vertical intervals; and
- B. **Information required.** The following information must be provided on the site plan in addition to the application requirements of 33.730.060. The information in paragraphs 1 and 2 must be submitted with permit application plans. Submission of the information in paragraph 3 is optional.
1. An existing conditions site plan including:
 - a. Location of all base zone and overlay zone lines on the site;
 - b. Location of the top of bank, river setback line and the landscaping sub areas;
 - c. Outline of any existing development, including existing river bank stabilization treatments, stormwater treatment facilities, environmental enhancement or mitigation areas, and trails and paths;
 - d. Extent of the 100-year floodplain;
 - e. Trees, including the location of the trunk and crown cover, must be identified as follows:

Commentary

- (1) The location, size and species of trees that are 1.5 3 inches or greater in diameter that are within the area where ground disturbance or vegetation removal will occur, or have crown cover that overlaps that area, must be indicated on the site plan; and
 - (2) The area of canopy crown cover and species composition of trees located outside of and within 50 feet of the area where ground disturbance and vegetation removal will occur.
- f.** Vegetation, other than trees, within the area where ground disturbance or vegetation removal will occur and within 50 feet of the area where ground disturbance and vegetation removal will occur. Vegetation may be shown as the area of cover with a list and percent cover of plant species present.
- g. Topography shown by contour lines at 2 foot vertical contours in areas of slopes less than 10 percent and at 5 foot vertical contours in areas of slopes 10 percent or greater.
2. A proposed development or exterior alterations plan including:
- a. Outline of the proposed project area, including:
 - (1) limits of the temporary and permanent disturbance areas, including equipment staging and maneuvering areas, ingress and egress areas and areas to be left undisturbed;
 - (2) areas of ground disturbance, stockpiling or grading;
 - (3) outfalls and river bank stabilization treatments;
 - (4) trails and paths;
 - (5) areas of vegetation to be left undisturbed including the root protection zone for trees;
 - (6) environmental enhancement or mitigation areas,
 - b. Location and size (cubic yards) of fill to be placed within the 100-year floodplain;
 - c. Location and description of all proposed erosion control measures;
 - d. Location and description of all proposed stormwater management facilities;
 - e. Location of proposed fencing, and identification of where the fencing is temporary fencing and where it is permanent fencing indicated with the fencing is temporary and permanent;
 - f. Location of exterior lighting; and
 - g. A landscaping plan indicating the size, species, and location of all vegetation to be planted.
3. Photographs of the site are not required but are encouraged to supplement the existing conditions site plan.

Commentary

33.475.210 River Setback

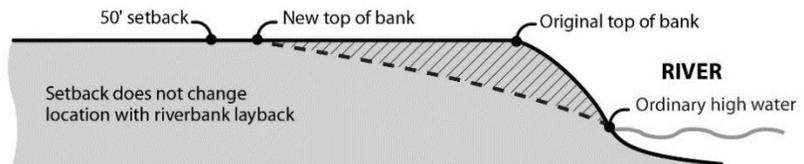
OAR 660-015-0005 and Statewide Planning Goal 15 require that a setback line be established to keep structures separated from the river. However, the requirement does not apply to “water-related or water-dependent uses”. The existing greenway regulations require that development be setback 25 feet from the top of bank. The setback does not apply to development such as buildings and structures that are river-dependent and river-related development. The setback also does not apply to the Greenway Trail, viewing areas located at designated viewpoints, view corridors, hazardous material clean up or to natural resource enhancement or mitigation. The setback is 50 feet from the top of bank of the Willamette River **for in the Central Reach for non-river dependent and river-related uses and development**. One of the main goals of the River Plan/Central Reach is to provide enough space within the **River Setback** for public recreation, natural resource protection and enhancement and other river related development and activities in the city's most urban section of riverfront. An expanded setback in the Central Reach helps fulfill the stated goals and policies of the CC2035 Plan for the Willamette River.

The setback is based on the location of the top of bank. A new top of bank map is included, which is based on Light Detection and Ranging (LIDAR) data. It is intended that applicants use the top of bank as mapped by the City or provide a surveyed top of bank based on the definition, Chapter 33.910, and measurements, Chapter 33.930. **City staff plan to survey portions of this map and provide a refined map to the City Council.**

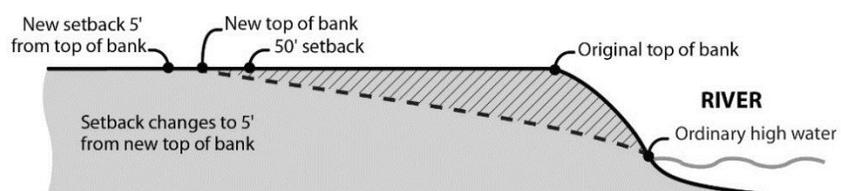
Best available science, including Metro's Title 13 Nature in Neighborhoods Program and City of Portland's Natural Resources Inventory, have documented that the absolute minimum area for protection of riparian corridors around rivers, streams and wetlands is 50 feet. A 50 foot setback that includes trails and other development does not meet the minimum requirement for protection of riparian corridors. However, due to the extent of existing development that already encroaches into the riparian corridor, as well as other Central City goals that encourage activation of and access to the Willamette River, a 50 foot setback is the maximum practical for the Central City. In other reaches of the Willamette River a wider setback that is more protective of the riparian corridor may be appropriate.

C. When the river bank is laid back to reduce the steepness, the location of the setback remains in its existing location unless laying the bank back creates a top-of-bank that is landward of the **existing original** setback. In that situations the **new** setback is 5 feet landward from the new top-of-bank. See examples below.

Example 1: The new top of bank is riverward of the original setback.



Example 2: The new top of bank is landward of the original setback, so a new setback is established 5 feet from top of bank.



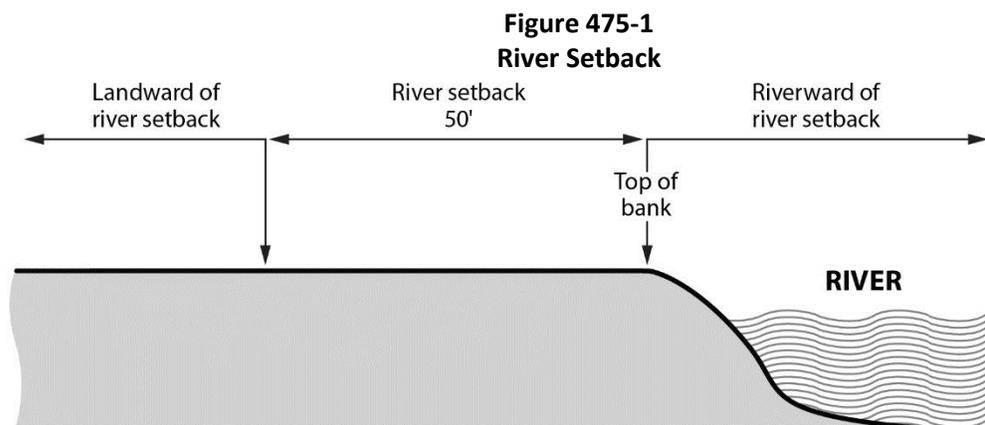
River General Overlay Zone

33.475.200 Use Regulations

There are no special use restrictions in the River General overlay zone.

33.475.210 River Setback

- A. Purpose.** The purpose of the river setback is to keep structures separated from the river in areas where the land is not being reserved for river-dependent and river-related uses. Separating structures from the river facilitates protection, maintenance, restoration, preservation and enhancement of the natural, scenic, historic and recreational qualities of the Willamette River in the Central Reach by reserving space for the conservation and enhancement of natural vegetation and the opportunity for public access. In addition, OAR 660-015-0005 requires the establishment of a setback line.
- B. General.** The requirements of this section focus on whether the development is river-dependent or river-related. The focus is not on the primary use of the land. For example in the River General overlay zone, a marine transportation terminal is a river-dependent primary use, but not all development associated with the terminal is river-dependent. The dock is river-dependent, but the parking lot and offices are not.
- C. The river setback.** The river setback extends from the top of the bank to a point 50 feet landward of the top of the bank. See Figure 475-1. Top of bank is shown on Map 475-2, or is determined as described in 33.910.030, Definitions, and 33.930.150, Measuring Top of Bank. Where alteration to the river bank carried out to meet 33.475.440.G results in the top of bank shifting landward, the applicant may choose to measure the setback from the original top of bank. When this occurs, a survey of the original top of bank line and new top of bank line must be submitted for verification that the top of bank has been measured according to the standard in 33.930.150, Measuring Top of Bank, and then recorded with the County recorder. See Figure 475-2. In all cases the setback line must be at least 5 feet landward of the new top of bank line. See Figure 475-3.



Commentary

~~33.475.210.D. River Setback Standards~~

33.475.210.E Encroachment into the setback.

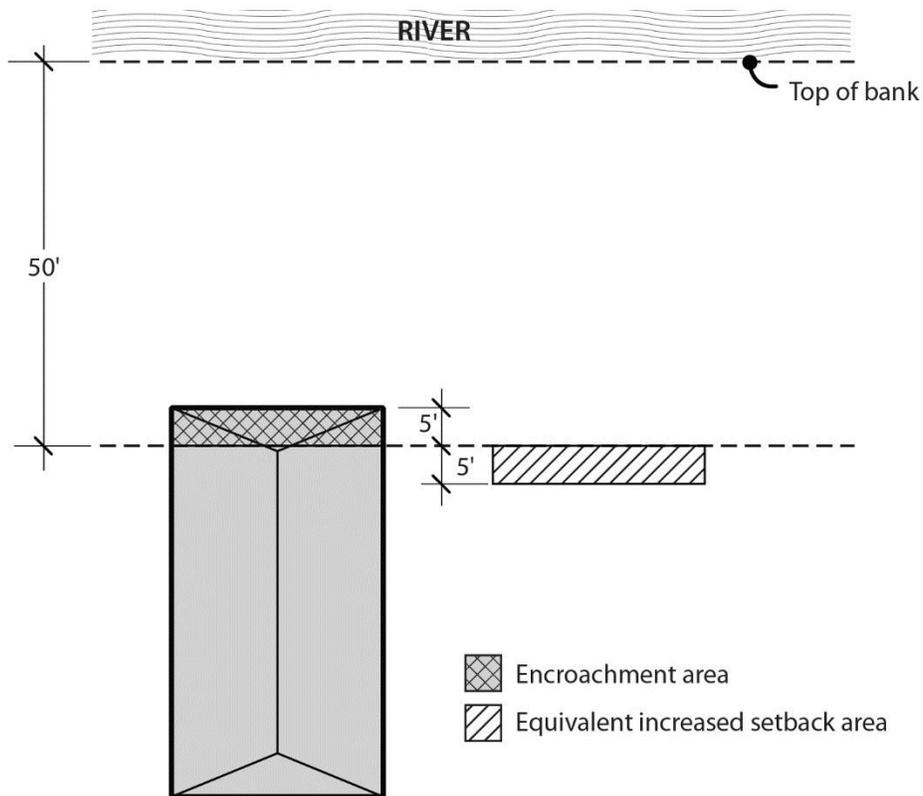
One of the main goals of the River Plan/Central Reach is to provide flexibility for property owners in the Central City to expand and redevelop on site. This standard allows non-river-dependent and non-river-related development to encroach up to 5 feet into the River Setback as long as the setback is enlarged an amount equal to the square footage of the encroachment. The regulations also stipulate that at no point can development encroach closer than 45 feet from top of bank. Staff does not recommend further encroachment into the river setback due to the importance of retaining as much of a 50 foot setback as possible to provide space for public access and recreation and environmental protection and enhancement.

D. River setback standards.

1. Development landward of the river setback. Development, exterior alterations, excavations, and fills landward of the river setback are not required to be river-dependent or river-related.
2. Development within or riverward of the river setback. Development, exterior alterations, excavations, and fills within or riverward of the river setback must be river-dependent or river-related. Development, exterior alterations, excavations, or fills that are not river-dependent or river-related are allowed within or riverward of the river setback only if it meets 33.475.210.E, Encroachment into the setback, or is approved through River Review and a Greenway Goal Exception.

- E. Encroachment into the setback.** Development that is not river-dependent or river-related may encroach up to 5 feet into the river setback as long as an area equivalent in size to the encroachment area is provided adjacent and contiguous to the setback area. See Figure 475-2.

**Figure 475-2
Encroachment into the River Setback**



Commentary

33.475.215 Marine Passenger Docks and Marine Passenger Terminals

As stated in 33.910.030, the river-related definition is updated to add certain uses and development associated with a marine passenger dock (and a marine passenger terminal) that's with a primary purpose is to load and unload passengers from marine vessels. Passenger waiting and queuing areas, security checkpoints, and machine shops associated with marine passenger docks and marine passenger terminals can locate in the river setback.

Section 33.475.215 limits building coverage to 5,000 square feet for river-related development associated with marine passenger docks within the river setback. Allowed river-related development could be located in multiple stories as long as the building footprint within the river setback does not exceed 5,000 square feet. Staff looked at the queuing area at the Salmon Springs dock, the average square footages for similar uses associated with an aviation passenger terminal and the square footage for other related uses provided by an interested property owner to calculate the square footage limitation. The elements that are essential to the loading and unloading of passengers are the queuing and security areas (and thus river-related). Some amount of passenger waiting area (with seating) is appropriate within the setback, especially for seniors and those with special needs. If a larger waiting area is needed, it can locate contiguous to the river setback. Limiting the footprint of this development in the river setback to essential river-related development will help address other Willamette River goals and objectives including the conservation and enhancement of natural, scenic and historic resources, recreation or public access.

33.475.220.B. Required Landscaping

New development must comply with this standard, which is intended to increase vegetation along the Willamette River to improve multiple ecosystem functions, increase habitat and provide other environmental benefits. Legally nonconforming development can maintain their nonconforming landscaping or may choose to come further into conformance; but may not become more nonconforming. If a legal nonconforming development alters their site they are subject to Chapter 33.258. Alterations costing more than \$154,000 will result in require that 10% of project value being dedicated to coming more into conformance with existing zoning codes. Landscaping is one option that counts towards becoming more conforming.

1. This requirement does not apply to Governor Tom McCall Waterfront Park because the park is in the center of Portland's urban center, serves the entire region as a recreational destination and has multiple and varied uses and activities including large scale events. There is a master plan for the park that includes improvements and landscaping that will accommodate the current and future uses and activities at the park.

The landscaping requirement also does not apply to the mapped portion of the Eastbank Crescent where there is a naturally occurring beach and the riverbank near the beach. If the Eastbank Crescent is improved as a public beach and swimming area, landscaping will be determined as part of a public planning process for that area.

33.475.215 Marine Passenger Docks and Marine Passenger Terminals

- A. Purpose.** River-related development provides goods or services that are directly associated with river-dependent land or waterway use. River-related development is typically allowed within the river setback, however certain river-related development associated with a marine passenger dock, while river-related in nature, does not need to be fully located within the river setback. In order to ensure that these particular types of river-related development do not overwhelm or dominate within the river setback, the total amount of footprint allowed within the setback is limited. The limitation will ensure that the river setback can accommodate other river-related or river-dependent development and provide opportunities for the conservation and enhancement of natural, scenic and historic resources, recreation or public access. The standard to limit the built area of river-related development associated with marine passenger docks in the river setback ensures that other goals of the Willamette River Greenway (Statewide Planning Goal 15) such as conservation, enhancement and maintenance of natural resources, recreation and public access, scenic and historic values can be met. [NOTE: The purpose statement for this code section will be provided at the Planning and Sustainability Commission public hearing on 7/26]
- B.** Passenger waiting and queuing areas, security checkpoints, cold food storage, and machine shops associated with marine passenger docks for subregional travel and marine passenger terminals for regional travel are limited to a 5,000 square feet footprint within or riverward of the river setback.

33.475.220 Landscaping

The following regulations apply in the River General overlay zone. Modifications and adjustments are prohibited.

- A. Purpose.** The landscaping regulations are intended to increase vegetation along the Willamette River. Adding a diversity of vegetation within the river setback will improve multiple ecosystem functions, increase fish and wildlife habitat, provide shade, cool the air, and create visual diversity. The regulations are also intended to accommodate safe and enjoyable public access to and along the Willamette River.
- B. Required landscaping.**
1. Governor Tom McCall Waterfront Park and the Eastbank Crescent, shown on Map 475-3, is are exempt from this Section.
 2. Required landscaping for all other areas. For all other areas, land within and riverward of the river setback that is not covered with a building or other structure or developed with a trail or viewing area must be landscaped to meet Table 475-1, Landscaping Planting Density. Subareas are shown on Figure 475-3 and described below. There are three planting densities allowed within each subarea. The applicant may choose which planting density standard to apply within each subarea, and more than one planting density may occur on a site. For example, the applicant may choose planting density 1 for all the subareas, or planting density 2 for subarea 1, planting density 3 for subarea 2, and planting density 1 for subarea 3.

Commentary

2. ~~Map 480-1 identifies the scenic viewpoints and view corridors. View corridors that extend from designated viewpoints should remain clear of vegetation that would block the focal features of the view. Focal features are identified in the *Central City Scenic Resources Protection Plan*. Shrubs are allowed if the shrubs won't block the view. Trees must not be planted with the view corridors.~~

33.475.220.B.4.d.

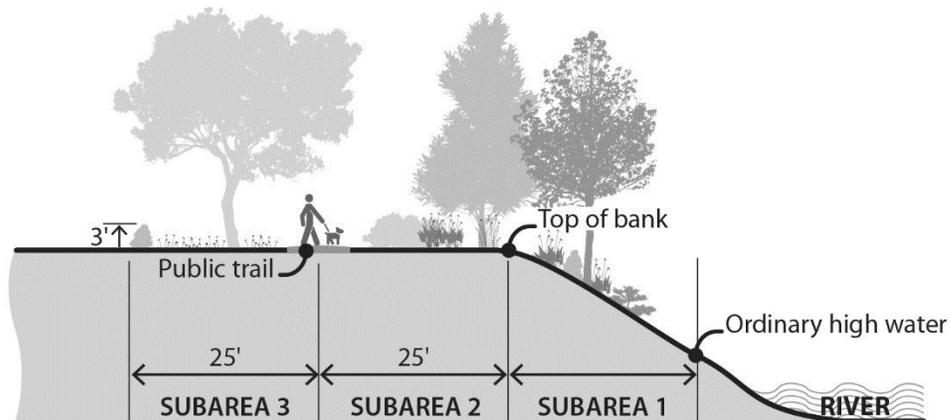
Resources enhancement areas and mitigation areas have planting standards that require a higher density of tree planting than the landscaping requirements. When the standards for enhancement and mitigation areas are met, the planting density will automatically meet the landscaping requirements. Outside of the areas used for resource enhancement or mitigation, the landscaping standards must be met.

33.475.220.B.4.e. Exceptions

On contaminated sites, the Oregon Department of Environmental Quality works with the property owners and other jurisdictions to determine the appropriate removal or remediation actions to clean up the site. The areas where the removal or remediation actions are implemented ~~do~~ not need to meet the landscaping standards. Outside of the removal or remediation areas, the landscaping standards must be met.

- a. Subarea 1. **Subarea 1** extends from the ordinary high water mark to the top of bank of the Willamette River.
- b. Subarea 2. Subarea 2 extends from the top of bank to a point 25 feet landward of the top of bank of the Willamette River.
- c. Subarea 3. Subarea 3 extends from a point 25 feet landward of the top of bank and **to** a point 50 feet landward of the top of bank of the Willamette River.

**Figure 475-3
Landscaping Area**



d. Vegetation planted to meet the resource enhancement standards of 33.475.440.G or the mitigation standards of 33.475.440.K may be counted towards meeting the landscaping standard.

de. Exceptions.

~~(1) Landscaping is not required within resource enhancement areas that meet the standards of 33.475.440.G;~~

~~(2) Landscaping is not required within mitigation areas that meet the standards of 33.475.440.K;~~

~~(31)~~ Landscaping is not required within portions of sites where contamination removal or remediation **actions** meet the standards of 33.475.500;

~~(42)~~ Within utility easements trees and shrubs are not required but the area must be seeded with a grass and forb seed mix at a ratio of 30 pounds per acre;

~~(53)~~ Trees and shrubs are not required within a scenic view corridor shown on Map 480-1 but the area must be seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Trees may not be planted within a scenic view corridor; or

Commentary

33.475.220.B.4.e.4 Exceptions

Where the riverbank between the ordinary high water mark and the top of bank is steep and armored with rip rap or where the rip rap is very thick, vegetation cannot survive. Rather than plant the armored bank, the equivalent size landscaped area can be provided elsewhere on site provided that area is outside of the river setback but within the river overlay zones. While on-site landscaping located within 100-200 feet of the Willamette River or within the river's floodplain provides riparian corridor functions and wildlife habitat, on-site landscaping located more than 100-200 feet from the river does provides wildlife habitat.

Most of the Central Reach sites that have river frontage are already developed. Incorporating landscaping landward of the river setback at an equivalent size to the subarea 1 area that would have been landscaped may not be feasible. Therefore, there is an option to pay a fee-in-lieu of landscaping.

(64) If the area to be landscaped within subarea 1 has an average slope of 30 percent or steeper (30 percent slope represents a rise over run ratio of 1:3.3) and the area with an average slope of 30 percent or steeper is armored with rip rap, or the area within subarea 1 has rip rap that is at least four feet deep, then the required subarea 1 landscaping may be planted on an area of the site that is landward of the river setback but within the River overlay zone, or the applicant may pay a revegetation fee-in-lieu as described below. If the landscaping will be provided on-site, the total area outside of subarea 1 to be landscaped must be equivalent in size to the area that would have been required to be landscaped in subarea 1. More than one landscaped area may be provided to achieve the total, but other required landscaping may not count toward the total:

- Revegetation fee-in-lieu use and administration. The revegetation fee is collected by Bureau of Development Services and is administered by the Bureau of Environmental Services. The fees collected are used for revegetation projects on public or private property within the same reach of the Willamette River as the site. The reaches are shown on Map 475-1.
- Calculation of required fee-in-lieu contributions. Applicants must contribute the cost to purchase and plant trees, shrubs and groundcover plants as set out in the next bullet. The cost to purchase and plant trees and plants will be adjusted annually as determined by the Director of BES based on current market prices for materials, labor and maintenance.
- Required fee-in-lieu contribution. The applicant must contribute the cost to purchase, plant and maintain one tree, three shrubs and four ground cover plants per 100 square feet of required planting area before a building permit will be issued. The fee calculation will be rounded up to the next multiple of \$10. The minimum area to be used in this calculation is 100 square feet. Calculations that are not a multiple of 100 will be rounded up to the next multiple of 100.

Commentary

Table 475-1

The intent of Table 475-1 is to allow a mix of tree types, densities and heights. Applicants may choose to install a mix of tree sizes, and planting densities, within each subarea. However, applicants are not required to choose a mix of densities, unless the total area to be planted is greater than 600 square feet. The shrub and grass densities are consistent across the entire setback, only the density of trees may vary depending on the size at maturity of the tree species.

Planting a mix of tree types, densities and heights will provide a diversity of habitat. In addition, a diversity of trees will create unique experiences along the river for the public.

Within a 600 square foot area, to meet the diversity requirement the applicant would need to plant:

- 3 small trees (300 sq. ft.) and 1 large tree (300 sq. ft.);
- 1 small (100 sq. ft.), 1 medium (200 sq. ft.) and 1 large (300 sq. ft.); or
- 2 small (200 sq. ft.) and 2 medium (400 sq. ft.).

As the total landscaping area gets larger, a wider mix of tree sizes can be chosen. For 1,200 sq. ft. there is a wide mix of sizes that could be used to meet the requirement. It is up to the applicant to show how they are meeting the planting density.

Title 11, Trees, code section 11.60.020.C. Canopy includes canopy size categories. Tree canopy types are categorized as small, medium, or large based on the estimated canopy size at maturity. The "Portland Tree and Landscaping Manual" suggested plant lists include the size categories recognized for many trees. To determine the size category of a tree not listed in the "Portland Tree and Landscaping Manual"; the applicant will provide an objective source of information about the tree's mature height, crown spread, and growth rate. This information can come from published sources, internet sources, or nursery information such as cut sheets.

The canopy size category is calculated according to the following formulas, which incorporate the estimated height and crown spread of a mature specimen and the tree species' growth rate:

1. Small trees have a canopy factor of less than 40, Medium trees have a canopy factor from 40 to 90, and Large trees have a canopy factor greater than 90;
2. Canopy factor = (Mature height of tree) x (Mature canopy spread) x (Growth rate factor) x 0.01;
3. The growth rate factor is 3 for fast-growing trees, 2 for medium growing trees, and 1 for slow-growing trees

Table 475-1			
Landscaping Planting Density			
Subarea	Planting Density 1: Small Trees[1]	Planting Density 2: Medium Trees[1]	Planting Density 3: Large Trees[1]
Landscaping Subarea 1	One tree, three shrubs, and four other ground cover plants must be planted for every 100 square feet. Trees may be clustered. All plants must be native.	One tree, six shrubs, and eight other ground cover plants must be planted for every 200 square feet. Trees may be clustered. All plants must be native.	One tree, nine shrubs, and 12 other ground cover plants must be planted for every 300 square feet. Trees may be clustered. All plants must be native.
Landscaping Subarea 2	<p>One tree and one of the following two options for every 100 square feet. Trees must be separated from other trees by at least 20 feet on center. Shrub species must not exceed 3 feet in height at maturity.</p> <p>Option 1: Three shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</p> <p>Option 2: Three shrubs and four other groundcover plants.</p>	<p>One tree and one of the following two options for every 200 square feet. Trees must be separated from other trees by at least 20 feet on center. Shrub species must not exceed 3 feet in height at maturity.</p> <p>Option 1: Six shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</p> <p>Option 2: Six shrubs and eight other groundcover plants.</p>	<p>One tree and one of the following two options for every 300 square feet. Trees must be separated from other trees by at least 20 feet on center. Shrub species must not exceed 3 feet in height at maturity.</p> <p>Option 1: Three Nine shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</p> <p>Option 2: Nine shrubs and 12 other groundcover plants.</p>
Landscaping Subarea 3	One tree for every 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Trees must be separated from other trees by at least 20 feet on center. Shrubs or other ground cover are not required, however if they are included they must meet the standards for Landscaping Subarea 2.	One tree for every 200 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Trees must be separated from other trees by at least 20 feet on center. Shrubs or other ground cover are not required, however if they are included they must meet the standards for Landscaping Subarea 2.	One tree for every 300 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Trees must be separated from other trees by at least 20 feet on center. Shrubs or other ground cover are not required, however if they are included they must meet the standards for Landscaping Subarea 2.

[1]Tree sizes is based on Title 11.60.020.C Canopy Size

Commentary

33.475.220.C. Landscaped area site preparation.

The urban riverfront in the Central Reach has been highly altered with hardscaped materials and debris. This standard is intended to help ensure that the site conditions are conducive to plant survival over time when the planting of vegetation is required.

Erosion control measures, which includes existing riverbank rip rap, does not need to be removed.

33.475.220.D.

This subsection details plant requirements. It is based on planting requirements in 33.430.

Staff notes that willow and tree cuttings and branches cut off existing trees, can be planted directly into rip rap.

- C. Landscaped area site preparation.** Before installing the required landscaping, the following standards must be met:
1. All prohibited and nuisance plants listed on the *Portland Plant List* must be removed within and riverward of the river setback.
 2. All structures and debris located within and riverward of the river setback must be removed except for river-dependent and river-related structures, legal non-conforming structures, erosion control measures, flood control facilities, large wood, and bioengineered structures. Examples of bioengineered structures include bundles of plant materials or soil cells wrapped in biodegradable fabrics.
 3. If the area to be planted is not currently vegetated, the soil must be amended with 12 inches of growing medium. If the planting area is in subarea 1, has an average slope of 30 percent or less steep 20 percent of steeper slope (2030 percent slope represents a rise over run ratio of ~~1:5 1:3.3~~), and is armored with rip rap, the growing medium may be placed in planting wells. The composition of the growing medium must meet one of the following:
 - a. For all planting areas located outside of the flood hazard area, the growing medium must be a blend of loamy soil, sand, and compost that is 30 to 40 percent plant material compost (by volume); or
 - b. For all planting areas located within the flood hazard area, the growing medium must be a blend of loamy soil, sand, small gravels and compost. A landscape architect or civil engineer must certify that the growing medium is adequate to support the establishment and growth of vegetation, and is heavier than water.
 4. Placement of the growing medium is not allowed when the ground is frozen or saturated; and
 5. Temporary erosion control measures are required until permanent stabilization measures are functional. Temporary erosion control measures must be biodegradable or removed after permanent stabilization measures are functional or within 3 years, whichever is sooner.
- D. Plant requirements.** Trees must be a minimum ½-inch caliper, bareroot, or live stakes, unless they are oak or madrone, which may be one gallon size. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots or equivalent. For planting areas over 600 square feet, at least two different tree species and sizes, three different shrub species, and four different groundcover species must be used.

Commentary

33.475.230 Exterior Lighting

The standards are intended to minimize the adverse health, safety, and livability impacts of exterior lighting on humans, fish and wildlife, including glare, light spill, and encroachment into habitat areas. The standards and exemptions are also intended to continue providing for public safety in public parks and along trails and rights of way, and to support river dependent uses. These standards are also proposed in the South Waterfront Subdistrict under the River General (g) overlay zone regulations—(see 33.253.E.5.h).

This section includes general standards for directionality and shielding of exterior light fixtures that apply throughout the overlay zone. These standards will support policies calling for energy efficiency, reducing light pollution and glare, and reducing light-related hazards to birds. This section also includes standards for exterior lighting on land proximate to the Willamette River. These standards restrict the location, spacing, brightness and spectral character of lighting to reduce impacts on birds, pollinators, and other wildlife and their habitat.

33.475.230 Exterior Lighting

- A. Purpose.** The standards for exterior lighting are intended to:
- Avoid or minimize light glare and light spill from artificial lighting and associated negative impacts on fish and wildlife and their habitats;
 - Reduce light pollution and glare impacts on residential developments;
 - Maintain public safety and security along the Greenway trail, in parks, along public rights-of-way, and on piers and gangways; and
 - Provide flexibility for river dependent operations associated with docks.
- B. General standards.** The following standards apply to all exterior lights located within the River General (g*) overlay zone.
1. Exterior lights must not project light upward or to the side of the fixture; and
 2. The top and sides of all exterior light fixtures must be shielded with 100 percent opaque materials.
- C. Additional standards for areas near the Willamette River.** The following standards apply to all permanent exterior lights located within and riverward of the river setback, and all permanent exterior lights located within 25 feet landward of the river setback. Exterior lights within Governor Tom McCall Waterfront Park, and exterior lights within public rights-of-way are exempt from the standard in this Subsection Subsubparagraph, but must meet the standards in Subparagraph B:
1. Exterior lights are allowed only if the lights are for the as follows use or development:
 - a. In property owned or managed by the City of Portland Parks and Recreation Park and Open Area uses;
 - b. In a public right of way, The major public trail;
 - c. When associated with a major public trail or A public viewing area; or
 - d. When associated with a rRiver-dependent or river-related development.
 2. Structures that support exterior light fixtures must be setback at least 5 feet from the top of bank of the Willamette River except for docks and gangways, and must be setback at least 30 feet from any other stream, drainageway, wetland or water body;
 3. Structures that support exterior light fixtures must be spaced at least 25 feet apart;
 4. Lamps must fall below 3000K or within an S/P ratio range of 1- 1.2; and
 5. Exterior lights must not project directly into the Willamette River.

Commentary

33.475.240 Public Viewpoints

Statewide Planning Goal 15 Willamette River **Greenway** calls for protecting, enhancing, and maintaining the natural, scenic, historical and recreational qualities of lands along the river. The provision allows public viewpoints within the river setback to help achieve scenic, natural and other public appreciation of this significant resource, consistent with state and local policies. This standard is similar to one that is in effect in 33.440. It will now apply to sites that are within the River Overlay **Zones** boundary, specifically sites that have viewpoints identified on Map 480-1 of the Scenic Resources Protection Plan.

33.475.250 Nonconforming Uses and Development

Nonconforming uses and development exist where a site met all the regulations at the time it was developed but does not meet the current regulations because of subsequent changes to the Zoning Code. For example, many parking lots were built before Portland required landscaping. Such development can remain as long as there are no changes to the site.

Chapter 33.440, Greenway Overlay Zones, includes a section that addresses nonconforming uses and development within the greenway setback. Staff proposes to replicate this standard in 33.475 for nonconforming uses and development in the Central Reach's river setback. The language allows nonconforming **uses and development** to continue. Expansion of the **use or** development may occur provided that it is not within or riverward of the river setback. This means that overhanging or cantilever structures like decks or bay windows are not allowed. These structures would bring the nonconforming development further out of compliance with river setback regulations. Development may change to allow river-dependent and river-related development by right, consistent with Statewide Planning Goal 15, Willamette River, and other zoning code regulations.

33.475.05260 Property Line Adjustments

In the past, property line adjustments have been approved that resulted in eliminating river frontage. The proposed regulations ensure that property line adjustments do not create more than one river overlay zone on the site with the exception of the River Environmental overlay zone, which is intended to coincide with other river overlay zones. The river overlay zones each have a different purpose and set of regulations.

33.475.240 Public Viewpoints

- A. **Purpose.** Public viewpoints providing stopping places along the Greenway Trail and the Willamette River where the public can view and enjoy the natural, scenic, recreational and economic qualities of the Greenway.
- B. **Viewpoint Requirement.** All sites designated with a viewpoint symbol on Map 480-1 are required to provide a public viewpoint. The viewpoint design is addressed through the Central City Fundamental Design Guidelines. In addition, the viewpoint must comply with the Use of Trail, Hours of Use, Trespass and Trail Maintenance and Liability sections of Chapter 33.272, Major Public Trails. The Trails Maintenance and Liability section is applicable when the viewpoint is located along the physically contiguous trail segment.

33.475.250 Nonconforming Uses and Development

Nonconforming uses and development in the River General (g*) overlay zone are subject to the regulations and reviews of Chapter 33.258, Nonconforming Situations. The additional regulations stated below and apply to development within or riverward of the river setback that is not river-dependent or river-related.

- A. The development may continue.
- B. The development may be changed to an allowed river-dependent or river-related development by right.
- C. The development may be changed to another nonconforming development if within the existing building. If outdoors, it may not be changed to another nonconforming development.
- D. The development may be expanded, but not within or riverward of the river setback. Expansion includes adding additional floor area.

33.475.260 Property Line Adjustments

All property line adjustments may not result in a property a property that is in more than one river overlay zone, unless the second overlay is the River Environmental overlay zone. Adjustments are prohibited.

Commentary

33.475.400 River Environmental Overlay Zone Purpose

The River Environmental overlay zone is a new overlay that has been created specifically to address the protection and conservation of remaining high and medium ranked natural resource areas in the Willamette River. The location, extent and relative condition of natural resources that provide riparian corridors and wildlife habitat functions in the Central Reach are identified in the Central City Natural Resources Inventory (2016). The River Environmental overlay zone does not apply to low-ranked natural resources, for example developed floodplains located more than 50 feet from top of bank.

The primary focus of the River Environmental overlay zone is to limit the impacts from development on the natural resources and functional values contained within the overlay zone. When impacts cannot be avoided, mitigation is required. Development in the overlay zone will not be precluded if proposed development meets the standards or if there are no practicable alternatives that will avoid adversely affecting the resource—in that sense the River Environmental overlay zone will function more like the Environmental Conservation zone than the Environmental Protection zone.

33.475.420 Review Procedures

The River Environmental overlay zone is includes a multi-track system that allows some types of development and activity to be exempt from regulation, allows some development and exterior alteration allowed if it meets standards, and requires some development will require to go through a land use review. The standards are modelled after the standards listed in Chapter 33.430, Environmental Zones; however, there are some differences specific to the Central Reach. One of the significant differences is that the Environmental zones included general standards as well as specific standards. The River Environmental Overlay Zone does not include general standards; only standards that apply to specific development and exterior alterations.

River Environmental Overlay Zone

33.475.400 Use Regulation

There are no special use restrictions associated specifically with the River Environmental Overlay Zone. However, any use restrictions that apply as a result of an accompanying River Overlay zone also apply within the River Environmental Overlay Zone.

33.475.410 Environmental Report

The application of the River Environmental overlay zone is based on a detailed study titled *Central Reach Natural Resources Protection Plan (2016)*. The report identifies the type, location, extent and relative condition of natural resource features and describes the functional values they provide within the study area. Functional values are the benefits provided by resources. The values for each resource site are described in the inventory section of the report.

33.475.420 Review Procedures

Development and exterior alterations will be reviewed through one of the following tracks:

- A. Standards.** Several specific types of development and exterior alterations are allowed within the River Environmental overlay zone if the proposal meets certain standards. Standards are provided for bulkheads, rights-of-way, utility lines, stormwater outfalls, trails, viewpoints, resource enhancement, exterior lights, and site investigative work. The standards are intended to encourage sensitive development while providing clear limitations on disturbance, including tree removal, and minimizing impacts on resources and functional values. Adjustments to the standards are prohibited. Modification of the standards may be approved through River Review. When a proposal can meet the standards, the applicant may choose to meet the objective standards of this section or go through the discretionary River Review process. When there are no applicable standards, the proposal must be approved through River Review. Compliance with the standards is determined as part of the building permit or development permit application process. The standards are listed in 33.475.440.
- B. Review.** River Review is required when the proposed development or exterior alteration is subject to the River Environmental Overlay Zone regulations, and the development or exterior alteration either does not meet the River Environmental development standards or there are no River Environmental development standards that apply to the proposal. The process and approval criteria for River Review can be found in Chapter 33.865, River Review.

Commentary

33.475.430 Prohibitions

This section prohibits the packaging and storage of most hazardous substances, the planting and propagation of identified nuisance plants and the dumping of trash or yard debris within the River Environmental overlay zone area. All of these materials and activities negatively impact protection and enhancement of high and medium ranked natural resources.

33.475.440 Standards

As previously mentioned, some development and alteration will be allowed within the River Environmental overlay zone without requiring a discretionary review. The types and levels of development and alteration allowed are generally low-impact activities that can be readily mitigated. The standards limit the amount of disturbance that can occur and limit how close the development or alteration can be to the river, a stream or a wetland. Tree removal is limited and mitigation is always required.

Development standards are proposed for the installation of railroad tracks, the installation of utility lines and stormwater outfalls, public trails and viewing areas, view corridors, resource enhancement projects, site investigative work, and the removal of trees. These categories, which are necessary or desired infrastructure or allowed greenway development, represent the extent of the activities that will be allowed within the River Environmental overlay zone without further discretionary review. Mitigation and tree replacement will be required for these activities.

33.475.440.A Standards for rail rights-of-way

The width of corridor allowed for the development of a rail right-of-way is based on discussions with BDS staff who have reviewed the installation and extension of rail road track in the Central Reach. The width is intended to accommodate standard gauge rail (4 feet 8 inches) with added space for ballast and any equipment that may be necessary for track operations.

33.475.440.B-C Standards for utility lines and stormwater outfalls

The standards in these paragraphs mirror standards for the installation of a utility line or stormwater outfall in the Environmental Conservation and Protection **Overlay** zones.

33.475.430 Prohibitions

The following are prohibited within the River Environmental Overlay Zone:

- A. The packaging or storage of hazardous substances, except as follows:
 - 1. Use of consumer quantities of hazardous substances is allowed. Consumer quantities of hazardous substances are packaged and distributed in a form intended or suitable for sale through retail sale outlets for consumption by individuals for purposes of personal use; and
 - 2. Marine vessel fueling stations are allowed.
- B. The planting or propagation of any plant listed on the *Nuisance Plant List*; or
- C. Dumping of trash or yard debris.

33.475.440 Development Standards

Unless exempted by 33.475.040.B.2., the standards in this Section apply to development and exterior alterations in the River Environmental overlay zone. All of the applicable standards must be met. Modification of any of these standards requires approval through River Review.

- A. **Standards for rail right-of-way.** The following standards apply to rail rights-of-way:
 - 1. Disturbance associated with the development of a rail right-of-way must occur within a corridor no more than 20 feet wide. No disturbance is allowed outside of the 20-foot-wide corridor;
 - 2. Disturbance associated with the rail corridor or development of the rail corridor must not occur riverward of the top of bank of the Willamette River, within the river channel, or within 30 feet of the top of bank of any other stream, wetland or water body;
 - 3. Tree removal is allowed as specified in Subsection J.; and
 - 4. Mitigation is required as specified in Subsection K.
- B. **Standards for utility lines.** The following standards apply to new **and upgrades to existing utility lines, including stormwater conveyance facilities, and private connections to existing or new utility lines, and upgrades of existing utility lines:**
 - 1. The disturbance area for the installation of a **private connection to an existing or new utility line must be no more than 10 feet wide;**
 - ~~2. The disturbance area for the installation of a new utility line or upgrades to existing utility lines, including utility trenching, must be no more than 15 feet wide;~~
 - ~~3. The disturbance area associated with the installation of a utility line or a private connection to a utility line must not be riverward of the top of bank of the Willamette River, within the river channel, or within 30 feet of the top of bank of any other stream, wetland, or other water body;~~
 - ~~4. Tree removal is allowed as specified in Subsection J.;~~

Commentary

54. Temporary disturbance located within and riverward of the river setback must be replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1. Trees may not be planted within a view corridor show on Map 480-1. Disturbance areas must be planted to meet the landscaping standards of 33.475.220, and
65. Exemption. If a proposed utility line or upgrade to a utility line runs through an area that has already been approved as a permanent disturbance area, or allowed by standards of this section, it is exempt from Paragraphs B.1., B.2., and B.3.

C. Standards for stormwater outfalls. The following standards apply to the installation of stormwater outfalls:

1. Disturbance associated with the installation or replacement of a stormwater outfall must occur within an area that no more than 15 feet wide;
2. When constructed open channels or vegetated swales are proposed, the slope between the stormwater source and the water body must not exceed 15 percent at any point;
3. If an outfall riprap pad is used it must be planted with live stakes of native plant stock, one-half inch in diameter. Stakes must be installed at a density of three stakes per square yard. Detailed specifications for installing live stakes are found in the *Erosion Control Manual*;
4. Tree removal is allowed as specified in Subsection J.; and
5. Mitigation is required as specified in Subsection K.

D. Standards for placement of piles. The following standards apply to the placement of up to four single piles or two multiple-pile dolphins for each 100 feet of shoreline:

1. The placement of the piles or dolphins must be associated with a river-dependent or river-related use;
2. An equal number of piles or dolphins as are placed in the river environmental overlay zone, plus one, must be removed from the river environmental overlay zone within the Central Reach. The boundaries of the Central Reach are shown on Map 475-1; and
3. If the applicant does not own the property where the pile or dolphin removal will occur, they must have an easement or deed restriction sufficient to allow the necessary removal.

Commentary

33.475.440.E. Standards for Trails

In the Central City, major public trails are shown as a star symbol on the Official Zoning Maps. During site development, a trail easement dedication and **potentially the** construction of the trail is required. These standards are intended to allow for major public trails to locate within the River Environmental overlay zone, but limit the impacts of the trails, and associated public use on the natural resource functions of the riparian corridor.

If the trail crosses a stream it needs to set back 10 feet from the top-of-bank on both sides of the stream. This is different than standards for other development in this section which require disturbance area to be setback 30 feet from a stream. The reason for the allowance for trails to be located closer to streams is to facilitate completion of a contiguous Greenway Trail along both sides of the Willamette River in the Central City. Much of the Greenway Trail is already constructed and new segments need to connect with the existing. In the North Reach and South Reach, the conditions and circumstances of the Greenway Trail, zoning, land use and existing natural resource may warrant a different standard for stream crossings.

33.475.440.EF-FG Standards for Viewing Areas and View Corridors

These standards allow for the construction and maintenance of public viewing areas and view corridors **that are shown on Map 480-1 and** in the River Environmental overlay zone. Trees **(6-12 inches in diameter)**, including native trees, may be removed ~~in the overlay zones~~. The area where vegetation is removed must be revegetated with ground cover. **Trees cannot be planted in view corridors because they grow and block or partially block the view. Shrubs can be planted along with the ground cover in the view corridors.**

E. Standards for trails. The following standards apply to the construction of a new major public trail and alterations to an existing major public trail:

1. The trail must be setback at least 10 feet, and disturbance associated with construction of the trail must be setback at least 5 feet, from the top of bank of the Willamette River, ~~or a stream, a wetland or other water body;~~
2. The trail and disturbance associated with construction of the trail must be setback at least 30 feet from the top of bank of a wetland ~~or other water body;~~
3. The total width of the trail must be no more than 16 feet;
4. The total width of disturbance area must be no more than 24 feet;
5. Tree removal is allowed as specified in Subsection J; and
6. ~~Temporary disturbance located within and riverward of the river setback must be replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1. Trees may not be planted within a view corridor show on Map 480-1. Temporary disturbance areas must be planted to meet the landscaping planting standards of 33.475.220.~~

EF. Standards for public viewing areas. The following standards apply to the construction of a public viewing area:

1. The viewing area must be associated with a viewpoint shown on Map 480-1;
2. The total disturbance area must be no more than 800 square feet in area;
3. The permanent disturbance area associated with the viewing area must not be more than 500 square feet in area;
- ~~3-4.~~ The total disturbance area must not be located below the top-of-bank of the Willamette River, stream, or any other water body, and must not be located within 30 feet of a wetland;
- ~~4-5.~~ Tree removal is allowed as specified in Subsection J.; and
- ~~5-6.~~ ~~Temporary disturbance located within and riverward of the river setback must be replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1. Trees may not be planted within a view corridor show on Map 480-1. Temporary disturbance areas must be planted to meet the landscaping planting standards of 33.475.220.~~

FG. Standards for view corridors. The following ~~are~~ standards apply to establishment or maintenance of view corridors shown on Map 480-1.

1. Tree removal is allowed as specified in Subsection J.; and
2. ~~Temporary disturbance must be replanted with three shrubs per 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Temporary disturbance areas must be landscaped to meet the standards of 33.475.220.~~

Commentary

33.475.430. **GH** Standards for resource enhancement

These standards are intended to ensure that the river bank is less steep than before the enhancement project because a shallow bank provides better resource function than a steep bank. The standards also require that the bank be stabilized with vegetation rather than rock armoring, which has little to no habitat value.

For projects that occur landward of the top of bank, the standards allow disturbance of the ground as long as there is no net increase in soil within the River Environmental overlay zone and the area disturbed is replanted with native vegetation. Resource enhancement projects, by definition, must result in a net increase in functional value and an improvement in the quantity or quality of resources. ~~Mature native vegetation in many cases provides high quality natural resource function. The removal of native vegetation is limited so that staff can evaluate whether or not the removal of vegetation will result in a net increase in functional value and an improvement in quality or quantity of resource.~~

33.475.440. **HI** Standards for site investigative work

Typically, when there is ground disturbance exempt from the River Environmental overlay zone requirements, then temporary disturbances must be replanted to meet the landscaping standards of Table 475-1. However, when the exemption specifies that the temporary disturbance be less than 100 square feet in size, then the landscaping standards of Table 475-1 cannot be met if the applicant chooses to plant a medium or large size tree. Therefore, for temporary disturbances required to be less than 100 square feet in size the applicant can replant the area with shrubs and seed with grasses and forbs; no trees are required.

GH. Standards for resource enhancement. The following standards apply to resource enhancement projects:

1. There must be no excavation or fill, or construction activity, below ordinary high water mark of any river, stream, wetland or other water body;
2. The riverbank may be re-graded if the slope after grading is shallower than the slope prior to grading and the slope is no greater than 20 percent (20 percent slope represents a rise to run ratio equal to 1:5);
3. Rock armoring must not be used on the surface between the top of bank and the ordinary high water mark of any water body except as required surrounding outfalls;
4. The placement of large wood and bioengineered structures on the bank is allowed to reduce localized erosion and improve bank stabilization. Examples of bioengineered structures include bundles of plant materials or soil cells wrapped in biodegradable fabrics;
5. No structures are proposed landward of the top of bank except public trails that meet the regulations of 33.475.440.E or public viewing areas that meet the regulations of 33.475.440.E;
6. All nuisance plants listed on the *Portland Plant List* must be removed;
7. Tree removal is allowed as specified in Subsection J; and
- 7.8. Temporary disturbance located within and riverward of the river setback must be replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1. Trees may not be planted within a view corridor show on Map 480-1. Areas where ground disturbance has occurred must be planted to meet the landscaping planting standards of 33.475.220.

HI. Standards for site investigative work. The following standards apply to site investigative work. Site investigative work includes soil tests and test pits, land surveys, and groundwater and water quality monitoring stations.

1. No more than 100 square feet of disturbance is allowed per test pit or monitoring station site investigative work activity;
2. Disturbance associated with site investigative work must be temporary;
3. No trees are removed; and
4. Temporary disturbance must be planted with three shrubs per 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre. Areas where ground disturbance has occurred must be planted to meet the landscaping planting standards of 33.475.220.

Commentary

33.475.440. ~~IJ~~ Standards for development in a City of Portland park

These standards allow the City of Portland **Bureau of** Parks and Recreation **department** to install park amenities in City parks located in the Central Reach. The types of amenities that Parks envisions being installed without river review include park benches, picnic tables, drinking fountains, bicycle racks, trash cans, playgrounds, memorials, kiosks, etc. The standards limit the amount of additional disturbance that will occur within the River Environmental overlay zone to a total of 1,800 square feet of additional permanent disturbance area. The standards also limit tree removal and require mitigation.

33.475.440. ~~JK~~ Standards for tree removal or pruning of vegetation

These standards allow the removal of non-native trees, including those that are listed as nuisance or prohibited on the *Portland Plant List*. These trees must be replaced with native trees. This is a change from existing allowances for the rest of the city found in 33.430, Environmental Overlay Zones. Currently, nuisance and prohibited trees may be removed and replacement is not required.

Under certain circumstances, the standards also allow the removal of native trees up to 12 inches in diameter. The removal of trees is limited to the areas within which the development or activity will occur and replacement is required for trees over 6 inches in diameter.

Trees may not be replaced within the scenic overlay zones. Trees grow and block views that are intended to be protected.

4J. **Standards for other development in a City of Portland park.** The following standards apply to development in a City of Portland park that is not subject to another set of development standards contained in this Section.

1. The total disturbance area must not be more than 2,200 square feet;
2. Disturbance areas must not be located below the top-of-bank of the Willamette River, streams, or other water body, or located within 30 feet of a wetland;

4-3. Tree removal is allowed as specified in Subsection J.; and

5-4. Mitigation is required as specified in Subsection K.

4K. **Standards for removal or pruning of vegetation ~~tree removal~~.** The following standards apply to the removal or pruning of vegetation ~~trees 6 inches or greater in diameter~~:

1. All vegetation removal activities must be surrounded or protected to prevent erosion and sediment from leaving the site or negatively impacting resources on the site;
2. The removal or pruning must be conducted with handheld equipment or equipment with a wheel surface-to-ground pressure of no more than 7.5 psi;
3. Temporary disturbance located within and riverward of the river setback must be replanted to meet the relevant subarea standards of Table 475-1, and temporary disturbance located outside and landward of the river setback is replanted to meet the subarea 3 standard of Table 475-1;
4. The vegetation that is removed or pruned is limited to the following:
 - a. Vegetation listed on the Nuisance Plant List;
 - b. Dead, dying or dangerous trees or portions of trees when they pose an immediate danger, as determined by the City Forester or certified arborist. All sections of wood more than 12 inches in diameter must be placed in the environmental overlay zone of the ownership within which the wood was cut unless the City Forester authorizes the removal because the wood is diseased and will threaten the health of other trees;
 - c. Vegetation that exceeds the height restriction of a view corridor shown on Map 480-2;
 - 1-d. Trees that are not native trees on the *Portland Plant List* may be removed with hand-held equipment or equipment with a wheel surface-to-ground pressure of no more than 7.5 psi; or
 - 2-e. Generally, Madrone, Garry Oak or Pacific Yew that are less than 6 inches in diameter, or other native trees on the *Portland Plant List* may not be removed except native trees 6 inches or greater but less than 12 inches in diameter may be removed if the removed or pruning is in conjunction with development or exterior improvements approved under the standards of this section as follows:

Commentary

- a.(1) Within the rail right-of-way and within 10 feet of the rail right-of-way;
- b.(2) Within the utility line corridor;
- c.(3) Within the disturbance area for installation or replacement of stormwater outfalls;
- d.(4) Within a major public trail;
- e.(5) Within a public viewing area associated with viewpoints shown on Map 480-1;
- f.(6) Within a view corridor shown on Map 480-1; and
- (7) Within a resource enhancement area; or
- g.(8) Within the disturbance area associated with development in a City of Portland park.

3. Madrone, Gary Oak or Pacific Yew that are larger than 6 inches may not be removed;

4.5. Trees that are over 6 inches in diameter that are removed must be replaced as shown in Table 475-2 and must meet the following:

4.a. Replacement vegetation must meet all of the following:

- a.(1) Trees must be a minimum ½-inch caliper, bareroot or live stakes, unless they are oak or madrone, which may be one gallon size. No more than ten percent of the trees may be oak or madrone. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots or equivalent;
- b.(3) The planting must occur within the River Overlay Zones. Trees must not be planted within a view corridor designated in the Scenic Resources Protection Plan, shown on Map 480-1. If the vegetation is not planted on the applicant's site, then the applicant must own the property or have an easement or deed that ensures the vegetated area will not be developed; and
- c.(4) The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met; and

5.b. Vegetation Trees planted to meet the landscaping requirements of 33.475.220 may be counted towards meeting the tree replacement standard.

Commentary

33.475.4340.KL Standards for mitigation

In order to develop in or alter the River Environmental overlay zone, mitigation is required. Mitigation must occur in an area that is one and one-half times the size of the area that will be disturbed for the development. This ratio is intended to mitigate for the fact that when mature, ~~and~~ established vegetation is removed and replaced with new plantings, there is a loss of resource functional value until the new vegetation becomes established.

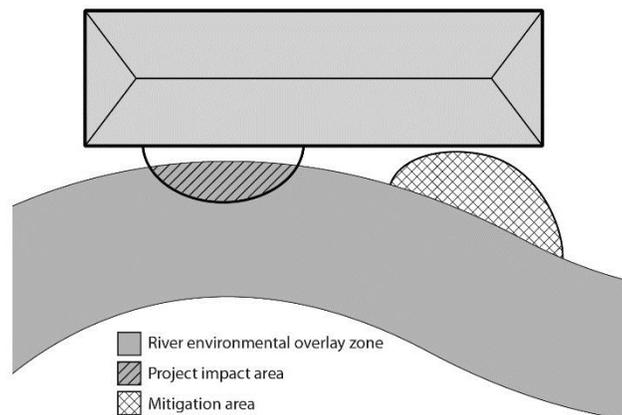
Mitigation ~~would be~~ is usually installed within the River Environmental overlay zone. However, if the land within the River Environmental overlay zone is already planted at a high density, then the mitigation can be done elsewhere on-site provided that the mitigation area is contiguous to the River Environmental overlay zone.

Size of tree to be removed (inches in diameter)	Option A (no. of native trees to be planted)	Option B (combination of native trees and shrubs)
At least 1.5 and up to 6	1	Not applicable
At least More than 6 and up to 12	2	Not applicable
More than 12 and up to 20	3	1 tree and 3 shrubs
More than 20 and up to 25	5	3 trees and 6 shrubs
More than 25 and up to 30	7	5 trees and 9 shrubs
More than 30	10	7 trees and 12 shrubs

KL. Standards for mitigation. The following standards apply to mitigation required by Paragraphs Subsections A through FG and H.

1. Mitigation must occur at a 1.5:1 ratio of mitigation area to project impact area. Project impact area is the total area within the River Environmental overlay zone where structures will be built, vegetation will be removed, or ground disturbance will occur as a result of the proposal. Mitigation area is not counted as part of the project impact area.
2. Mitigation must occur in the River Environmental overlay zone or in an area that is contiguous to the River Environmental Overlay Zone, see Figure 475-4.
3. If the mitigation area is not on the site where the project occurs, then the applicant must own the property or have an easement or deed restriction sufficient to ensure the right to carry out, monitor, and maintain the mitigation for 10 years.

**Figure 475-4
Mitigation Area Contiguous to River Environmental Overlay Zone**



Commentary

33.475.4340.kL.5.

The tree replacement standard specifies the number of trees that must be planted to replace the trees removed. Those trees can be counted towards meeting the mitigation planting density. Additional tree planting may be required to fulfill the mitigation ratio.

Table 475-3

This table represents the same planting density as the landscaping planting density for subarea 1, described in Table 475-1. It is intended to result in a multistoried habitat with tree canopy, shrub layer and ground cover that provide a wide range of riparian corridor and wildlife habitat functions. This planting density applies everywhere in the River Environmental overlay zone where mitigation is conducted.

Title 11, Trees, code section 11.60.020.C. Canopy includes canopy size categories. Tree canopy types are categorized as small, medium, or large based on the estimated canopy size at maturity. The "Portland Tree and Landscaping Manual" suggested plant lists include the size categories recognized for many trees. To determine the size category of a tree not listed in the "Portland Tree and Landscaping Manual"; the applicant shall provide an objective source of information about the tree's mature height, crown spread, and growth rate. This information can come from published sources, internet sources, or nursery information such as cut sheets.

The canopy size category is calculated according to the following formulas, which incorporate the estimated height and crown spread of a mature specimen and the tree species' growth rate:

1. Small trees have a canopy factor of less than 40, Medium trees have a canopy factor from 40 to 90, and large trees have a canopy factor greater than 90;
2. Canopy factor = (Mature height of tree) x (Mature canopy spread) x (Growth rate factor) x 0.01;
3. The growth rate factor is 3 for fast-growing trees, 2 for medium growing trees, and 1 for slow-growing trees.

4. Nuisance plants identified on the *Portland Plant List* must be removed within the area to be replanted. Trees removed to meet this Paragraph must be replaced as specified in Subsection J.;
5. Plantings required for tree removal, as specified in Subsection J., can be counted towards mitigation if the planting is located within the River Environmental overlay zone or in an area that is contiguous to the River Environmental overlay zone;
6. Required planting density standards are specified in Table 475-3. Trees may be clustered. Trees must not be planted within a view corridor shown on Map 480-1. Plants must be selected from the *Portland Plant List*;

Table 475-3 Planting Density			
	Small Trees[1]	Medium Trees[1]	Large Trees[1]
Planting Density	<p>One tree and three shrubs for every 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; and one of the following two options for every 100 square feet.</p> <p><u>Option 1: Three shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</u></p> <p><u>Option 2: Three shrub and four other groundcover plants.</u></p>	<p>One tree and six shrubs for every 200 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; and one of the following two options for every 200 square feet.</p> <p><u>Option 1: Six shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</u></p> <p><u>Option 2: Six shrub and eight other groundcover plants.</u></p>	<p>One tree and nine shrubs for every 300 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; and one of the following two options for every 300 square feet.</p> <p><u>Option 1: Nine shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or</u></p> <p><u>Option 2: Nine shrub and 12 other groundcover plants.</u></p>

[1] Tree sizes is based on Title 11.60.020.C Canopy Size

7. If more than 10 trees, shrubs or groundcover plants are used to meet the above standard, then no more than 50 percent of the trees, shrubs or groundcover plants may be of the same genus. If more than 40 trees, shrubs or groundcover plants are used, then no more than 25 percent of the plants may be of the same genus. For planting areas over 600 square feet, at least two different tree species and sizes, three different shrub species, and four different groundcover species must be used;
8. Trees must be a minimum ½-inch caliper, bareroot or live stake, unless they are oak or madrone, which may be one gallon size. No more than ten percent of the trees may be oak or madrone. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots or equivalent; and
9. The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met.

Commentary

33.475.440.M

Typically, application of soil, including placing fill in the River Environmental overlay zone, requires river review. However, the landscaping standards of 33.475.220 require amending the soil prior to installing the required plants. This standard, 33.475.440.M, exactly matches the landscaping soil amendment standard to ensure that applying soil amendments as required by the landscaping standard does not require river review.

33.475.450 Corrections to Violations of River Environmental Overlay Zone Development Standards

The proposed regulations for corrections to violations match the regulations that currently govern violations of standards in 33.430, Environmental Overlay Zones. The regulations are intended to facilitate timely remediation for damage to resources and functional values that occur as a result of a violation.

M. Standards for application of soil amendments. The following standards apply to the application of soil amendments:

1. The depth of the soil amendment must be no more than 12 inches;
2. The soil must not be applied below the ordinary high water mark of the Willamette River, streams, or other water body, or within 30 feet of a wetland;
3. The composition of the growing medium must meet one of the following:
 - a. For all planting areas located outside of the flood hazard area, the growing medium must be a blend of loamy soil, sand, and compost that is 30 to 40 percent plant material compost (by volume); or
 - b. For all planting areas located within the flood hazard area, the growing medium must be a blend of loamy soil, sand, small gravels and compost. A landscape architect or civil engineer must certify that the growing medium is adequate to support the establishment and growth of vegetation, and is heavier than water.
4. Placement of the growing medium is not allowed when the ground is frozen or saturated; and
5. Temporary erosion control measures are required until permanent stabilization measures are functional. Temporary erosion control measures must be biodegradable or removed after permanent stabilization measures are functional or within 3 years, whichever is sooner.

33.475.450 Corrections to Violations of River Environmental Overlay Zone Development Standards

- A. Purpose.** The purpose of the correction regulations is to ensure the timely restoration of natural resources and functional values that have been degraded due to a violation of the River Environmental Overlay Zone standards.

These regulations establish a process to determine which review requirements will be applied to remedy a violation that takes place in the River Environmental Overlay Zone. The type of review required depends on the circumstances of the violation. Section 33.475.450.B details methods for correcting such violations and Title 3 of the City Code details the enforcement penalties.

- B. Correction Options.** Applicants must choose one of the following options to correct environmental code violations.
1. When these options may be used.
 - a. If all of the following are met, the applicant may choose Option One, Option Two, or Option Three:
 - (1) No more than 12 diameter inches of trees were removed;

Commentary

- (2) No ground disturbance occurred riverward of the top of bank of the Willamette River or within 30 feet of the top of bank of a stream, wetland or other water body;
 - (3) The correction will remove all illegal development; and
 - (4) The correction will replant illegal clearing.
- b. If any of the following occurred, the applicant may not use Option One, but may choose either Option Two or Option Three:
 - (1) More than 12 diameter inches of trees were removed;
 - (2) A Madrone **larger than 6 inches**, Garry Oak **larger than 6 inches**, or Pacific Yew larger than 6 inches was removed; or
 - (3) Disturbance occurred riverward of the top of bank of the Willamette River, or within 30 feet of the top of bank of a stream, wetland or other water body.
 - c. If the applicant cannot meet Options One or Two, Option Three must be used.
 - d. If the violation also violates a condition of approval of a land use review, no trees have been removed, and disturbance did not occur riverward of the top of bank of the Willamette River or within 30 feet of the top of bank of a stream, wetland or other water body, the applicant may choose Option One or the process described in Section 33.730.140. The applicant may not choose Options Two or Three.
 - e. If the violation also violates a condition of approval of a land use review, trees have been removed, and disturbance occurred riverward of the top of bank of the Willamette River or within 30 feet of the top of bank of a stream, wetland or other water body, the applicant must use the process described in Section 33.730.140. The applicant may not choose one of the options in this section.
2. Option One, Remove and Repair. This option results in removal of illegal development and replanting and repair of any damage. All of the requirements of this paragraph must be met. Adjustments and modifications to these requirements are prohibited.
- a. All items and materials placed in the area of violation are removed and no new disturbance area is created;
 - b. Any soil compaction resulting from the violation is tilled or otherwise broken up to a depth of 6 inches prior to planting;
 - c. Violation remediation planting. The area to be planted is the area disturbed by the violation. All of the following must be met:
 - (1) The area disturbed by the violation activity must be replanted **to meet the standards of Table 475-3**;

Commentary

- (2) One tree, six shrubs, and eight other ground cover plants are required to be planted for every 200 square feet of planting area. For planting areas over 600 square feet, at least two different tree species and sizes, three different shrub species, and four different groundcover species must be used. All plants must be native;
 - (3) A second area, equal in size to the area disturbed by the violation activity, must also be replanted to meet the standards of Table 475-3 as remediation, or seven additional plants as described in B.2.c.2 must be planted on the site for every 50 square feet disturbed;
 - (54) Any Nuisance or Prohibited Plants listed on the *Portland Plant List* must be removed from the planting area and within 10 feet of the planting area;
 - (65) Trees must be a minimum one ½ inch in diameter, bareroot or live stake, unless they are oak, madrone, or conifer, which may be three- to five-gallon size. No more than 10 percent of the trees may be oak or madrone. Trees must not be planted within a view corridor designated in the Scenic Resources Protection Plan, shown on Map 480-1. Trees may be clustered. Shrubs must be a minimum of two-gallon size. All other species must be a minimum of four-inch pots;
 - (76) The requirements of Section 33.248.090, Mitigation and Restoration Planting, must be met; and
 - (87) For violations involving the removal of trees, two times the number of diameter inches removed must be planted on the site, in addition to other remediation vegetation planted. If any tree removed was a Garry Oak, Madrone, or Pacific Yew, the replacement trees must be of the same species. Planted trees must be a minimum one inch in diameter unless they are oak, Madrone, or conifer, which may be three- to five-gallon size.
3. Option Two, Retain and Mitigate. This option results in legalizing the illegal development and mitigating for any damage. All of the requirements of this subsection must be met. Adjustments and modifications to these standards are prohibited.
- a. The applicable standards of paragraphs 33.475.440.B must be met;
 - b. Violation remediation planting. The area to be planted is the area disturbed by the violation. Where development is approved for the area disturbed by the violation, an area of the same size elsewhere on the site must be planted. All of the following must be met:
 - (1) The area disturbed by the violation activity must be replanted to meet the standards of Table 475-3;

Commentary

- (2) One tree, one shrub, and five groundcover plants are required to be planted for every 50 square feet of planting area. For planting areas over 600 square feet, at least two different tree species and sizes, three different shrub species, and four different groundcover species are used. Plants must be native and selected from the *Portland Plant List*.
 - (3) A second area, equal in size to the area disturbed by the violation activity, must also be replanted to meet the standards of Table 475-3 as remediation, or seven additional plants as described in B.2.c.2 must be planted on the site for every 50 square feet disturbed;
 - (4) Any Nuisance or Prohibited Plants listed on the *Portland Plant List* must be removed from the planting area and within 10 feet of the planting area;
 - (5) Trees must be a minimum one ½ inch in diameter, bareroot or live stake, unless they are oak, madrone, or conifer, which may be three- to five-gallon size. No more than 10 percent of the trees may be oak or madrone. Trees must not be planted within a view corridor designated in the Scenic Resources Protection Plan, shown on Map 480-1. Trees may be clustered. Shrubs must be a minimum of two-gallon size. All other species must be a minimum of four-inch pots; and
 - (6) The requirements of Section 33.248.090, Mitigation and Restoration Planting, must be met; and
- c. For violations involving the removal of trees, two times the number of diameter inches removed must be planted on the site, in addition to other remediation vegetation planted. If any tree removed was a Garry Oak, Madrone, or Pacific Yew, the replacement trees must be of the same species. Planted trees must be a minimum 1-one inch in diameter unless they are oak, Madrone, or conifer, which may be three- to five-gallon size.
4. Option Three, River Review. This option requires River Review, using the approval criteria and procedures below:
- a. Approval criteria. The applicable approval criteria of Subsection 33.865.120 must be met.
 - b. Review procedures. Reviews are processed as follows:
 - (1) Type III. A Type III review is required for any development, exterior alteration, or exterior improvement within a wetland, stream channel, drainageway, or water body.
 - (2) Type II. All other reviews to correct violations are processed through a Type II procedure.
 - (3) All River Reviews must provide the information required in Section 33.865.040, Supplemental Application Requirements

Commentary

33.475.500 Removal or Remediation of Hazardous Substances

The regulations in this section apply to removal or remediation of hazardous substances. The goal of these regulations is to ensure that cleanup actions do not impair river-dependent and river-related uses and development, public access and recreation or natural resources.

The requirements are intended to refine the cleanup design to be in conformance with City requirements and the Oregon Statewide Planning Goals, particularly Goal 15: The Willamette River Greenway. Goal 15 requires protection of significant fish and wildlife habitats, protection of natural vegetative fringe along the river, and setbacks from the river for non-water related or non-water dependent uses. The regulations have been written in a way that will provide the person conducting the cleanup and the regulating agency with the flexibility required to design the most appropriate removal or remediation action.

Portions of State or federally approved cleanups may be exempt from procedural requirements of the section. Under Oregon State Law (ORS 465.315(3)) the onsite portion of a state approved cleanup is exempt from the procedural requirements of the Code to obtain local permits if the substantive requirements of the local jurisdiction are met.

The regulations in this section are the City's substantive requirements for clean ups that must be met regardless of whether the cleanup may be exempt or is applying for a permit. The Bureau of Development Services implements what it calls an "exempt process" for evaluating hazardous substance removal or remediation plans compliance with the City's substantive regulations. Cleanup conducted under state law in a City right of way is not exempted and must comply with all applicable City requirements.

Under federal law (42 U.S.C. 9621 (e)(1)), EPA has its own process for determining the extent to which substantive requirements of City Code will be considered in a federally approved cleanup.

33.475.500.FE

Statewide Planning Goal 15 requires that structures or buildings be separated from the river. The City's river setback (called greenway setback outside of this chapter) requires that development in the River General overlay zone in the Central City that is not river-dependent or river-related be set back 50 feet from the top of bank. Structures required as part of remediation actions are considered river-related and allowed within the setback. The standard seeks to ensure that after cleanup actions are complete, the location of structures associated with the remediation will allow for future river-dependent and river-related development, such as development of the Greenway Trail.

Clean Up of Contaminated Sites

33.475.500 Removal or Remediation of Hazardous Substances

- A. General.** The following regulations are substantive requirements that apply to actions taken to remove or remediate hazardous substances. All of the regulations must be met unless one or more are demonstrated to be impracticable pursuant to subsection G, below.
- B. Where these regulations apply.** The regulations of this section apply to the portion of the site located within the boundaries of the removal or remediation action.
- C. Review procedure.**
1. Except as described in paragraph C.2, compliance with these regulations is processed through a Type II procedure.
 2. If the action to remove or remediate hazardous substances is subject to this Code but exempt from procedural requirements, the action must comply with the substantive requirements of these regulations to the extent required under state or federal law and the person performing the action must notify the City that the action is exempt. A person conducting a cleanup otherwise exempted from the procedural requirements may choose to obtain a permit.
- D. Relationship to other regulations in this chapter.** Actions to remove or remediate hazardous substances that are approved or selected under Oregon or federal cleanup law are exempt from the procedural requirements of Chapter 33.475. Any part of **development action** that is not in itself a remedial or removal action must meet all other applicable regulations and procedural requirements of this chapter.
- ~~**E. Determination Letter.** To obtain a letter from the City of Portland Bureau of Development Services determining substantial conformance with standards 33.475.500, a supplemental site plan, as described in 33.865.040.A, is required.~~
- FE. Regulations that apply to actions to remove or remediate hazardous substances.** The following regulations apply to proposals for the removal or remediation of hazardous substances:
1. The removal or remedial actions and the final remedy must not preclude the use of the site consistent with the uses allowed by the base zone or an approved conditional use. If the site is within the River Industrial overlay zone or riverward of the river setback, the final remedy must allow the use of the site for river-dependent or river-related activities unless the site is found to be unsuitable for river-dependent or river-related uses. Generally, this means that the final remedy must allow development of the Greenway trail, dredging necessary to establish or maintain navigation to and from riverfront sites, the placement of piles or dolphins, or the development of a marine facility, dock, or wharf or other river-dependent or river-related structure;

Commentary

33.475.500.6F.1

The requirements of this subsection are aimed at encouraging the person conducting the cleanup to design a remedy that leaves identified natural resource areas intact as much as possible. The City is aware that this will not be possible in all cases, and therefore requires re-vegetation when ground disturbance and native plant removal cannot be avoided. The re-vegetation requirements are intended to allow flexibility in the type and size of trees planted.

2. Buildings, structures and equipment required as part of removal or remediation actions must be located and designed taking into account the purpose of the river setback standard which is to keep structures at least 50 feet away from the top of bank of the river, reserve space for public access to the river and development of the ~~Greenway~~ ~~Trail~~, and allow for natural resource enhancement; and
3. Water quality treatment facilities must be located outside of the River Environmental Overlay Zone.

GF. **Regulations that apply to actions to remove or remediate hazardous substances that occur in specific areas.** The following regulations apply to actions within the River Environmental Overlay Zone to remove or remediate hazardous substances based on specific locations:

1. The following regulations apply to areas landward of the top of bank:
 - a. Disturbance of the ground and removal of native vegetation must be avoided outside of the actual soil removal areas. If avoiding disturbance or native vegetation removal is not practicable, disturbance and removal must be minimized.
 - b. Where ground disturbance or removal of native vegetation cannot be avoided, the area must be replanted. The replanting standards are as follows:
 - [1] Nuisance and prohibited plants identified on the *Portland Plant List* must be removed within the area to be replanted and within 10 feet of any plantings;
 - [2] Planting density. The replanting area must meet one of the following plant and planting density standards specified in Table 475-4. Trees may be clustered. Trees must not be planted within a view corridor designated in the Scenic Resources Protection Plan, shown on Map 480-1.

Commentary

Table 475-4

This table represents the same planting density as the mitigation planting density, Table 475-3, and the landscaping planting density for subarea 1, Table 475-1.

Title 11, **Trees, code section** 11.60.020.C. Canopy **includes canopy** size categories. Tree canopy types are categorized as small, medium, or large based on the estimated canopy size at maturity. The "Portland Tree and Landscaping Manual" suggested plant lists include the size categories recognized for many trees. To determine the size category of a tree not listed in the "Portland Tree and Landscaping Manual", the applicant shall provide an objective source of information about the tree's mature height, crown spread, and growth rate. This information can come from published sources, internet sources, or nursery information such as cut sheets.

The canopy size category is calculated according to the following formulas, which incorporate the estimated height and crown spread of a mature specimen and the tree species' growth rate:

1. Small trees have a canopy factor of less than 40, Medium trees have a canopy factor from 40 to 90, and large trees have a canopy factor greater than 90;
2. Canopy factor = (Mature height of tree) x (Mature canopy spread) x (Growth rate factor) x 0.01;
3. The growth rate factor is 3 for fast-growing trees, 2 for medium growing trees, and 1 for slow-growing trees.

Table 475-5

This table's information is the same requirement as the tree replacement standard, Table 475-2.

Table 475-4 Planting Density			
	Small Trees[1]	Medium Trees[1]	Large Trees[1]
Planting Density	One tree and three shrubs for every 100 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre, and one of the following two options for every 100 square feet.	One tree and six shrubs for every 200 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre, and one of the following two options for every 200 square feet.	One tree and nine shrubs for every 300 square feet and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre, and one of the following two options for every 300 square feet.
	Option 1: Three shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or	Option 1: Six shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or	Option 1: Nine shrubs and seeded with a grass and forb seed mix at a ratio of 30 pounds per acre; or
	Option 2: Three shrub and four other groundcover plants.	Option 2: Six shrub and eight other groundcover plants.	Option 2: Nine shrub and 12 other groundcover plants.

[1] Tree sizes is based on Title 11.60.020.C Canopy Size

- [3] Plant diversity. For planting areas over 600 square feet, at least two different tree species and sizes, three different shrub species, and four different groundcover species are used. If more than 10 trees or shrubs are used to meet the above standard, then no more than 50 percent of the trees or shrubs may be of the same genus. If more than 40 trees, shrubs or groundcover plants are used, then no more than 25 percent of the plants may be of the same genus;
 - [4] Plant size. Trees must be a minimum ½-inch caliper or bareroot unless they are oak or madrone, which may be one gallon size. No more than ten percent of the trees may be oak or madrone. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots or equivalent; and
 - [5] The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met.
- c. Tree replacement. Trees that are 1.5-4 inches or greater in diameter that are removed must be replaced based on Table 475-5:

Commentary

33.475.500.GF.2.a

If the river bank will be altered significantly as a result of the removal or remediation of hazardous substances, the City requires that the bank be restored using soil bioengineering instead of engineered inert materials to the extent practicable. The City's priority is a natural bank that can sustain vegetation for soil stabilization, improve ecological values and provide riparian functionality. However, the City recognizes that there will be cases when bioengineering will not be practicable. If rock armoring is used on the bank, the City requires re-grading to a slope level that will allow vegetation to be maintained, and requires that live willow or dogwood stakes be planted between the rocks to provide a minimum level of vegetative cover.

Table 475-5 Tree Replacement in Hazardous Substance Clean-up Sites		
Size of tree to be removed (inches in diameter)	Option A (no. of native trees to be planted)	Option B (combination of native trees and shrubs)
At least 4 and up to 12	2	Not applicable
More than 12 and up to 20	3	1 tree and 3 shrubs
More than 20 and up to 25	5	3 trees and 6 shrubs
More than 25 and up to 30	7	5 trees and 9 shrubs
More than 30	10	7 trees and 12 shrubs

[21] Size. The replacement trees must be a minimum ½-inch diameter or bareroot unless they are oak or madrone, which may be one gallon size. Shrubs must be a minimum of one gallon size or bareroot. All other species must be a minimum of four-inch pots or equivalent.

[32] Type. The replacement trees must be native trees selected from the *Portland Plant List*;

[43] Location. All replacement trees must be planted within the River Environmental Overlay Zone, within 50 feet of the River Environmental Overlay Zone, or within 50 feet of the top of bank of the Willamette River in the Central Reach. The person conducting the cleanup must own the property where the trees are planted or have an easement or deed restriction sufficient to ensure the success of the tree planting; and

[54] Replacement trees can be counted toward meeting the requirements of subparagraph G.1.b(2).

- d. All vehicle areas and construction staging areas installed for purposes of conducting the removal and remediation actions must be removed from the River Environmental Overlay Zone when they are no longer necessary for remedy construction. All such areas must be removed by the time the project is complete and the areas must be replanted according to the standards of subparagraph G.1.b, above.
2. The following regulations apply to the area between the top of bank and the ordinary high water mark:
 - a. When there is an alteration to the area between top of bank and the ordinary high water mark that is greater than 500 square feet or includes more than 50 cubic yards of excavation or fill, changes the ground contours, results in the removal of buildings, requires engineering of the river bank or includes in-water work, the following should be met:

Commentary

- [1] The area between the top of bank and the ordinary high water mark where the alteration occurs must be designed using biotechnical techniques including soil bioengineering. Figures 475-5 and 475-6 show examples of biotechnical techniques. In addition to using biotechnical techniques, the following requirements apply:
- Rock armoring or other hard surface armoring methods must not be used between the top of bank and the Ordinary High Water Mark except as needed surrounding outfalls. This is not intended to preclude using rock or other hard surface stabilization methods below the surface if necessary to contain hazardous substances or to preclude the use of rocks or gravel as part of the biotechnical technique;
 - The bank must be sloped or terraced in a way that allows the establishment and maintenance of vegetation as the primary soil stabilization method;
 - If the site is currently used for public recreation, including access to a beach or the river, the bank must be sloped or terraced in a way that allows for at least one public access way to the beach or river;
 - Large wood, including root wads, tree boles and logs, must be used to reduce localized erosion, improve bank stabilization, and improve ecological values and, if the site is currently used for public recreation, support continued use of beaches and the river; and
 - At least eighty percent of the area between the top of bank and the ordinary high water mark that is being altered as a result of the remedy must be planted with shrubs. At least one tree must be planted for every 400 square feet of altered area. All of the area that is not planted with shrubs or trees must be fully covered with ground cover plants. All plants must be selected from the Portland Plant List and should be appropriate for the conditions on the site. The requirements of Section 33.248.090, Mitigation and Restoration Planting must be met.
- [2] If biotechnical techniques are not practicable, as described in 33.475.500.H, and rock armoring is used on the surface between the top of bank and the Ordinary High Water Mark, then the slope of the bank must be shallow enough to allow a combination of rock and vegetation. At a minimum, live native willow or dogwood stakes should be planted in adequate soil, in the interstices between the rocks at a ratio of three stakes for every square yard of rock armoring.

Commentary

33.475.500.GF.3

If the river bottom, which is the ground below the ordinary high water mark, will be altered significantly as a result of the removal or remediation of hazardous substances, the City requires that the river bottom be restored to support use by fish and people. The City's priority is a natural river bottom with improved ecological values and allows for public access where possible. However, the City recognizes that there will be cases when this will not be practical. If angular or large rock is necessary, the City requires adding a top layer of small gravel over the large rock.

- b. When there is a minor alteration of less than 500 square feet or less than 50 cubic yards of excavation or fill to the area between the top of bank and the ordinary high water mark, the regulations of paragraph G.1, above apply.
3. In the area that is riverward of the Ordinary High Water Mark, the following apply:
- a. Avoid in-water permanent structures that will impact the navigation channel or will preclude river-dependent or river-related development from accessing and utilizing the river for public recreation, transportation, tourism, or the transport, transfer and conveyance of goods and materials to and from the upland site;
 - b. Integrate large wood, or other natural wave deflection structures or techniques that mimic the function of large wood, into the near-shore environment. Rock armoring, chemically treated wood, articulated block, and industrial debris is discouraged;
 - c. If the area is a beach or is a shallow water depositional area, then the final design should include all of the following:
 - (1) At least six inches depth of substrate that is ½-inch rounded gravel or smaller in size should be placed over capping material;
 - (2) The submerged slope should be no steeper than 1:7 (rise to run ratio); and
 - (3) Public access from the Greenway Trail or abutting upland sites to the river should not be precluded.
 - d. If the area is not a beach or is not a shallow water depositional area, then the final substrate should be rounded rock no larger than 6 inches (D100=6”) with an average gradation size of 3 inches (D50=3”). Angular rock is discouraged.

HG. Demonstration of Impracticability. A person conducting a cleanup may be exempted from compliance with any requirement in this section if the person demonstrates that compliance with the requirement is not capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project remedial purposes. The person must still comply with that requirement to the extent practicable and remains subject to all other applicable requirements. To demonstrate impracticability the applicant must submit an engineering analysis, a cost schedule and any other information, such as desired future use of the site, that supports a demonstration that a requirement cannot be fully met.

Commentary

Figures 475-5 and 475-6

The examples that accompany this subsection were developed as part of a river bank design charrette conducted by River Plan staff as part of River Plan/North Reach, and attended by biologists, bank design experts, landscape architects, and City, state and federal agency representatives. Staff updated the figures to reflect types of contamination clean-up that have occurred in the Willamette River in recent years.

Figure 475-5

Example 1: Upland and In-Water Contamination Clean-Up

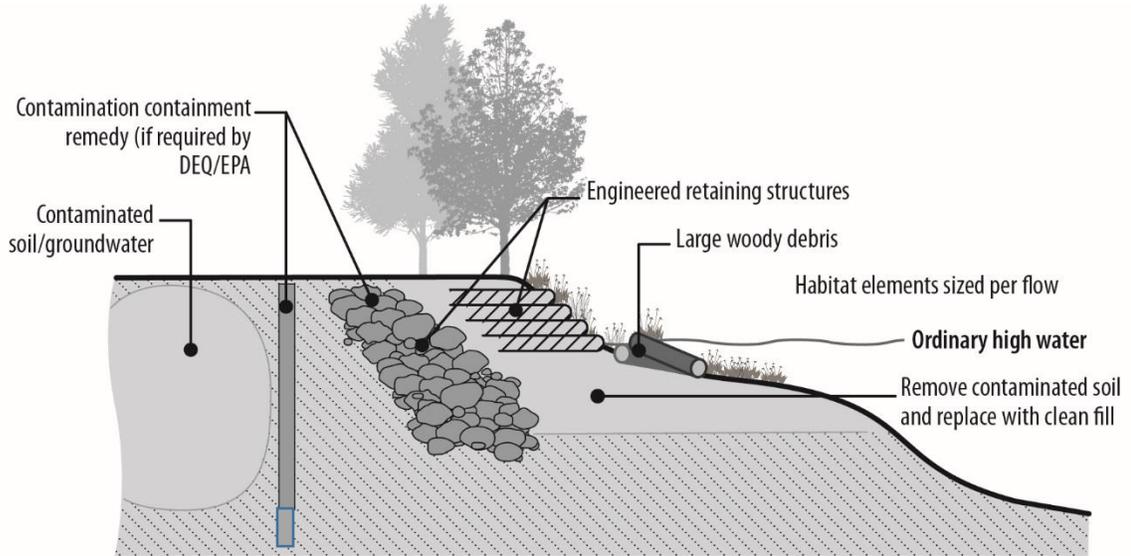
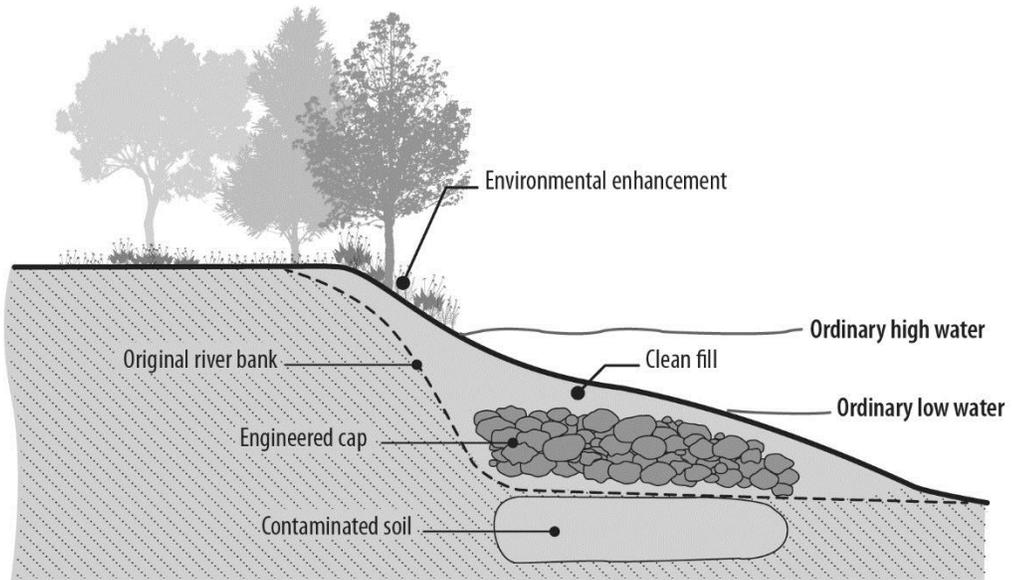


Figure 475-6

Example 2: In-Water Contamination Clean-Up



Commentary

Map 475-1

This map depicts the Central Reach portion of the Willamette Greenway Boundary that is subject to the regulations of Chapter 475. Industrially zoned sites in the northeast and southeast portion of the Central Reach in the Central City remain subject to the regulations of the Greenway Overlay Zones chapter, 33.440. Revised regulations for these sites will be reviewed as part of the update to the Greenway Plan for the North Reach Plan, which predominantly addresses river industrial sites and development. The greenway overlay zone regulations for the South Waterfront Subdistrict are contained in 33.510.253 and therefore, the South Waterfront Subdistrict is not included on this map and the regulations of this chapter do not apply.

Proposed Central Reach River Overlay Boundary

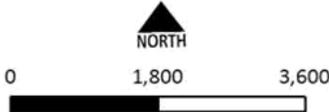
Map 475-1

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary



Scale in Feet
Bureau of Planning and Sustainability
Portland, Oregon

Commentary

Map 475-2

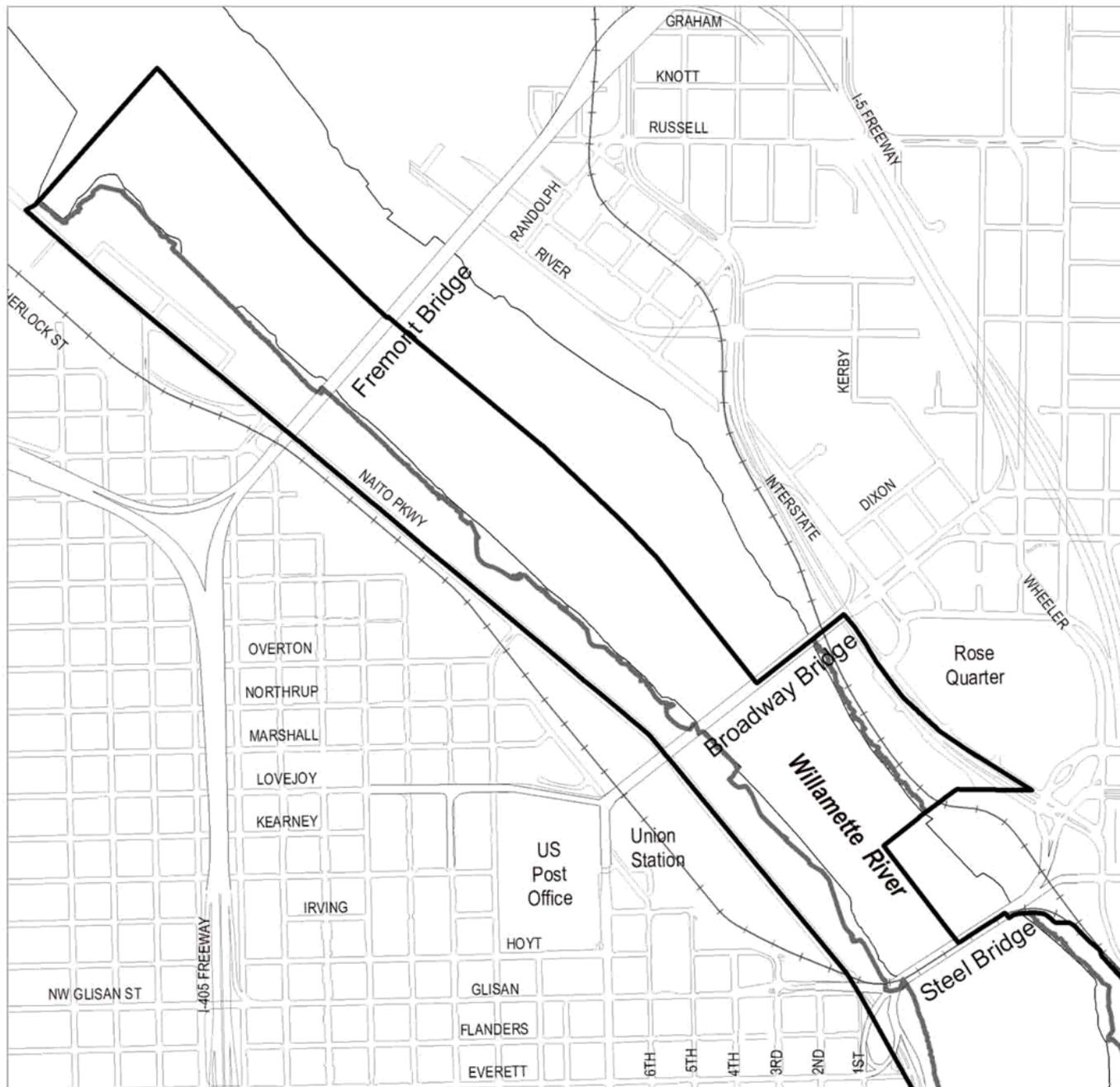
This map series shows the mapped top of bank for the Central City using Light Detection and Ranging (LIDAR). The top of bank is defined in 33.910 as the largest decrease in slope that is 10 percent or greater between the ordinary high water mark of a water body and a point 50 feet landward from the ordinary high water mark. See Section 33.930.150, Measuring Top of Bank. If there is no decrease in slope that is 10 percent or greater within a distance of 50 feet from the ordinary high water mark, then the top of bank will be the default location described in Section 33.930.150, Measuring Top of Bank. City staff plan to survey portions of this map and provide a refined map to the City Council.

Proposed Central Reach Top of Bank

Map 475-2

Map 1 of 3

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary
-  Top of Bank (where mapped)



Commentary

Proposed Central Reach Top of Bank

Map 475-2

Map 2 of 3

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary
-  Top of Bank (where mapped)



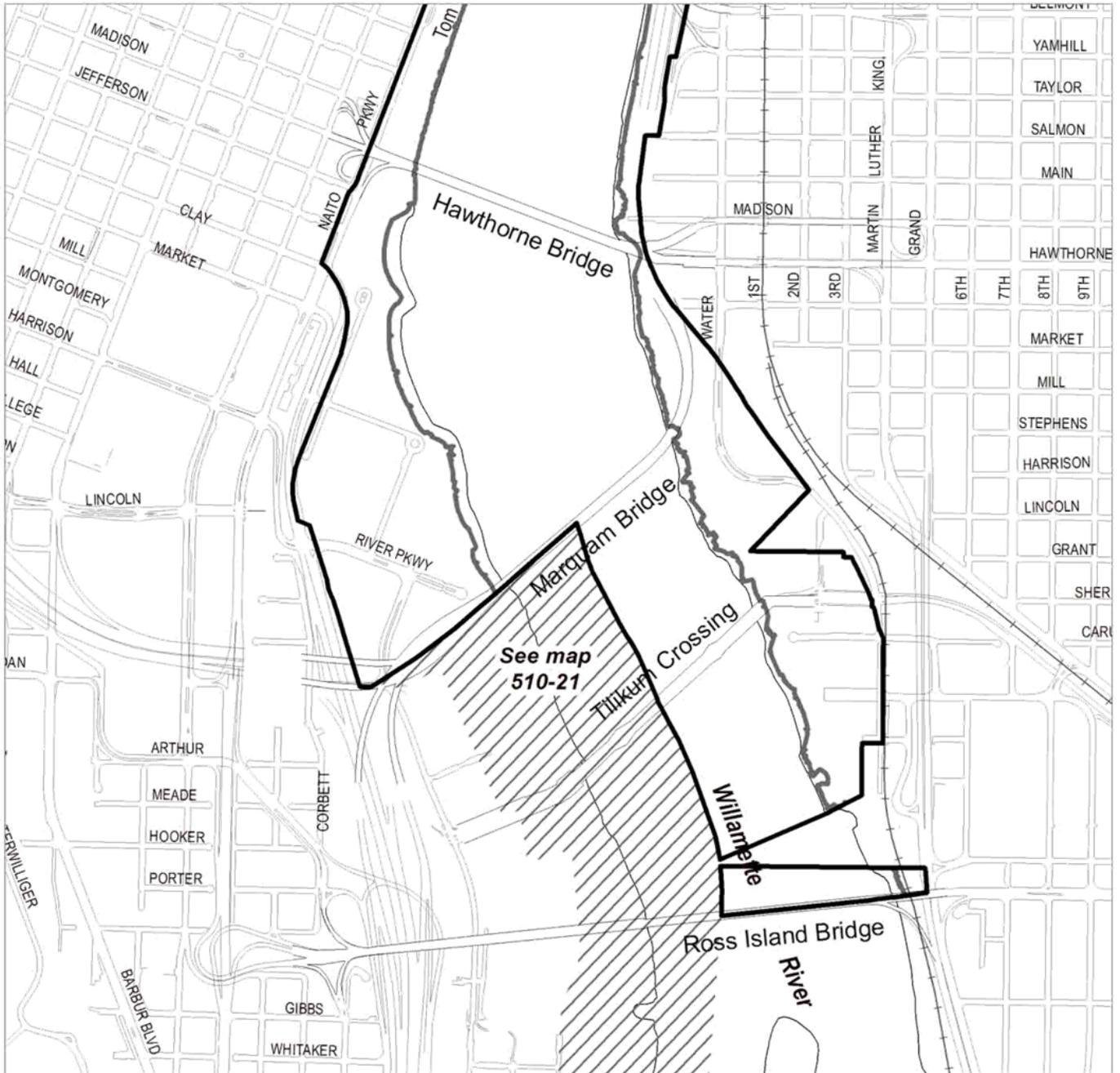
Commentary

Proposed Central Reach Top of Bank

Map 475-2

Map 3 of 3

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary
-  Top of Bank (where mapped)



Commentary

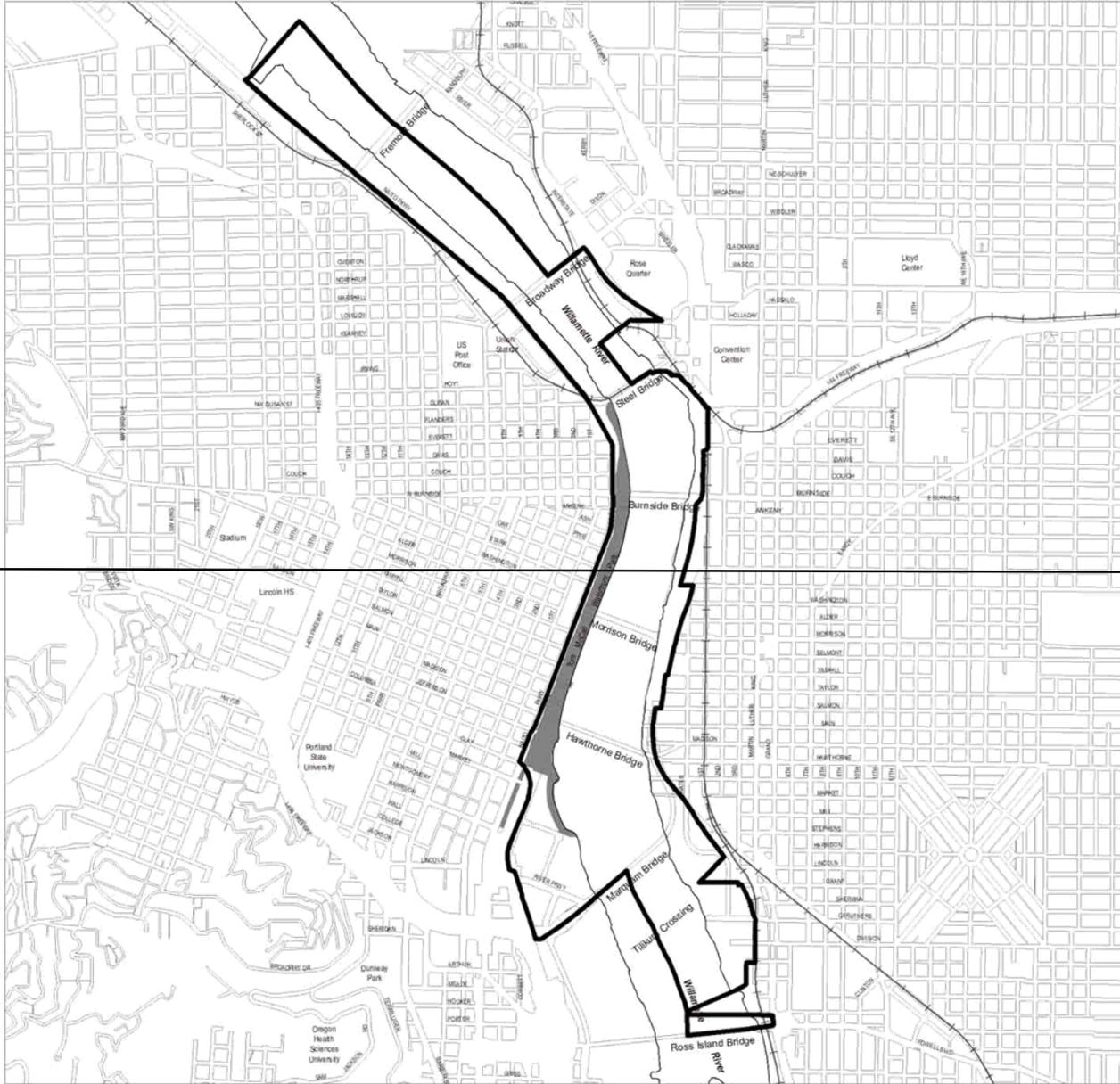
Map 475-3

This map depicts Governor Tom McCall Waterfront Park and the public beach at Eastbank Crescent. There are different requirements at this-these locations, such as landscaping.

Proposed Landscaping Requirements at Governor Tom McCall Waterfront Park

Map 475-3

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary
-  Governor Tom McCall Waterfront Park



Commentary

Areas Exempt from Landscaping Requirements

Map 475-3

Map Revised Xxxxx X, 201X



Legend

-  Proposed Central Reach River Overlay Boundary
-  Exempt Areas

