

EXHIBIT C

TITLE 19 ZONING

CHAPTER 19.200 DEFINITIONS AND MEASUREMENTS

19.201 Definitions

“Major pruning” means the trimming or removal of 20% or more of the live crown, or removal of or injury to roots within a radial distance from the tree of six times the tree’s diameter at breast height (DBH) or over 25% of the root protection zone (see Figure 16.32.042.G.1.b) during any 12-month period.

CHAPTER 19.400 OVERLAY ZONES AND SPECIAL AREAS

19.402 Natural Resources NR

19.402.1 Intent

Section 19.402 is to be interpreted consistently with the following:

- A. Section 19.402 provides protection for water quality resources under Statewide Land Use Planning Goal 6 and Sections 1-4 of Title 3 of the Metro Urban Growth Management Functional Plan (UGMFP). Section 19.402 also provides protection for designated natural resources that have been identified for the purposes of implementing Statewide Planning Goal 5 relating to significant natural riparian, wildlife, and wetland resources and Title 13 of the UGMFP.
- B. Many of Milwaukie's riparian, wildlife, and wetland resources have been adversely affected by development over time. These regulations seek to minimize additional adverse impacts and to restore and improve resources, where possible, while balancing property rights and development needs of the city.
- C. It is also the intent of Section 19.402 to:
 - 1. Designate water quality resources (WQRs) to protect the functions and values of riparian and wetland resources at the time of development.
 - 2. Protect and improve the functions and values that contribute to water quality and to fish and wildlife habitat in urban streamside areas. These functions and values include, but are not limited to:
 - a. Vegetated corridors to separate protected water features from development.
 - b. Microclimate and shade.
 - c. Streamflow moderation and water storage.
 - d. Water filtration, infiltration, and natural purification.
 - e. Bank stabilization and sediment and pollution control.
 - f. Large wood recruitment and retention and natural channel dynamics.
 - g. Organic material resources.
 - 3. Designate habitat conservation areas (HCAs) to implement the performance standards of Title 13 of the UGMFP for riparian areas and fish and wildlife habitat, and to protect significant local Goal 5 resources such as wetlands.
 - 4. Provide nondiscretionary (clear and objective) standards, as well as a discretionary review process, applicable to development in HCAs, in accordance with Goal 5.

5. Allow and encourage habitat-friendly development while minimizing the impact on water quality and fish and wildlife habitat functions.
 6. Permit residential cluster development to encourage creative and flexible site design that is sensitive to the land's natural features and adapts to the natural topography.
 7. Provide mitigation standards for the replacement of ecological functions and values lost through development in WQRs and HCAs. This includes restoration of designated natural resources that are temporarily disturbed during development, as well as mitigation for permanent disturbance of those areas as a result of development.
 8. Preserve existing native vegetation against removal and replacement with lawns, gardens, or other nonnative plantings.
- D. Section 19.402 allows development in situations where adverse impacts from the development can be avoided or mitigated and where the strict application of these rules would deny reasonable economic use of property.
- E. It is not the intent of Section 19.402 to:
1. Impose any obligation on property owners to restore existing developed sites to predevelopment or natural conditions when no new activity is proposed.
 2. Impose any unreasonable hardship against the continued maintenance of existing legal site conditions.
 3. Apply to activities that do not affect WQRs or HCAs.
 4. Prohibit normal lawn and yard landscape planting and maintenance that does not involve removal and replacement of existing native vegetation. Normal lawn and yard planting and maintenance does not include the planting of invasive nonnative or noxious vegetation, including, but not limited to, plants listed as nuisance species on the Milwaukie Plant List established in Subsection 19.402.2.G.

19.402.2 Coordination with Other Regulations

- A. Implementation of Section 19.402 is in addition to, and will be coordinated with, Title 19 Zoning, Title 18 Flood Hazard Regulations, Chapter 16.28 Erosion Control, and Chapter 16.32 Tree Code.
- B. For properties along the Willamette River, Section 19.402 does not prohibit the maintenance of view windows, as allowed by Section 19.401 Willamette Greenway Zone WG.
- C. Except as provided for in Subsection 19.402.2.B, when applicable provisions of Sections 19.402 and 19.401 or Chapter 16.32 are in conflict, the more restrictive provision will be controlling.
- D. Nonconforming development that was legally existing for WQRs as of January 16, 2003, the effective date of Ordinance #1912, or that was legally existing for HCAs as of September 15, 2011, the effective date of Ordinance #2036, and that is nonconforming solely because of Section 19.402, is not subject to the provisions of Chapter 19.800 Nonconforming Uses and Development. However, development that is nonconforming for other reasons will be subject to the provisions of Chapter 19.800.
- E. The requirements of Section 19.402 apply in addition to all applicable local, regional, state, and federal regulations, including those for wetlands, trees, and flood management areas. Where Section 19.402 imposes restrictions that are more stringent than regional, state, and federal regulations, the requirements of Section 19.402 will govern.
- F. Development in or near wetlands and streams may require permits from the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps). If a federal permit is required, a water quality certification from the Oregon Department of Environmental Quality (DEQ) may also be

required. The Planning Manager will notify DSL and the Corps when an application for development within streams and wetlands is submitted. Because these agencies may have more restrictive regulations than the City, applicants are encouraged to contact them before preparing development plans.

- G. A document or other list used to identify native, nuisance, and prohibited plants will be maintained by the Planning Manager and will be referred to as the Milwaukie Plant List.
- H. A document or other list used to identify chemicals that have been demonstrated to be detrimental to water quality and habitat health will be maintained by the Planning Manager and will be referred to as the Milwaukie Prohibited Chemicals List.

19.402.3 Applicability

- A. The regulations in Section 19.402 apply to all properties that contain or are within 100 ft of a WQR and/or HCA (including any locally significant Goal 5 wetlands or habitat areas identified by the City of Milwaukie) as shown on the Milwaukie Natural Resources Administrative Map (hereafter "NR Map").
- B. For properties that do not contain, but are within 100 ft of, a WQR and/or HCA, as shown on the NR Map, and where an activity not listed as exempt in Subsection 19.402.4.A will disturb more than 150 sq ft, a construction management plan is required in accordance with Subsection 19.402.9 (see also Table 19.402.3).
- C. The NR Map, which shows WQRs and HCAs, is adopted by reference. The NR Map will be used to determine the applicability of Section 19.402 and will be administered in accordance with Subsection 19.402.15.
- D. Designated natural resources are shown on the NR Map as follows:
 - 1. Water quality resources (WQRs) include protected water features and their associated vegetated corridors, as specified in Table 19.402.15. The vegetated corridor is a buffer around each protected water feature, established to prevent damage to the water feature. The width of the vegetated corridor varies depending on the type of protected water feature, upstream drainage area served, and slope adjacent to the protected water feature. The NR Map is a general indicator of the location of vegetated Corridors; the specific location of vegetated corridors must be determined in the field in accordance with Table 19.402.15.
 - 2. Habitat conservation areas (HCAs) include significant Goal 5 wetlands, riparian areas, and fish and wildlife habitat. HCAs are designated based on a combination of inventory of vegetative cover and analysis of habitat value and urban development value. HCA locations on the NR Map are assumed to be correct unless demonstrated otherwise; verifications and corrections will be processed in accordance with the procedures established in Subsection 19.402.15.
- E. To determine whether a proposed activity on a given property will trigger any requirements of Section 19.402, the City will use the latest available aerial photographs; a copy of the applicable section of the NR Map; and, in the case of WQRs, the parameters established in Table 19.402.15. If a property owner or applicant believes that the NR Map is inaccurate, they may propose corrections according to the standards established in Subsection 19.402.15.
- F. In the context of designated natural resources, "disturbance" is a condition or result of an act that "disturbs" as defined in Section 19.201. Disturbance can be either temporary or permanent as noted below.
 - 1. Temporary disturbances are those that occur during an allowed or approved development or activity but will not persist beyond completion of the project. Temporary disturbances include, but are not limited to, accessways for construction equipment; material staging and stockpile

areas; and excavation areas for building foundations, utilities, stormwater facilities, etc.

2. Permanent disturbances are those that remain in place after an allowed or approved development or activity is completed. Permanent disturbances include, but are not limited to, buildings, driveways, walkways, and other permanent structures.
- G. If more than 150 sq ft of area will be disturbed in conjunction with a proposed activity listed as exempt in Subsection 19.402.4.B, a construction management plan must be submitted according to the provisions of Subsection 19.402.9. This requirement applies even when the proposed activity will not occur within a designated natural resource but is within at least 100 ft of the resource, in accordance with Table 19.402.3.
- H. Proposed activities that are listed as exempt or occur more than 100 ft from a WQR or HCA, as shown on the NR Map or determined in accordance with Table 19.402.15, do not require review under the provisions of Section 19.402.
- I. Those portions of streams, creeks, and other protected water features that appear on the NR Map but are enclosed in pipes, culverts, or similar structures are not subject to the provisions of Section 19.402, except where a proposed activity will expose or directly disturb the protected water feature, such as with excavation. For WQRs, the underground portion of the protected water feature is not considered a protected water feature for purposes of determining the WQR location as outlined in MMC Table 19.402.15. For HCAs, the boundary verification options provided in MMC 19.402.15 may be used as necessary to determine whether the aboveground characteristics of the underground portion of the protected water feature affect the representation of HCA on the NR Map.
- J. The requirements of Section 19.402 apply, as shown in Table 19.402.3, both to properties that include a WQR and/or HCA, and to properties that do not include a WQR or HCA but where an activity is proposed within 100 ft of a WQR or HCA.

Table 19.402.3 Applicability of Requirements of Section 19.402		
Situations/activities that may trigger Section 19.402	Prepare Construction Management Plan per Subsection 19.402.9?	Comply with Remainder of Section 19.402?
Activities listed as exempt per:	No	No
• Subsection 19.402.4.A (outright exemptions for both WQRs and HCAs)		
• Subsection 19.402.4.B (limited exemptions for HCAs only)	No (unless > 150 sq ft of disturbance is proposed)	No
Nonexempt activities:	No (unless activity is within 100' of WQR or HCA and > 150 sq ft of disturbance is proposed)	No
• Outside of WQR and HCA		
• Within WQR or HCA	Yes	Yes

- K. Activities that are not exempt per Subsection 19.402.4, or prohibited per Subsection 19.402.5, are subject to the Type I, II, or III review process as outlined in Table 19.402.3.K.

Table 19.402.3.K
Types of Process Review for Various Activities

Activity (and applicable code sections)	Type of Review Process		
	Type I (19.1004)	Type II (19.1005)	Type III (19.1006)
Agency-approved natural resource management plans (Subsections 19.402.10.A and C)	✓		
Independent natural resource management plans (Subsections 19.402.10.B and C)		✓	
Limited tree removal (Subsection 19.402.6.B)	✓		
Tree removal that is not exempt or allowable with Type I review (Subsection 19.402.8.A.8)			✓
Activities within HCA that meet nondiscretionary standards (Subsection 19.402.11.D)	✓		
Maintenance of existing utility facilities (Subsection 19.402.6.E)	✓		
Utility connections (Subsection 19.402.6.F)	✓		
Nonemergency abatement of nuisances or violations (Subsection 19.402.6.G)	✓		
Limited WQR disturbance for new dwelling units (Subsection 19.402.6.B)	✓		
Special use activities (Subsections 19.402.7.A and 19.402.11.E)		✓	
Other limited disturbance to WQRs (Subsection 19.402.7.D)		✓	
Development activities that are not exempt or allowable with Type I or II review (Subsections 19.402.8 and 19.402.12)			✓
Property line adjustments that balance the HCA distribution (Subsection 19.402.13.E.1 or 2)	✓		
Property line adjustments that otherwise limit HCA disparity (Subsection 19.402.13.E.3)		✓	
Low-impact partitions (put designated natural resources in separate tract) (Subsection 19.402.13.F)	✓		
Other partitions or subdivisions (Subsections 19.402.13.G or H)		✓	
Boundary verifications with minor corrections	✓		

Table 19.402.3.K
Types of Process Review for Various Activities

Activity (and applicable code sections)	Type of Review Process		
	Type I (19.1004)	Type II (19.1005)	Type III (19.1006)
(Subsection 19.402.15.A.1)			
Boundary verifications with substantial corrections (Subsection 19.402.15.A.2)		✓	

- L. Where WQRs and HCAs overlap, the WQR overlap area is not included in any calculations of the HCA area for purposes of determining whether HCA-only exemptions are allowed or for calculating allowable HCA disturbances.

19.402.4 Exempt Activities

A. Outright Exemptions

The following activities in WQRs or HCAs are exempt from the provisions of Section 19.402:

1. Action taken on a building permit for any portion of a phased development project for which the applicant has previously met the applicable requirements of Section 19.402, including the provision of a construction management plan per Subsection 19.402.9. This exemption applies so long as the building site for new construction was identified on the original application, no new portion of the WQR and/or HCA will be disturbed, and no related land use approvals have expired per Subsection 19.1001.7. This exemption also extends to projects initiated prior to September 15, 2011, the effective date of Ordinance #2036, which have already been approved through Water Quality Resource Review.
2. Stream, wetland, riparian, and upland enhancement or restoration projects and development in compliance with a natural resource management plan or mitigation plan approved by the City or by a state or federal agency.
3. Emergency procedures or activities undertaken (excluding non-exempt tree removal as allowed in Subsection 19.402.4.A.6) that are necessary to remove or abate hazards to person or property, provided that the time frame for such remedial or preventative action is too short to allow for compliance with the requirements of Section 19.402. After the emergency, the person or agency undertaking the action must repair any impacts to the designated natural resource resulting from the emergency action; e.g., remove any temporary flood protection such as sandbags, restore hydrologic connections, or replant disturbed areas with native vegetation.
4. The planting or propagation of plants categorized as native species on the Milwaukie Plant List.
5. Removal of plants categorized as nuisance species on the Milwaukie Plant List. After removal, all open soil areas must be replanted and/or protected from erosion.
6. Removal of trees under any of the following circumstances:
 - a. The tree is a "downed tree" as defined in Section 19.201, the tree has been downed by natural causes, and no more than 150 sq ft of earth disturbance will occur in the process of removing the tree.
 - b. The tree is less than 6-in diameter at breast height (DBH), is not a species on the Milwaukie Rare or Threatened Tree List, and was not planted to meet any requirements in Sections

16.32.042 or 16.32.044.

- c. Removal of the tree is in accordance with an approved natural resource management plan per Subsection 19.402.10 and any applicable requirements in Chapter 16.32.
 - d. Major pruning of trees within 10 ft of existing structures in accordance with the Best Management Practices of the International Society of Arboriculture (ISA).
 - e. Removal of a public tree (as defined in Subsection 16.32.010; i.e., a tree on land owned or maintained by the City) that meets at least one of the criteria for exempt removal as outlined in this subsection or one of the criteria for limited tree removal as provided in Subsection 19.402.6.A.
7. Landscaping and maintenance of existing landscaping and gardens. This exemption extends to the installation of new irrigation and drainage facilities and/or erosion control features, as well as to landscaping activities that do not involve the removal of native plants or plants required as mitigation, the planting of any vegetation identified as a nuisance species on the Milwaukee Plant List, or anything that produces an increase in impervious area or other changes that could result in increased direct stormwater discharges to the WQR.
 8. Additional disturbance for outdoor uses, such as gardens and play areas, where the new disturbance area does not exceed 150 sq ft; does not involve the removal of any trees larger than 6-in diameter at breast height (DBH) or otherwise regulated by Chapter 16.32; and is located at least 30 ft from the top of bank of a stream or drainage and at least 30 ft from the edge of a wetland.
 9. Routine repair and maintenance, alteration, demolition, and/or change of use of existing legal structures, provided that the following criteria are met:
 - a. There is no change in the location, or increase in the footprint, of any building, impervious surface, or outdoor storage area within a WQR or HCA.
 - b. No other site changes are proposed that could result in increased direct stormwater discharges to a WQR. If the project will result in increased direct stormwater discharges, the proposal is subject to the Type II review process and the standards for discretionary review established in Subsection 19.402.12.
 10. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, trails, walkways, and parking improvements (including asphalt overlays); provided that there is no new disturbance of the WQR or HCA, no increase in impervious area, no reduction in landscaped areas or tree cover, and no other change that could result in increased direct stormwater discharges to the WQR.
 11. Routine repair and maintenance of public and private stormwater facilities in accordance with a stormwater management plan approved by the City.
 12. Existing agricultural practices or uses, excluding buildings and structures, provided that such activities or uses do not result in increased direct stormwater discharges to WQRs.
 13. Removal of debris, as defined in Section 19.201.
 14. Change of ownership.
 15. Lot consolidations, as defined in Section 17.08.010.
 16. Activities and improvements in existing public rights-of-way.
 17. Establishment and maintenance of trails in accordance with the following standards:
 - a. Trails must be confined to a single ownership or within a public trail easement.

- b. Trails must be no wider than 30 in. Where trails include stairs, stair width must not exceed 50 in and trail grade must not exceed 20%, except for the portion of the trail containing stairs.
 - c. Trails must be unpaved and constructed with nonhazardous, pervious materials.
 - d. Trails must be located at least 15 ft from the top of bank of all water bodies.
 - e. Plants adjacent to trails may be trimmed, but trimming clearances must not exceed a height of 8 ft and a width of 6 ft.
 - f. Native trees of larger than 6-in DBH, other trees regulated by Chapter 16.32, and native shrubs or conifers larger than 5 ft tall, must not be removed.
18. Installation and maintenance of erosion control measures that have been reviewed and approved by the City.

B. Limited Exemptions Within HCAs

The following activities within HCAs are exempt from the provisions of Section 19.402, except that a construction management plan is required, according to the provisions of Subsection 19.402.9, where the activity disturbs a total of more than 150 sq ft:

- 1. The alteration and/or total replacement of existing structures, provided that both of the following standards are met:
 - a. The alteration and/or replacement does not intrude more than 500 sq ft into the HCA, beyond the area defined as the building footprint as of September 15, 2011, the effective date of Ordinance #2036.
 - b. The alteration and/or replacement does not result in increased direct stormwater discharges to a WQR.
- 2. Minor encroachments, not to exceed 500 sq ft for residential zones or 150 sq ft in nonresidential zones, for new features such as accessory buildings, patios, walkways, or retaining walls.
- 3. Temporary and minor clearing, excavation, or other disturbances, not to exceed 150 sq ft, for the purpose of: site investigations or preparation of soil profiles; installation of underground utility facilities or other infrastructure; routine repair and maintenance and/or alteration of existing utility facilities, access, streets, driveways, and parking improvements; or similar activities, provided that such disturbed areas are restored to their original condition when the activity is complete.
- 4. Low-impact outdoor recreation facilities for public use—including, but not limited to, multiuse paths, accessways, trails, picnic areas, or interpretive and educational displays and overlooks that include benches and outdoor furniture—provided that such facilities contain no more than 500 sq ft of new impervious surface. Any trails must have a maximum width of 5 ft and must be constructed using nonhazardous, pervious materials.
- 5. Facilities that infiltrate stormwater on the site, including the associated piping, so long as the forest canopy and the areas within the driplines of the trees are not disturbed. Such facilities may include, but are not limited to, vegetated swales, rain gardens, vegetated filter strips, and vegetated infiltration basins. Native or nonnative vegetation may be planted in these facilities, provided that none of the plantings are identified as a nuisance species on the Milwaukie Plant List.

19.402.5 Prohibited Activities

Title 19 Zoning is comprised of regulations that deal with the use of land; it does not extend into the broader realm of laws that regulate personal activities unrelated to land use and development. Given such limitations, the following activities are prohibited within WQRs and HCAs:

- A. New structures, development, or landscaping activity other than those allowed by Section 19.402.
- B. Uncontained areas of hazardous materials, as defined by DEQ.
- C. Planting any vegetation listed as a nuisance species on the Milwaukie Plant List.
- D. Outside storage of materials; unless such storage began before September 15, 2011, the effective date of Ordinance #2036; or unless such storage is approved according to the applicable provisions of Section 19.402.
- E. Application of pesticides or herbicides with any of the active ingredients listed on the Milwaukie Prohibited Chemicals List.

19.402.6 Activities Requiring Type I Review

Within either WQRs or HCAs, the following activities and items are subject to Type I review per Section 19.1004:

A. Limited Tree Removal

1. For trees not exempted by Subsections 19.402.4.A.6 (general exemptions) or 19.402.6.A.2 (development scenarios), the Planning Manager may approve an application for limited tree removal or major pruning within WQRs and HCAs under any of the following circumstances:

- a. The tree poses an immediate emergency, as determined by the Urban Forester, Planning Manager, or designee; or a hazardous but nonemergency situation, with an unreasonable risk to the occupants of the property, the adjacent property, or the general public, as determined by an ISA Certified Arborist that is Tree Risk Assessment Qualified (TRAQ) in accordance with current ISA Tree Risk Assessment Best Management Practices.

Immediate emergencies may include, but are not limited to, situations in which a tree or portion of a tree has been compromised and has damaged or is damaging structures or utilities on private or public property, or where a tree or portion of a tree is prohibiting safe passage in the public right-of-way. Examples include but are not limited to trees that have fallen into or against a house or other occupied building, or trees downed across power lines or roadways. Emergency situations do not offer time for the normal review process and will be evaluated retroactively once the emergency has been resolved.

A situation may be deemed hazardous if a tree, or portion of a tree, has undergone a recent change in health or condition in a manner that may pose a danger to people, to structures on private property, to public or private utilities, or to travel on private property or in the public right-of-way. Examples of imminent hazards may include, but are not limited to, trees that are broken, split, cracked, uprooted, or otherwise in danger of collapse.

Approval will be limited to removal of the tree, or portion of the tree, as necessary to eliminate the emergency or hazard. Any damage or impacts to the designated natural resource must be repaired after the emergency or hazard has been resolved. Any applicable requirements of Chapter 16.32 must also be met.

- b. The tree is dead, diseased, or dying and cannot be saved, as determined and documented in a report by an ISA Certified Arborist in accordance with ISA standards. This includes situations where a tree has sustained physical damage that will cause it to die or enter an advanced state of decline.
- c. The tree is categorized as a nuisance species on the Milwaukie Plant List.
- d. The tree is a downed tree, but more than 150 sq ft of earth disturbance is necessary to remove it.
- e. The tree is part of a stormwater management system and has grown too large to remain an

effective part of the system.

- f. The tree location conflicts with areas of public street widening, construction, or extension as shown in the Transportation System Plan and there is no practicable alternative to removing the tree.
 - g. Tree removal is required for the purposes of utility or infrastructure repair and there is no practicable alternative to removing the tree.
 - h. The tree is recommended for removal by a designated fire marshal for Clackamas County because it presents a significant fire risk to habitable structures or limits emergency access for rescue workers, and the risk or access issue cannot be abated through pruning or other means that would result in tree retention.
 - i. The tree is not categorized as either a nuisance or native species on the Milwaukie Plant List, is less than 12-in DBH, and is not located in a WQR categorized as Class A ("Good"); according to Table 19.402.11.C, provided that no more than three (3) such trees will be removed during any 12-month period. In residential zones, for the proposed removal of more than one such tree (i.e., non-nuisance, non-native, not in a "Good" WQR area) during any 12-month period, the Type B tree permit process outlined in Subsection 16.32.044.E is applicable in addition to the provisions of Subsection 19.402.6.A.
 - j. For major pruning, as defined in Section 19.201, a certified arborist has determined, and documented in a report, that the tree will survive the proposed pruning.
2. The provisions of Subsection 19.402.6.A.1 do not apply to tree removal proposed in association with development or other activities regulated by Section 19.402, for which other approval criteria and mitigation standards may apply.
 3. The Planning Manager will require the application to comply with all of the following standards:
 - a. A construction management plan must be prepared in accordance with Subsection 19.402.9. When earth disturbance is necessary for the approved removal or pruning, all open soil areas that result from the disturbance must be replanted and/or protected from erosion.
 - b. All pruning and/or tree removal must be done in accordance with the standards of the International Society of Arboriculture (ISA) and must comply with the applicable requirements in Chapter 16.32.
 - c. Any tree that is removed in accordance with Subsection 19.402.6.A must be replaced with a new tree, of at least 1.5-in caliper or at least 5-ft overall height after planting. An exception to this requirement may be granted if the applicant demonstrates that a replacement tree has already been planted in anticipation of tree removal or if existing dense canopy coverage otherwise precludes tree replacement. Any other proposed exception to this replanting requirement is subject to the mitigation fees established in conjunction with Section 16.32.044.
 - d. The replacement tree(s) must be located in the general vicinity of the removed tree(s), somewhere within the designated natural resource (WQR or HCA). The replacement tree(s) does not have to be a native species; but, in accordance with Subsection 19.402.5.C, the replacement tree(s) must not be categorized as a nuisance species on the Milwaukie Plant List. The property owner must ensure that the replacement tree(s) survives at least two (2) years beyond the date of its planting.

B. Limited WQR Disturbance for New Dwelling Units

1. Within WQRs, nonexempt residential development that is not listed in Subsections 19.402.7 or 19.402.8 and that is in compliance with the following nondiscretionary standards is allowable

subject to Type I review:

- a. The disturbance (temporary or permanent) is directly related to the construction of a new dwelling unit (primary or accessory); and
 - b. The area of the site that is not categorized as WQR and that is outside the minimum required yard setbacks for the underlying zone is 1,500 sq ft or less. In such cases, the disturbance area within the WQR is limited by the following formula: subtract the area of the site that is not categorized as WQR from the area of the site that is categorized as WQR; if that number is positive, that amount of WQR on the site can be disturbed, up to a maximum of 800 sq ft (see Figure 19.402.6.B.1.b); and
 - c. The WQR being disturbed is not categorized as Class A (“Good”) according to Table 19.402.11.C; and
 - d. The disturbance area is at least 30 ft from the top of bank of a stream or drainage or 30 ft from the edge of a wetland; and
 - e. The disturbance does not include the removal of any trees 6-in DBH or greater that are categorized as a native species on the Milwaukie Plant List; and
 - f. The disturbance will not result in any increased direct stormwater discharges to the WQR.
2. Where limited WQR disturbance is allowed by this subsection, mitigation must be provided in accordance with the general standards of Subsection 19.402.11.B (including for plant species, size, spacing, survival, etc.) and as follows:
- a. For temporary disturbances, the disturbance area must be replanted at a minimum with native ground-cover species sufficient to cover all bare or exposed soil.
 - b. For permanent disturbances, an area equal in size to the disturbance area must be established as a mitigation area. Within the mitigation area, all vegetation categorized as a nuisance species on the Milwaukie Plant List must be removed and native-species trees and shrubs must be planted at a ratio of 5 trees and 25 shrubs per 500 sq ft of allowed disturbance. Any remaining bare soil within the mitigation area must be replanted with native ground-cover species.

These standards apply in addition to any other applicable provisions related to tree removal as established in Section 16.32.042.

C. Activities within HCAs in Compliance with Nondiscretionary Standards

Within HCAs but outside of WQRs, nonexempt development that is not listed in Subsections 19.402.7 or 19.402.8 and that is in compliance with the following nondiscretionary standards is subject to Type I review.

1. Single Detached and Middle Housing Residential Uses

For single detached and middle housing residential uses, including any related public facilities as required by Chapter 19.700 Public Facility Improvements, the amount of nondiscretionary disturbance allowed within an HCA is determined by subtracting the area of the lot or parcel outside of the total resource area (WQR and HCA) from the maximum potential disturbance area within the HCA (which is 50% of the total HCA, up to a maximum of 5,000 sq ft)—see Table 19.402.6.C.1 for examples. Such disturbance will be subject to Type I review and the mitigation requirements described in Subsection 19.402.11.D.2.

Table 19.402.6.C.1**Method for Calculating Allowable Nondiscretionary Disturbance within an HCA for Single Detached Dwellings and Middle Housing Residential Uses**

X = The maximum potential disturbance area within the HCA, which is 50% of the total HCA, up to a maximum of 5,000 sq ft.

Y = The area of the lot or parcel outside the total resource area (WQR and HCA).

Z = The net amount of disturbance area allowed within the HCA ($Z = X - Y$).

If (Y) is greater than (X), disturbance shall-is not be permitted within the HCA; otherwise, the applicant may disturb up to the net amount of disturbance area allowed (Z) within the HCA.

Example 1: 8,000-sq-ft lot with 3,000 sq ft of HCA and 5,000 sq ft outside of HCA/WQR $X = 1,500$ sq ft (50% of HCA)

$Y = 5,000$ sq ft outside of HCA/WQR

$Z = -3,500$ sq ft ($1,500$ sq ft – $5,000$ sq ft)

Conclusion: Y is greater than X; therefore, development is not permitted within the HCA.

Example 2: 8,000-sq-ft lot with 6,000 sq ft of HCA and 2,000 sq ft outside of HCA/WQR $X = 3,000$ sq ft (50% of HCA)

$Y = 2,000$ sq ft outside of HCA/WQR

$Z = 1,000$ sq ft ($3,000$ sq ft – $2,000$ sq ft)

Conclusion: Y is not greater than X; therefore, the applicant may disturb up to the value of Z (1,000 sq ft) within the HCA.

2. All Other Uses

A maximum net disturbance area of 10% of the HCA on the site is allowed by right, subject to Type I review and the mitigation requirements described in Subsection 19.402.11.D.2.

D. Natural Resource Management Plans

Natural resource management plans that meet the standards outlined in Subsection 19.402.10.A are subject to Type I review. These are typically plans that have already been approved by a qualified agency.

E. Maintenance of Existing Utility Facilities

Routine repair and maintenance of existing utility facilities, accesses, streets, driveways, and/or parking improvements that disturbs a WQR and/or HCA is subject to Type I review, provided such activities can meet the general standards for special uses established in Subsection 19.402.11.E.1. These include, but are not limited to, the requirement to provide a mitigation plan and to restore the disturbed area.

F. Utility Connections

Unless they are exempt per Subsection 19.402.4, connections to existing or new utility lines that involve disturbance to a WQR and/or HCA are subject to Type I review against the following criteria:

1. The activities required to establish the connection shall not disturb a protected water feature. Utility connections that will disturb a protected water feature are subject to the review procedures for special uses established in Subsection 19.402.11.E.

2. The activities required to establish the connection shall not disturb an area greater than 10 ft wide.
3. The connection can meet the general standards for special uses established in Subsection 19.402.11.E.1.

G. Nuisance Abatement

Measures to remove or abate nuisances; or any other violation of state statute, administrative agency rule, or City or County ordinance; shall be subject to Type I review of a construction management plan, to be approved by the Planning Manager prior to the abatement activity. The person or agency undertaking the action shall repair any impacts to the designated natural resource resulting from the nuisance or violation (e.g., restore disturbed soils, restore hydrologic connections, replant disturbed areas with native vegetation, etc.) unless subsequent development has been approved.

H. Boundary Verification

Boundary verifications that propose minor corrections will be processed in accordance with Subsection 19.402.15.A.1 and are subject to Type I review.

I. Low-Impact Partitions

Partitions that meet the standards established in Subsection 19.402.13.F are subject to Type I review.

19.402.7 Activities Requiring Type II Review

Within either WQRs or HCAs, the following activities and items are subject to Type II review and approval by the Planning Manager per Section 19.1005, unless they are otherwise exempt or permitted as a Type I activity.

A. Special Uses

If not listed as exempt in Subsection 19.402.4, and not able to meet the nondiscretionary standards for HCAs as established in Subsection 19.402.11.D, any special use activity listed below ~~shall be~~ is subject to Type II review if the proposal complies with the applicable standards provided in Subsection 19.402.11.E:

1. Improvement or construction of public or private utility facilities.
2. New stormwater facilities.
3. Walkways and bike paths.
4. Stormwater management plans.

If the proposed special use activity is not in compliance with the applicable standards in Subsection 19.402.11.E, it is subject to Type III review and the general discretionary review criteria provided in Subsection 19.402.12.

B. Natural Resource Management Plans

Natural resource management plans that do not meet the Type I review standards provided in Subsection 19.402.10.A, but that meet the standards provided in Subsection 19.402.10.B, are subject to Type II review. These are typically plans that have been prepared independently of a qualified agency but that are in accordance with standards and guidelines related to enhancing natural resources.

C. Partitions and Subdivisions

Partitions and subdivisions that meet the standards provided in Subsection 19.402.13.G and H,

respectively, are subject to Type II review.

D. Other Uses and Activities with Minimal Impacts to WQRs

The activities listed below are subject to Type II review and the general discretionary review criteria provided in Subsection 19.402.12:

1. New agricultural practices or uses, excluding buildings and structures, that result in increased direct stormwater discharges to WQRs.
2. Landscaping and maintenance of existing landscaping that would increase impervious area within a WQR by no more than 150 sq ft and/or would result in increased direct stormwater discharges to the WQR.
3. Routine repair and maintenance, alteration, and/or total replacement of existing legal buildings or structures that increases the existing disturbance area by no more than 150 sq ft within the WQR.
4. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, and parking improvements that increases the existing disturbance area by no more than 150 sq ft within the WQR. Activities approved under this subsection shall be subject to the following requirements:
 - a. Restore the disturbed portion of the WQR.
 - b. Within the disturbed portion of the WQR, remove any vegetation categorized as a nuisance species on the Milwaukie Plant List and replace it with native vegetation from the list.

E. Boundary Verification

Boundary verifications that propose substantial corrections will be processed in accordance with Subsection 19.402.15.A.2 and are subject to Type II review.

19.402.8 Activities Requiring Type III Review

Within either WQRs or HCAs, the following activities are subject to Type III review and approval by the Planning Commission under Section 19.1006, unless they are otherwise exempt or permitted as a Type I or II activity.

A. The activities listed below are subject to the general discretionary review criteria provided in Subsection 19.402.12:

1. Any activity allowed in the base zone that is not otherwise exempt or permitted as a Type I or II activity.
2. Within HCAs, development that is not in compliance with the nondiscretionary standards provided in Subsection 19.402.11.D.
3. New roads to provide access to protected water features, necessary ingress and egress across WQRs, or the widening of an existing road.
4. Improvement of existing public utility facilities that cannot meet the applicable standards of Subsection 19.402.11.E.
5. New stormwater facilities that cannot meet the applicable standards of Subsection 19.402.11.E.
6. New public or private utility facility construction that cannot meet the applicable standards of Subsection 19.402.11.E.
7. Walkways and bike paths that are not exempt per Subsection 19.402.4 or cannot meet the applicable standards of Subsection 19.402.11.E.

8. Tree removal in excess of that permitted under Subsection 19.402.4 or 19.402.6. Tree removal must also comply with any applicable requirements in Chapter 16.32.
9. Landscaping and maintenance of existing landscaping that would increase impervious area by more than 150 sq ft.
10. Routine repair and maintenance, alteration, and/or total replacement of existing legal buildings or structures that increases the existing disturbance area by more than 150 sq ft within the WQR.
11. Routine repair and maintenance, alteration, and/or total replacement of existing utility facilities, accesses, streets, driveways, and parking improvements that would disturb more than 150 sq ft within the WQR.

19.402.9 Construction Management Plans

- A. Construction management plans are not subject to Type I review per Section 19.1004 but will be reviewed administratively in similar fashion to an erosion control permit (MMC Chapter 16.28).
- B. Construction management plans shall provide the following information:
 1. Description of work to be done.
 2. Scaled site plan showing a demarcation of WQRs and HCAs and the location of excavation areas for building foundations, utilities, stormwater facilities, etc.
 3. Location of site access and egress that construction equipment will use.
 4. Equipment and material staging and stockpile areas.
 5. Erosion and sediment control measures.
 6. Measures to protect trees and other vegetation located within the potentially affected WQR and/or HCA. Tree protection must be consistent with the requirements in Section 16.32.042.FG.

When required for a property that does not include a designated natural resource, the construction management plan must show the protective measures that will be established on the applicant's property.

19.402.10 Natural Resource Management Plans

Natural resource management plans or restoration plans that authorize limited disturbance within the WQR or HCA may be approved with Type I or II review, subject to the following standards:

A. Plans Eligible for Type I Review

The plan has already been approved by the U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife (ODFW), DSL, Oregon Watershed Enhancement Board (OWEB), Metro, Clackamas County Soil and Water Conservation District, or other agency approved by the Planning Manager.

B. Plans Eligible for Type II Review

The plan has been prepared in accordance with particular standards and guidelines promulgated by a natural resource agency, such as OWEB's Oregon Aquatic Habitat Restoration and Enhancement Guide, ODFW's Western Oregon Stream Restoration Program, DSL's Hydrogeomorphic (HGM) approach of assessment for wetland and riparian functions, or other standards approved by the Planning Manager.

C. Approval Criteria

Every plan prepared for approval under Section 19.402 must demonstrate that it encourages

restoration activities that have any of the following effects:

1. Changes the trend of habitat function from one of a diminishing ability to support salmonids and other organisms to one that supports a complex, self-sustaining system.
2. Corrects or improves conditions caused by past management and/or disturbance events.
3. Maximizes beneficial habitat in the short term where watershed degradation has been extensive and natural processes will need substantial time to restore habitat.
4. Creates beneficial habitat and restores stream function and hydrology to the fullest extent practicable within developed areas where there is no reasonable expectation of returning to natural conditions.

D. Construction Management Plans

A construction management plan prepared in accordance with Subsection 19.402.9 is required with each natural resource management plan.

E. Ongoing Maintenance

Natural resource management plans must demonstrate how ongoing maintenance is part of the associated restoration or enhancement activities.

F. Expiration of Plans

The approval of a natural resource management plan is valid for five (5) years. Approved plans may be renewed through the Type I review process by demonstrating that the original approved plan still meets the criteria provided in Subsection 19.402.10.C. Plans that demonstrate an adaptive management component and/or that involve partnership with one of the agencies noted in Subsection 19.402.10.A may be approved as valid for up to 20 years upon request.

19.402.11 Development Standards

A. Protection of Natural Resources During Site Development

During development of any site containing a designated natural resource, the following standards apply:

1. Work areas must be marked to reduce potential damage to the WQR and/or HCA.
2. Trees in WQRs or HCAs must not be used as anchors for stabilizing construction equipment.
3. Native soils disturbed during development must be conserved on the property.
4. An erosion and sediment control plan is required and must be prepared in compliance with requirements set forth in the City's Public Works Standards.
5. Site preparation and construction practices must be followed that prevent drainage of hazardous materials or erosion, pollution, or sedimentation to any WQR adjacent to the project area.
6. Stormwater flows that result from proposed development within and to natural drainage courses must not exceed predevelopment flows.
7. Prior to construction, the WQR and/or HCA that is to remain undeveloped must be flagged, fenced, or otherwise marked and must remain undisturbed. Such markings must be maintained until construction is complete.
8. The construction phase of the development must be done in such a manner as to safeguard the resource portions of the site that have not been approved for development.
9. Where practicable, lights must be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting must be selected so that impacts to

habitat functions are minimized.

10. All work on the property must conform to a construction management plan prepared according to Subsection 19.402.9.
11. The applicable provisions of Chapter 16.32 must be met.

B. General Standards for Required Mitigation

Where mitigation is required by Section 19.402 for disturbance to WQRs and/or HCAs, the following general standards apply:

1. Disturbance

- a. Designated natural resources that are affected by temporary disturbances must be restored, and those affected by permanent disturbances must be mitigated, in accordance with the standards provided in Subsection 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs, as applicable.
- b. Landscape plantings are not considered to be disturbances, except for those plantings that are part of a non-exempt stormwater facility; e.g., raingarden or bioswale.

2. Required Plants

Unless specified elsewhere in Section 19.402, all trees, shrubs, and ground cover planted as mitigation must be native plants, as identified on the Milwaukie Plant List. Applicants are encouraged to choose particular native species that are appropriately suited for the specific conditions of the planting site; e.g., shade, soil type, moisture, topography, etc.

3. Plant Size

Required mitigation trees must average at least a ½-in caliper—measured at 6 in above the ground level for field-grown trees or above the soil line for container-grown trees—unless they are oak or madrone, which may be 1-gallon size. Required mitigation shrubs must be at least 1-gallon size and 12 in high.

4. Plant Spacing

Trees must be planted between 8 and 12 ft on center. Shrubs must be planted between 4 and 5 ft on center or clustered in single-species groups of no more than four (4) plants, with each cluster planted between 8 and 10 ft on center. When planting near existing trees, the dripline of the existing tree is the starting point for plant spacing measurements. Note that in meeting the Tree Planting Standards in Subsection 16.32.042.C, the Urban Forester may only credit those trees that meet the requirements in Table 16.32.042.D. The additional trees required by this subsection may be excluded from contributing to the Tree Planting Standards in Subsection 16.32.042.C.

5. Plant Diversity

Shrubs must consist of at least two (2) different species. If 10 trees or more are planted, then no more than 50% of the trees can be of the same genus.

6. Location of Mitigation Area

a. On-Site Mitigation

All mitigation vegetation must be planted on the applicant's site within the designated natural resource that is disturbed, or in an area contiguous to the resource area; however, if the vegetation is planted outside of the resource area, the applicant must preserve the contiguous planting area by executing a deed restriction such as a restrictive covenant.

b. Off-Site Mitigation

- (1) For disturbances allowed within WQRs, off-site mitigation cannot be used to meet the mitigation requirements of Section 19.402.
- (2) For disturbances allowed within HCAs, off-site mitigation vegetation may be planted within an area contiguous to the subject-property HCA, provided there is documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site. If the off-site mitigation is not within an HCA, the applicant must document that the mitigation site will be protected after the monitoring period expires, such as through the use of a restrictive covenant.

7. Invasive Vegetation

Invasive nonnative or noxious vegetation must be removed within the mitigation area prior to planting, including, but not limited to, species identified as nuisance plants on the Milwaukie Plant List.

8. Ground Cover

Bare or open soil areas remaining after the required tree and shrub plantings ~~shall~~ must be planted or seeded to 100% surface coverage with grasses or other ground-cover species identified as native on the Milwaukie Plant List. Revegetation must occur during the next planting season following the site disturbance.

9. Tree and Shrub Survival

A minimum of 80% of the trees and shrubs planted must remain alive on the second anniversary of the date that the mitigation planting is completed.

a. Required Practices

To enhance the survival of the mitigation plantings, the following practices are required:

- (1) Mulch new plantings to a minimum of 3-in depth and 18-in diameter to retain moisture and discourage weed growth.
- (2) Remove or control nuisance or noxious vegetation throughout the maintenance period.

b. Recommended Practices

To enhance the survival of tree replacement and vegetation plantings, the following practices are recommended:

- (1) Plant bare root trees between December 1 and April 15; plant potted plants between October 15 and April 30.
- (2) Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and the resulting damage to plants.
- (3) Water new plantings at a rate of 1 in per week between June 15 and October 15 for the first two (2) years following planting.

c. Monitoring and Reporting

Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind as needed to ensure the minimum 80% survival rate. The Planning Manager may require a maintenance bond to cover the continued health and survival of all plantings. A maintenance bond is not required for land use applications related to owner-occupied single-family residential projects. An annual report on the survival rate of all plantings must be submitted for two (2) years.

10. Light Impacts

Where practicable, lights must be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting must be selected so that impacts to habitat functions are minimized.

C. Mitigation Requirements for Disturbance within WQRs

1. The requirements for mitigation vary depending on the existing condition of the WQR on the project site at the time of application. The existing condition of the WQR must be assessed in accordance with the categories established in Table 19.402.11.C.
2. When disturbance within a WQR is approved according to the standards of Section 19.402, the disturbance must be mitigated according to the requirements outlined in Table 19.402.11.C and the standards established in Subsection 19.402.11.B.

Table 19.402.11.C
WQR Mitigation

Existing Condition of WQR (What conditions for water quality and wildlife habitat are provided by the extent and character of existing vegetation?)	Mitigation Requirements
Class A ("Good")	
Combination of trees, shrubs, and ground cover are 80% present, with more than 50% tree canopy coverage in vegetated corridor.	<ul style="list-style-type: none"> • Submit a plan for mitigating water quality impacts related to the development, including: sediments, temperature, nutrients, or any other condition that may have caused the protected water feature to be listed on DEQ's 303(d) list. • Restore and replant disturbed areas with native species from the Milwaukie Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site. • Inventory and remove debris, noxious materials, and nuisance species vegetation. • Plant and/or seed all bare areas to provide 100% surface coverage.
Class B ("Marginal")	
Combination of trees, shrubs, and ground cover are 80% present, with at least 25-50% canopy coverage in vegetated corridor.	<ul style="list-style-type: none"> • Restore and replant disturbed areas with native species from the Milwaukie Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site. • Inventory and remove debris, noxious materials, and nuisance species vegetation. • Plant and/or seed all bare areas to provide 100% surface coverage.
Class C ("Poor")	
Combination of trees, shrubs, and ground cover are less than 80% present; and/or less than 25% canopy coverage in vegetated corridor.	<ul style="list-style-type: none"> • Restore and mitigate disturbed areas with native species from the Milwaukie Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site. • Inventory and remove debris, noxious materials, and nuisance species vegetation. • Plant and/or seed all bare areas to provide 100% surface coverage.

D. HCA Disturbance

1. General Provisions for Disturbance in HCAs

a. Temporary and Permanent Disturbances

All disturbances within an HCA that occur during construction or other development activities, whether temporary or permanent disturbances, count equally for the purposes of calculating and tracking the maximum disturbance area allowed for a particular site. Disturbance resulting from any activity deemed exempt per Subsection 19.402.4 will not be counted against the amount of disturbance allowed by Subsection 19.402.

b. Disturbance in Excess of that Allowed by Section 19.402

In accordance with Subsection 19.402.8, proposed development that would disturb more HCA than allowed by Subsections 19.402.11.D.1.a and b is subject to the Type III review process and general discretionary review criteria, as outlined in Subsection 19.402.12.C.1.

c. Disturbance Changes HCA Status

When disturbances within HCAs are allowed, in accordance with the applicable provisions of Section 19.402, the City will remove the HCA designation from such disturbance areas on the NR Map, as provided in Subsection 19.402.15.B.

In the case of a request to develop within an HCA on a property where a prior development request was subject to the disturbance area limitations of Subsection 19.402.11.D.1, the calculation of the new amount of disturbance area allowed within the HCA on the property will be based on the mapped location of the HCA at the time of the request, notwithstanding any previous calculation of allowed disturbance area.

2. Mitigation Requirements for Disturbance in HCAs

To achieve the goal of reestablishing forested canopy that meets the ecological values and functions described in Subsection 19.402.1, when development intrudes into an HCA, tree replacement and vegetation planting are required according to the following standards, unless the planting is also subject to wetlands mitigation requirements imposed by state and federal law.

These mitigation options apply to tree removal and/or site disturbance in conjunction with development activities that are otherwise permitted by Section 19.402. They do not apply to situations in which tree removal is exempt per Subsection 19.402.4.A or approvable through Type I review (Subsection 19.402.6.A).

An applicant must meet the requirement of Mitigation Option 1 or 2, whichever results in more tree plantings; except that where the disturbance area is one acre or more, the applicant must comply with Mitigation Option 2. The Urban Forester may allow the mitigation requirements in this subsection to satisfy the mitigation requirements in Chapter 16.32 except that the mitigation requirements in Section 16.32.042 must be met when applicable.

a. Mitigation Option 1

This mitigation requirement is calculated based on the number and size of trees that are removed from the site. Trees that are removed from the site must be replaced as shown in Table 19.402.11.D.2.a. Conifers must be replaced with conifers. Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

Table 19.402.11.D.2.a Tree Replacement	
Size of Tree to be Removed (inches in diameter)	Number of Trees and Shrubs to be Planted
6 to 12	2 trees and 3 shrubs
13 to 18	3 trees and 6 shrubs
19 to 24	5 trees and 12 shrubs
25 to 30	7 trees and 18 shrubs
over 30	10 trees and 30 shrubs

b. Mitigation Option 2

This mitigation requirement is calculated based on the size of the disturbance area within an HCA. Native trees and shrubs are required to be planted at a rate of 5 trees and 25 shrubs per 500 sq ft of disturbance area. This is calculated by dividing the number of square feet of disturbance area by 500, multiplying that result times 5 trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs. For example, if there will be 330 sq ft of disturbance area, then 330 divided by 500 equals 0.66, and 0.66 times 5 equals 3.3, so 3 trees must be planted, and 0.66 times 25 equals 16.5, so 17 shrubs must be planted. Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

c. Adjustments to HCA Mitigation Requirements

Proposals to vary the number or size of trees and shrubs required as mitigation in Subsection 19.402.11.D.2 are subject to the Type II review process and the requirements of Subsection 19.402.12.C.2.

E. Standards for Special Uses

Unless they are exempt per Subsection 19.402.4, or do not meet the nondiscretionary standards for HCAs provided in 19.402.11.D, the special uses listed in Subsection 19.402.7.A are subject to Type II review if they comply with the applicable standards in Subsection 19.402.11.E. Otherwise, the special uses listed in Subsection 19.402.7.A are subject to Type III review and the general discretionary review criteria provided in Subsection 19.402.12.

1. General Standards for Special Uses

Except for stormwater management plans, all nonexempt special uses listed in Subsections 19.402.11.E.2 through 5 that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D must comply with the specific applicable standards in Subsection 19.402.11.E, as well as with the following general standards:

- a. In addition to a construction management plan prepared according to the standards of Subsection 19.402.9, a mitigation plan must be submitted per Subsection 19.402.11.D.2 or 19.402.12.C.2 for HCAs, as applicable, or per Subsection 19.402.11.C for WQRs. WQRs and HCAs must be restored and maintained in accordance with the approved mitigation plan.

- b. Existing vegetation outside of approved work areas shall be protected and left in place. Work areas must be carefully located and marked to reduce potential damage to WQRs and HCAs. Trees in WQRs or HCAs must not be used as anchors for stabilizing construction equipment.
- c. Where existing vegetation has been removed, or the original land contours disturbed, the site must be revegetated and the vegetation must be established as soon as practicable. Interim erosion control measures, such as mulching, must be used to avoid erosion on bare areas.

2. Public or Private Utility Facilities

In addition to the requirements of Subsection 19.402.11.E.1, the following disturbance area limitations apply to all new public and private utility facilities, as well as to facility upgrades that are not exempted by Subsection 19.402.4 or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D.

- a. The disturbance area for the upgrade of existing utility facilities can be no greater than 15 ft wide.
- b. The disturbance area for new underground utility facilities can be no greater than 25 ft wide and disturb no more than 200 linear feet of WQR within any 1,000-linear-foot stretch of WQR. Such a disturbance area must be restored with the exception of necessary access points to the utility facility.
- c. Disturbance areas shall be revegetated.
- d. No fill or excavation is allowed within the ordinary high water mark of a stream, unless a permit is obtained from the Corps through the Standard Local Operating Procedures for Endangered Species (SLOPES) process.

3. New Stormwater Facilities

In addition to the requirements of Subsection 19.402.11.E.1, new stormwater facilities that are not exempted by Subsection 19.402.4, or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D, must not encroach more than 25 ft into the outer boundary of the WQR adjacent to a primary protected water feature.

4. Walkways and Bike Paths

In addition to the requirements of Subsection 19.402.11.E.1, walkways and bike paths that are not exempted by Subsection 19.402.4, or that do not meet the nondiscretionary standards for HCAs provided in Subsection 19.402.11.D, and that are proposed to be constructed or improved with gravel, permeable pavement, pavers, wood, or other materials, must comply with the following standards:

- a. Walkways and bike paths within WQRs or HCAs cannot exceed a 12-ft width.
- b. If the proposed walkway or bike path will be located within a WQR and will be paved, then, for the purposes of evaluating the proposed project, the vegetated corridor ~~shall~~ must be widened by the width of the walkway or bike path.
- c. The walkway or bike path must be designed to avoid WQRs and HCAs, to the greatest extent practicable, and must be constructed so as to minimize disturbance to existing vegetation and slope stability.
- d. The walkway or bike path must be a minimum of 10 ft from the boundary of the protected water feature.
- e. Where practicable, any lights associated with the walkway or bike path must be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and

intensity of lighting must be selected so that impacts to habitat functions are minimized.

5. Stormwater Management Plans

Stormwater management plans that authorize disturbance within the WQR or HCA may be approved if in compliance with all of the following standards:

- a. Stormwater facilities will be designed to provide an environmentally beneficial hydrological impact on protected water features.
- b. Protected water features will be protected from erosion by implementing a stream protection strategy and quantity control strategies.
- c. Watershed health will be improved through the use of vegetated facilities to meet pollution reduction, flow control, and infiltration goals. These facilities will be maintained in a manner that ensures a continued benefit to watershed health.
- d. Proposed stormwater management facilities will correct or improve conditions caused by past management and/or disturbance events, if any are present.
- e. Where there is no reasonable expectation of returning to natural conditions, beneficial habitat, vegetation, and stream function and hydrology will be restored to the fullest extent practicable within developed areas.

19.402.12 General Discretionary Review

This subsection establishes a discretionary process by which the City will analyze the impacts of development on WQRs and HCAs, including measures to prevent negative impacts and requirements for mitigation and enhancement. The Planning Manager may consult with a professional with appropriate expertise to evaluate an application, or they may rely on appropriate staff expertise to properly evaluate the report's conclusions.

A. Impact Evaluation and Alternatives Analysis

An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria for general discretionary review and to evaluate development alternatives for a particular property. A report presenting this evaluation and analysis must be prepared and signed by a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist. At the Planning Manager's discretion, the requirement to provide such a report may be waived for small projects that trigger discretionary review but can be evaluated without professional assistance.

The alternatives will be evaluated on the basis of their impact on WQRs and HCAs, the ecological functions provided by the resource on the property, and offsite impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The evaluation and analysis must include the following:

1. Identification of the ecological functions of riparian habitat found on the property, as described in Subsection 19.402.1.C.2.
2. An inventory of vegetation, sufficient to categorize the existing condition of the WQR per Table 19.402.11.C, including the percentage of ground and canopy coverage materials within the WQR.
3. An assessment of the water quality impacts related to the development, including sediments, temperature and nutrients, sediment control, and temperature control, or any other condition with the potential to cause the protected water feature to be listed on DEQ's 303(d) list.
4. An alternatives analysis, providing an explanation of the rationale behind choosing the alternative selected, listing measures that will be taken to avoid and/or minimize adverse

impacts to designated natural resources, and demonstrating that:

- a. No practicable alternatives to the requested development exist that will not disturb the WQR or HCA.
 - b. Development in the WQR and/or HCA has been limited to the area necessary to allow for the proposed use.
 - c. If disturbed, the WQR can be restored to an equal or better condition in accordance with Table 19.402.11.C; and the HCA can be restored consistent with the mitigation requirements of Subsection 19.402.11.D.2.
 - d. Road crossings will be minimized as much as possible.
5. Evidence that the applicant has done the following, for applications proposing routine repair and maintenance, alteration, and/or total replacement of existing structures located within the WQR:
- a. Demonstrated that no practicable alternative design or method of development exists that would have a lesser impact on the WQR than the one proposed. If no such practicable alternative design or method of development exists, the project will be conditioned to limit its disturbance and impact on the WQR to the minimum extent necessary to achieve the proposed repair/maintenance, alteration, and/or replacement.
 - b. Provided mitigation to ensure that impacts to the functions and values of the WQR will be mitigated or restored to the extent practicable.
6. A mitigation plan for the designated natural resource that contains the following information:
- a. A description of adverse impacts that will be caused as a result of development.
 - b. An explanation of measures that will be taken to avoid, minimize, and/or mitigate adverse impacts to the designated natural resource; in accordance with, but not limited to, Table 19.402.11.C for WQRs and Subsection 19.402.11.D.2 for HCAs.
 - c. Sufficient description to demonstrate how the following standards will be achieved:
 - (1) Where existing vegetation has been removed, the site must be revegetated as soon as practicable.
 - (2) Where practicable, lights must be placed so that they do not shine directly into any WQR and/or HCA location. The type, size, and intensity of lighting must be selected so that impacts to habitat functions are minimized.
 - (3) Areas of standing trees, shrubs, and natural vegetation will remain connected or contiguous; particularly along natural drainage courses, except where mitigation is approved; so as to provide a transition between the proposed development and the designated natural resource and to provide opportunity for food, water, and cover for animals located within the WQR.
 - d. A map showing where the specific mitigation activities will occur. Off-site mitigation related to WQRs cannot be used to meet the mitigation requirements of Section 19.402.
 - e. An implementation schedule; including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting; as well as a contingency plan. All in-stream work in fish-bearing streams be done in accordance with the allowable windows for in-water work as designated by ODFW.

B. Approval Criteria

1. Unless specified elsewhere in Section 19.402, applications subject to the discretionary review process must demonstrate how the proposed activity complies with the following criteria:

a. Avoid

The proposed activity avoids the intrusion of development into the WQR and/or HCA to the extent practicable. The proposed activity must have less detrimental impact to the designated natural resource than other practicable alternatives, including significantly different practicable alternatives that propose less development within the resource area.

b. Minimize

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity within the resource area must minimize detrimental impacts to the extent practicable.

- (1) The proposed activity must minimize detrimental impacts to ecological functions and loss of habitat, consistent with uses allowed by right under the base zone, to the extent practicable.
- (2) To the extent practicable within the designated natural resource, the proposed activity must be designed, located, and constructed to:
 - (a) Minimize grading, removal of native vegetation, and disturbance and removal of native soils; by using the approaches described in Subsection 19.402.11.A, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation).
 - (b) Minimize adverse hydrological impacts on water resources.
 - (c) Minimize impacts on wildlife corridors and fish passage.
 - (d) Allow for use of other techniques to further minimize the impacts of development in the resource area; such as using native plants throughout the site (not just in the resource area), locating other required landscaping adjacent to the resource area, reducing light spill-off into the resource area from development, preserving and maintaining existing trees and tree canopy coverage, and/or planting trees where appropriate to maximize future tree canopy coverage.

c. Mitigate

If the applicant demonstrates that there is no practicable alternative that will avoid disturbance of the designated natural resource, then the proposed activity must mitigate for adverse impacts to the resource area. All proposed mitigation plans must meet the following standards:

- (1) The mitigation plan must demonstrate that it compensates for detrimental impacts to the ecological functions of resource areas, after taking into consideration the applicant's efforts to minimize such detrimental impacts.
- (2) Mitigation must occur on the site of the disturbance, to the extent practicable. Off-site mitigation for disturbance of WQRs will not be approved. Off-site mitigation for disturbance of HCAs will be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and if the applicant has documented that they can carry out and ensure the success of the off-site mitigation as outlined in Subsection 19.402.11.B.5.

In addition, if the off-site mitigation area is not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant must demonstrate that it is not practicable to complete the mitigation within the same subwatershed and that, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.

- (3) All revegetation plantings must use native plants listed on the Milwaukie Plant List.
- (4) All in-stream work in fish-bearing streams must be done in accordance with the allowable windows for in-water work as designated by ODFW.
- (5) A mitigation maintenance plan must be included and must be sufficient to ensure the success of the planting. Compliance with the plan will be a condition of development approval.

2. Municipal Water Utility Facilities Standards

In addition to all other applicable criteria of Subsection 19.402.12.B, and if not already exempted by Subsection 19.402.4, municipal potable water, stormwater, and wastewater utility facilities (which may include, but are not limited to, water treatment plants, wastewater treatment plants, raw water intakes, pump stations, transmission mains, conduits or service lines, terminal storage reservoirs, and outfall devices) may be built, expanded, repaired, maintained, reconfigured, rehabilitated, replaced, or upsized in accordance with the following criteria:

- a. Such projects are not required to avoid the resource area per Subsection 19.402.12.B.1.a, provided that, where practicable, the project does not encroach closer to a protected water feature than existing operations and development; or, for new projects where there are no existing operations or development, provided that the project does not encroach closer to a protected water feature than practicable.
- b. Best management practices will be employed that accomplish all of the following:
 - (1) Account for watershed assessment information in project design.
 - (2) Minimize the trench area and tree removal within the resource area.
 - (3) Utilize and maintain erosion controls until other site stabilization measures are established, post-construction.
 - (4) Replant immediately after backfilling, or as soon as effective.
 - (5) Preserve wetland soils and retain soil profiles.
 - (6) Minimize compactions and the duration of the work within the resource area.
 - (7) Complete in-water construction during appropriate seasons, or as approved within requisite federal or state permits.
 - (8) Monitor water quality during the construction phases, if applicable.
 - (9) Implement a full inspection and monitoring program during and after project completion, if applicable.

C. Limitations and Mitigation for Disturbance of HCAs

1. Discretionary Review to Approve Additional Disturbance within an HCA

An applicant seeking discretionary approval to disturb more of an HCA than is allowed by Subsection 19.402.11.D.1 must submit an Impact Evaluation and Alternatives Analysis, as outlined in Subsection 19.402.12.A, and will be subject to the approval criteria provided in Subsection 19.402.12.B.

An applicant may use the nondiscretionary mitigation options presented in Subsection 19.402.11.D.2 as a guide for proposing mitigation measures that will then be evaluated against the approval criteria provided in Subsection 19.402.12.B.

2. Discretionary Review to Approve Mitigation that Varies the Number and Size of Trees and Shrubs within an HCA

An applicant seeking discretionary approval to proportionally vary the number and size of trees and shrubs required to be planted under Subsection 19.402.11.D.2 (e.g., to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs) but who will comply with all other applicable provisions of Subsection 19.402.11 will be subject to the following process:

- a. The applicant shall submit the following information:
 - (1) A calculation of the number and size of trees and shrubs the applicant would be required to plant under Subsection 19.402.11.D.2.
 - (2) The number and size of trees and shrubs that the applicant proposes to plant.
 - (3) An explanation of how the proposed number and size of trees and shrubs will achieve, at the end of the third year after initial planting, comparable or better mitigation results than would be achieved if the applicant complied with all of the requirements of Subsection 19.402.11.D.2. Such explanation must be prepared and signed by a knowledgeable and qualified natural resource professional or a certified landscape architect. It must include discussion of site preparation including soil additives, removal of invasive and noxious vegetation, plant diversity, plant spacing, and planting season; and immediate post-planting care, including mulching, irrigation, wildlife protection, and weed control.
 - (4) A mitigation, site-monitoring, and site-reporting plan.
 - (5) An explanation of how the applicable requirements in Chapter 16.32 will also be met.
- b. Approval of the request shall be based on consideration of the following:
 - (1) Whether the proposed planting will achieve, at the end of the third year after initial planting, comparable or better mitigation results than would be achieved if the applicant complied with all of the requirements of Subsection 19.402.11.D.2.
 - (2) Whether the proposed mitigation adequately addresses the plant diversity, plant survival, and monitoring practices established in Subsection 19.402.11.B.
 - (3) Whether the applicable requirements in Chapter 16.32 will also be met.

19.402.13 Land Division and Property Line Adjustments

The following standards apply to property line adjustments and all forms of land division defined in Chapter 17.08. These standards apply in addition to the applicable requirements provided in Title 17 Land Division and elsewhere in Title 19 Zoning. Lot consolidations, as defined in Chapter 17.08, are not subject to the provisions of Section 19.402.

A. Boundary Verification

Whether or not an applicant believes the NR Map is accurate, the applicant must verify the boundaries of the WQR and HCA on the property according to Subsection 19.402.15.

B. Construction Management Plans

1. In accordance with Subsection 19.402.9, a construction management plan is required for applications for land division that will require physical site improvements (e.g., grading and/or construction of structures, streets, or utilities) within, or within 100 ft of, a WQR or HCA.
2. A construction management plan is not required for applications for land division that do not require grading; constructing structures, streets, or utilities; or making other physical improvements to the site.

C. Impacts from Site Improvements

Applications for land division that will require physical site improvements (e.g., grading and/or the

construction of streets, sidewalks, culverts, bridges, or utilities) within a WQR or HCA must comply with the relevant standards for disturbance limitation and mitigation provided in Subsections 19.402.11 and/or 19.402.12, as applicable.

D. Mitigation for Future Structures or Improvements

Applications proposing a division of land on which future construction may impact a WQR or HCA must comply with one of the following two standards:

1. Complete the mitigation requirements for any impacts to the WQR or HCA, in accordance with the requirements of Section 19.402, thereby exempting all subsequent development on lots containing a WQR and/or HCA from further review if in compliance with the related approval. When mitigation is required for new streets created as part of a subdivision, as outlined in Subsection 19.402.13.H, such mitigation must be completed prior to approval of the final plat for the subdivision, unless the Planning Commission's approval establishes a different schedule.
2. Not complete the mitigation requirements, thus requiring that any subsequent development be subject to review under Section 19.402.

E. Property Line Adjustments

Applications for property line adjustment, when any of the properties include HCAs, must address the resulting change in the percentage of HCA coverage on each property and demonstrate compliance with one of the following standards:

1. The proposed property line adjustment will result in no more than a 30-point difference in the percentage of HCA coverage on each property. Such an adjustment is subject to the Type I review process.
2. The proposed property line adjustment will not contravene a condition of approval related to HCA distribution from a previously approved land division. Such an adjustment is subject to the Type I review process.
3. The proposed property line adjustment cannot meet the standard of Subsection 19.402.13.E.1, above, but will result in the smallest practicable difference in the percentage of HCA coverage on each property. Furthermore, the new boundary configuration will mitigate, to the extent practicable, the potential future impacts to the HCA from access and development. Such an adjustment is subject to the Type II review process.

F. Low-Impact Partitions

Applications for partitions are subject to Type I review if they demonstrate compliance with the following standards:

1. For properties that contain HCAs, but no WQRs, and where the HCA covers 85% or less of the total lot area, the partition must achieve either of the following results:
 - a. There must be no more than a 30-point difference in the percentage of HCA coverage on each of the new parcels. For example, a two-lot partition that would produce one parcel that is 55% HCA and the other that is 30% HCA is permissible with Type I review, whereas a two-lot partition that would produce one parcel that is 75% HCA and the other that is 40% HCA is not permissible with Type I review and will be subject to the standards of Subsection 19.402.13.G.
 - b. At least 90% of the original property's HCA is on a separate unbuildable parcel, protected by a conservation restriction.
2. For properties that contain WQRs, the applicant must place 100% of the WQR in a separate unbuildable tract, protected by a conservation restriction.

3. For properties that contain both WQRs and HCAs, the applicant must comply with both of the standards listed above in Subsections 19.402.13.F.1 and 2.
4. For properties where the HCA covers more than 85% of the total lot area, the proposed partition is subject to the standards and review process established in Subsection 19.402.13.G.

G. All Other Partitions

Applications for partitions that cannot comply with Subsection 19.402.13.F are subject to Type II review and must comply with one of the following two standards:

1. For properties that do not contain any WQRs, but for which it is not practicable to comply with the partition standards in Subsection 19.402.13.F.1, and where the HCA covers 85% or less of the total lot area, the application must meet the following standards and is not subject to the requirements of Subsection 19.402.12:
 - a. The partition plan will result in the smallest practicable percentage point difference in HCA coverage on the parcels created by the partition.
 - b. To the extent practicable, the parcel configuration will mitigate the potential future impacts to the HCA from access and development.
2. For properties that contain WQRs but cannot comply with Subsection 19.402.13.F.2, that contain both WQRs and HCAs but cannot comply with Subsection 19.402.13.F.3, or where the HCA covers more than 85% of the total lot area, the application must comply with the following standards:
 - a. To the extent practicable, the parcel configuration must mitigate the potential future impacts to WQRs from access and development.
 - b. An Impact Evaluation and Alternatives Analysis must be prepared in accordance with the relevant portions of Subsection 19.402.12.A.
 - c. For properties where the HCA covers more than 85% of the total lot area, the Impact Evaluation and Alternatives Analysis must address how the applicant's proposal retains the greatest practicable degree of contiguity of the HCA across the new parcels.

H. Subdivisions

Applications for subdivisions are subject to Type II review and must comply with one of the following two standards:

1. At least 90% of the property's HCA and 100% of the property's WQR must be located in a separate tract. Applications that meet this standard are not subject to the discretionary review requirements of Subsection 19.402.12.
2. If a subdivision cannot comply with the standards in Subsection 19.402.13.H.1, the application must comply with the following standards:
 - a. All proposed lots must have adequate buildable area outside of the WQR and HCA.
 - b. To the extent practicable, the lot and access configurations must mitigate the potential future impacts to the WQR and HCA from access and development.
 - c. An Impact Evaluation and Alternatives Analysis must be prepared in accordance with the relevant portions of Subsection 19.402.12.A.
 - d. For properties where the HCA covers more than 85% of the total lot area, the Impact Evaluation and Alternatives Analysis must address how the applicant's proposal retains the greatest practicable degree of contiguity of the HCA across the new lots.

I. Resource Area as a Separate Tract

Where required by Section 19.402, the new subdivision or partition plat must delineate and show all WQRs and HCAs as being located in a separate unbuildable tract(s) according to the following process:

1. Prior to preliminary plat approval, the designated natural resource (whether WQR, HCA, or both) must be shown as a separate tract(s), which cannot be part of any lot or parcel used for construction of any structures.
2. Prior to final plat approval, ownership of the separate natural resource tract(s) must be identified to distinguish it from lots or parcels intended for sale. Ownership in common or by a homeowners association is strongly discouraged. The tract(s) may be identified as any one of the following:
 - a. Private natural area held by the owner with a restrictive covenant and/or conservation easement.
 - b. For residential subdivisions, private natural area subject to an easement conveying storm and surface water management rights to the City of Milwaukie, Clackamas County Water Environment Services, and/or any other relevant jurisdiction, and preventing the owner of the tract from activities and uses inconsistent with the purposes of Section 19.402.
 - c. Public natural area where the tract has been dedicated to the City of Milwaukie or a private nonprofit with the mission of land conservation.
3. The boundaries of all such separate tracts must be demarcated with stakes, flags, or some similar means so that the boundaries between tracts and adjacent properties are defined in perpetuity. Fences that prevent the unfettered passage of wildlife cannot be installed along the boundary of any tract.

19.402.14 Adjustments and Variances

To encourage applicants to avoid or minimize impacts to WQRs and/or HCAs, several types of adjustments and variances are available for use on any property that includes a WQR or HCA. These include adjustments to specific base zone and lot design standards, discretionary variances, and allowances for residential cluster development.

A. Adjustments

The adjustments provided in Subsection 19.402.14.A cannot be used to avoid the requirement to submit a construction management plan, if deemed applicable per Subsection 19.402.3. The following adjustments are allowed by right as part of any Type I, II, or III application:

1. Adjustments to Base Zone Standards**a. Yard Setback (General)**

Yard setback standards may be adjusted by up to 10%. This allowance applies only to the yard requirements established in base zones and does not apply to additional yard requirements for conditional uses or community service uses, yard exceptions established in Subsection 19.501.2, or transition area measures established in Subsection 19.504.4.

b. Rear Yard Setback (Limited)

For residential development, if the subject property is adjacent to a separate tract that was established according to the standards of Subsection 19.402.13.J and the tract is adjacent to the rear yard of the subject property, the minimum rear yard requirement may be reduced to 10 ft.

2. Adjustments to Lot Design Standards

When property boundaries are changed and/or land divided per Title 17 Land Division, an applicant may utilize the following adjustments to avoid or minimize impacts to a WQR or HCA:

- a. The minimum base zone standards for lot width and lot depth may be reduced by up to 10%.
- b. The minimum lot frontage required on a public street may be reduced by up to 10%.

B. Variances

1. Requests to vary any standards beyond the adjustments allowed in Subsections 19.402.14.A or B are subject to the review process and approval criteria for variances established in Section 19.911.
2. In granting any variance request related to Section 19.402, the Planning Commission may impose such conditions as are deemed necessary to minimize adverse impacts that may result from granting the variance. Examples of such conditions include, but are not limited to, maintaining a minimum width of the vegetated corridor alongside a primary protected water feature and limiting the amount of WQR for which the adjacent vegetated corridor width can be reduced.

19.402.15 Boundary Verification and Map Administration

The NR Map shows the locations of WQRs and HCAs. For WQRs, the NR Map is a general indicator of protected water features and their associated vegetated corridors; the location of actual WQRs is determined according to the parameters established in Table 19.402.15. With respect to HCA locations, the NR Map is assumed to be correct unless demonstrated otherwise.

Table 19.402.15
Determination of WQR Location

Protected Water Feature Type	Slope Adjacent to Protected Water Feature	Starting Point for measurements from Protected Water Feature	Width of Vegetated Corridor ¹
Primary Protected Water Features ²	< 25%	<ul style="list-style-type: none"> Bankful stage (top of bank) or 2-year recurrence interval flood elevation Delineated edge of Title 3 wetland 	50'
Primary Protected Water Features ²	≥ 25% for 150' or more ³	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation Delineated edge of Title 3 wetland 	200'
Primary Protected Water Features ²	≥ 25% for less than 150' ³	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation Delineated edge of Title 3 wetland 	Distance from starting point of measurement to top of ravine (break in ≥ 25% slope) ⁴ plus 50' ⁵
Secondary Protected Water Features ⁶	< 25%	<ul style="list-style-type: none"> Bankful stage or 2-year flood elevation 	15'

Table 19.402.15
Determination of WQR Location

Protected Water Feature Type	Slope Adjacent to Protected Water Feature	Starting Point for measurements from Protected Water Feature	Width of Vegetated Corridor ¹
Secondary Protected Water Features ⁶	≥ 25% ³	• Bankful stage or 2-year flood elevation	50'

¹ Vegetated corridor width will be applied to the outer boundaries of water features, such as the edge of a wetland and both banks of a watercourse.

² Primary protected water features include: all perennial streams, streams draining 100 or more acres, Title 3 wetlands, and natural lakes and springs. See Section 19.201 for the full definition.

³ Vegetated corridors in excess of 50 ft for primary protected features, or in excess of 15 ft for secondary protected features, apply on steep slopes only in the uphill direction from the protected water feature.

⁴ Where the protected water feature is confined by a ravine or gully, the top of ravine is the break in the 25% slope.

⁵ A maximum reduction of 25 ft may be permitted in the width of the vegetated corridor beyond the slope break if a geotechnical report demonstrates that the slope is stable. To establish the width of the vegetated corridor, slope will be measured in 25-ft increments away from the water feature until the slope is less than 25% (top of ravine).

⁶ Secondary protected water features include intermittent streams draining 50 to 100 acres. See Section 19.201 for the full definition.

A. Boundary Verification

To determine whether the standards of Section 19.402 apply to a proposed activity at any given location, the boundaries of any designated natural resource(s) on or near the site must be verified.

Agreement with the accuracy of the NR Map does not constitute or require a land use decision. However, for activities proposed within 100 ft of a wetland or its associated vegetated corridor, the boundary verification process outlined in Subsection 19.402.15.A.2.a(1)(b) must be followed to identify the specific location of wetlands on the subject property. The Planning Manager may waive the requirement for official wetland delineation, depending on the specific circumstances of the site and the proposed activity. Such circumstances may include, but are not limited to, the scale and potential impacts of the proposed activity, the proximity of the proposed activity to the mapped resource, and the Manager's confidence in the accuracy of the NR Map relative to the resource in question.

An applicant may challenge the accuracy of the NR Map through either of the boundary verification processes outlined in Subsections 19.402.15.A.1 and 2.

1. Type I Boundary Verification

The following minor corrections to mapped HCAs may be proposed according to one of the following procedures, and are subject to Type I review per Section 19.1004:

a. Simple Incongruities

In some cases, the vegetative cover data shown on the NR Map might not align with the location of existing legally established development or tree cover. An applicant who believes

that the NR Map is inaccurate, based on such an obvious misalignment, must submit the following information regarding the property:

- (1) A detailed property description and site plan of the property that includes all existing conditions plans listed on the City's Site Plan Requirements checklist.
- (2) A copy of the applicable NR Map section.
- (3) The latest available aerial photograph of the property, with lot lines shown, at a scale of at least 1 map inch equal to 50 ft for lots of 20,000 or fewer square feet, and a scale of 1 map inch equal to 100 ft for larger lots.
- (4) A documented demonstration of the misalignment between the NR Map and the property's tax lot boundary lines and/or the location of existing legally established development.
- (5) Any other factual information that the applicant wishes to provide to support boundary verification.

b. Legal Development Prior to Adoption Date

If a property was legally developed between the summer of 2002 (when the aerial photograph used to determine the regional habitat inventory was taken) and September 15, 2011, the effective date of Ordinance #2036, the applicant must submit the following information regarding the property:

- (1) The information described in Subsection 19.402.15.A.1.a.
- (2) A summer 2002 aerial photograph of the property, with lot lines shown, at a scale of at least 1 map inch equal to 50 ft for lots of 20,000 or fewer square feet, and a scale of 1 map inch equal to 100 ft for larger lots.
- (3) Any approved building permits or other development plans and drawings related to the development of the property that took place between summer 2002 and September 15, 2011, the effective date of Ordinance #2036.
- (4) A clear explanation and documentation, such as supporting maps or drawings or a more recent aerial photograph, indicating the new development that has occurred and where previously identified habitat no longer exists because it is now part of a developed area.

2. Type II Boundary Verification

Corrections to mapped WQRs and/or detailed verification of mapped HCAs may be proposed according to the following procedures and are subject to Type II review per Section 19.1005.

a. Corrections to WQRs

(1) Submittal Requirements

To propose a correction to a WQR shown on the NR Map, the applicant must submit the following information, depending on the type of water feature in question:

(a) Drainages

In the case of drainages; including rivers, streams, springs, and natural lakes; the applicant must submit a report, prepared by a qualified scientist or professional engineer who specializes in hydrology, demonstrating whether or not the drainage meets the definition of a protected water feature. If the drainage is demonstrated to be a protected water feature, the applicant must provide a topographic map of the site, with contour intervals of 5 ft or less, that shows the specific location of the drainage on the subject property.

(b) Wetlands

In the case of wetlands, the applicant must submit a wetland delineation report, prepared by a professional wetland specialist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology and following the wetlands delineation process established by DSL, demonstrating the location of any wetlands on the site. The delineation report will be accepted only after approval by DSL. If the wetland is demonstrated to be a primary protected water feature, the applicant must provide a topographic map of the site, with contour intervals of 5 ft or less, that shows the specific location of the wetland on the subject property.

The Planning Manager will confer with DSL and Metro to confirm delineation and hydrology reports, as may be needed, prior to issuing a notice of decision on a requested map correction. In cases where the City initiates the boundary verification for purposes of improving the accuracy of the NR map, a formal delineation approval by DSL is not required, though a report following the delineation process established by DSL must be provided.

(2) Approval Criteria

The City will update the NR Map if the wetland or hydrology report submitted demonstrates any of the following:

- (a) That there was an error in the original mapping.
- (b) That the boundaries of the WQR have changed since the most recent update to the NR Map.
- (c) That a primary protected water feature no longer exists because the area has been legally filled, culverted, or developed prior to January 16, 2003, the effective date of Ordinance #1912.

b. Detailed Verification of HCAs

An applicant who believes that an HCA shown on the NR Map should be corrected for a reason other than those described in Subsections 19.402.15.A.1.a or b may propose a detailed verification.

(1) Submittal Requirements

The applicant must submit a report prepared and signed by either a knowledgeable and qualified natural resource professional; such as a wildlife biologist, botanist, or hydrologist; or a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, stormwater facilities, or other similar facilities. The report must include:

- (a) A description of the qualifications and experience of all persons that contributed to the report and, for each person that contributed, a description of the elements of the analysis to which the person contributed.
- (b) The information described in Subsection 19.402.15.A.1.a.
- (c) The information described in Subsection 19.402.15.A.1.b, if the applicant believes such information is relevant to the verification of habitat location on the subject lot or parcel.
- (d) Additional aerial photographs, if the applicant believes they provide better information regarding the property, including documentation of the date and process used to take the photos and an expert's interpretation of the additional information

they provide.

- (e) A map showing the topography of the property shown by 2-ft vertical contours in areas of slopes less than 15%, and at 5-ft vertical contours of slopes 15% or greater.
- (f) Any additional information necessary to address each of the detailed verification criteria provided in Subsection 19.402.15.A.2.b.(2); a description of where any HCAs are located on the property, based on the application of the detailed verification criteria; and factual documentation to support the analysis.

(2) Approval Criteria

A boundary verification request submitted under Subsection 19.402.15.A.2.b will be evaluated according to the following three-step process:

(a) Identify Riparian Habitat

Locate the water feature that is the basis for identifying riparian habitat.

- (i) Locate the top of bank of all streams, rivers, and open water within 200 ft of the property.
- (ii) Locate all flood areas within 100 ft of the property.
- (iii) Locate all wetlands within 150 ft of the property, based on the NR Map. Identified wetlands must be further defined or informally delineated consistent with methods currently accepted by DSL and the Corps.

(b) Identify Vegetative Cover Status

Identify the vegetative cover status of all undeveloped areas on the property that are within 200 ft of the top of bank of streams, rivers, and open water; are wetlands or are within 150 ft of wetlands; and are flood areas (i.e., 100-year floodplain) and within 100 ft of flood areas. For purposes of this subsection, “undeveloped areas” means those portions of the property that have not been changed from a more natural, pre-development state by buildings, accessory structures, parking and loading areas, paved or graveled areas, improved open areas (such as plazas and walkways), hardscape landscaping, above-ground utilities, and/or similar improvements.

Determine whether these undeveloped areas fall into any of the following three categories:

- (i) Low structure vegetation or open soils = Undeveloped areas that are part of a contiguous area 1 acre or larger of grass, meadow, croplands, or areas of open soils located within 300 ft of a surface stream. Low structure vegetation areas may include areas of shrub vegetation less than 1 acre in size; if they are contiguous with areas of grass, meadow, croplands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 ft of a surface stream; and if those contiguous areas together form an area of 1 acre in size or larger.
- (ii) Woody vegetation = Undeveloped areas that are part of a contiguous area 1 acre or larger of shrub or open or scattered forest canopy (less than 60% crown closure) located within 300 ft of a surface stream.
- (iii) Forest canopy = Undeveloped areas that are part of a contiguous grove of trees of 1 acre or larger in area with approximately 60% or greater crown

closure, irrespective of whether the entire grove is within 200 ft of the relevant water feature.

(c) Confirm HCA Boundaries

Using Table 19.402.15.A.2.b.(2).(c), determine whether any portion of the identified undeveloped riparian areas on the subject property is classifiable as HCA.

Table 19.402.15.A.2.b.(2).(c) Identifying Habitat Conservation Areas (HCAs)			
Distance from Protected Water Feature	Vegetation Status of Undeveloped Riparian Area		
	Low Structure Vegetation or Open Soils	Woody Vegetation (shrub and scattered forest canopy)	Forest Canopy (closed to open forest canopy)
Surface Streams			
0 ft – 100 ft	HCA	HCA	HCA
101 ft – 200 ft	HCA if slope >25% ¹ (otherwise not HCA)	HCA if slope >25% ¹ (otherwise not HCA)	HCA ²
Wetlands (wetland feature itself is an HCA)			
0 ft – 100 ft	HCA	HCA	HCA
101 ft – 150 ft	Not HCA	Not HCA	HCA
Flood Areas (FEMA's 1% annual chance flood hazard area or 1996 Metro flood area)			
Within 300 ft of river or surface stream	HCA	HCA	HCA
More than 300 ft from river or surface stream	HCA	HCA	HCA
0 ft – 100 ft from edge of flood area	Not HCA	HCA	HCA

¹ Measure slope adjacent to the protected water feature using the methodology outlined in Table 19.402.15.

² Those portions of the riparian area that are 151 to 200 ft from the protected water feature and have a slope less than 25% are not HCA.

(3) Notification to Metro and DLCD

When an application for boundary verification proposes corrections to mapped HCAs that would result in a change in HCA designation of 1 acre or more, the City will notify Metro and the Oregon Department of Land Conservation and Development within 7 days after the application has been deemed complete, in accordance with the Type II referral procedure outlined in Subsection 19.1005.3.A.

3. Type III or V Boundary Verification

Corrections to mapped WQRs or HCAs that are not subject to processing according to the provisions outlined in either of Subsection 19.402.15.A.1 or A.2, such as in cases where the City initiates the change without property owner authorization and/or where the changes involve more properties than for which it is practicable to obtain all property owners' authorization, will be processed in accordance with the procedures for zoning map amendments as provided in Subsection 19.902.6. Such corrections will be processed with either Type III or Type V review, accordingly, but do not constitute amendments to the Zoning Map itself, only to the NR Map.

B. Map Administration

1. Updates to the NR Map

When a boundary verification, conducted in accordance with the standards of Subsection 19.402.15.A, demonstrates an error in the location of a WQR or HCA shown on the NR Map, the City will update the NR Map to incorporate the corrected information as soon as practicable. Changes to the NR Map are not considered amendments to the City's Comprehensive Plan, to Comprehensive Plan Map 6 (Natural Resources Inventory), or to the Zoning Map.

2. Mapping Implications of Allowed Disturbances

a. WQRs

Permanent disturbances within a WQR, whether they occurred prior to the adoption of the Zoning Ordinance or are allowed according to the standards of Section 19.402, do not affect the way related WQRs are shown on the NR Map.

b. HCAs

When disturbances are allowed within HCAs, in accordance with the applicable standards of Section 19.402, the City may update the NR Map to show that the permanently disturbed area is no longer considered an HCA.

3. Designation of Annexed Areas

When land annexed to the City includes WQRs and/or HCAs, as designated by Clackamas County, those same designations will be shown on the City's NR Map at the time of annexation. Verification of the boundaries of such WQRs and/or HCAs will be processed in accordance with the applicable provisions established in Subsection 19.402.15.A; not necessarily at the time of annexation, but at such time as a new activity is proposed on the annexed property.

TITLE 16 ENVIRONMENT

CHAPTER 16.32 TREE CODE

ARTICLE III Private Trees in Residential Zones

Section 16.32.042 Tree Preservation and Planting with Development in Residential Zones

B. Tree Preservation Standards

1. Healthy trees at least 6-in DBH are required to be preserved except when their removal is required for construction, demolition, grading, utilities, and other development impacts.
2. Preservation of at least 30% on-site healthy private tree canopy coverage is required unless mitigation is provided according to Subsection 16.32.042.E. See Figures 16.32.042.B.2-a and B.2-b for examples of when mitigation is or is not required. (See Subsection 16.32.042.D.3 for information on calculating tree canopy coverage.)
3. For development sites with 30% or less on-site healthy private tree canopy coverage, the removal of healthy private tree canopy is not allowed unless mitigation is provided according to Subsection 16.32.042.E.
4. Trees of any size that are listed on the Milwaukie Rare or Threatened Tree List must be prioritized for preservation; if removed, healthy trees from this list will incur an additional fee as listed on the Consolidated Fee Schedule.
5. Unhealthy trees and trees species on the Oregon State Noxious Weed List or Milwaukie Invasive Tree List, as well as trees within designated natural resource areas (as per Section 19.402) that are listed as nuisance species on the Milwaukie Plant List, are not required to be preserved in conjunction with applicable development as established in Subsection 16.32.042.A.
6. The applicant must provide a performance bond for existing trees that are preserved for purposes of addressing the 30% canopy coverage standard, to ensure their survival for such period of time as identified in the Consolidated Fee Schedule. On-site trees may be exempt from the performance bond requirements if the Urban Forester or an ISA Certified Arborist determine that construction activities do not present a significant impact to tree health. Existing trees used for canopy credit do not qualify for removal based on the criteria outlined in Subsection 16.32.044 D.2.(11).

D. Tree Canopy Calculations and Credits

The following situations are eligible for credit towards tree canopy requirements when trees are planted or preserved in accordance with applicable City standards:

1. On-Site Trees
 - a. 100% of the existing crown area or mature crown area of on-site healthy private trees that are preserved, whichever is greater.
 - (1) In cases where a portion of the crown area of an on-site healthy private tree extends off site, the entire crown area is eligible for credit towards the tree canopy requirements.
 - (2) In cases where a portion of the crown area of an off-site private tree extends on site, the crown area is not eligible for credit towards the tree canopy requirements.

- (3) Healthy on-site trees with DBH of 12 inches or greater may receive additional canopy credits for existing or future mature crown area (whichever is greater) to be factored into preservation calculations as defined in the Consolidated Fee Schedule.

- b. 75% of the future mature crown area of planted on-site private trees.

Section 16.32.044 Non-Development Private Tree Removal in Residential Zones

A. Applicability

A permit is required prior to the removal of the following private trees in residential zones:

1. Trees that are at least six-inch DBH.
2. Trees that are less than six-inch DBH as specified on the Milwaukie Rare or Threatened Tree List.
3. Trees that were planted to meet any requirements in Sections 16.32.042 or 16.32.044.

B. Permit Exemptions

Tree removal permits are not required in residential zones when:

1. Tree removal is approved with development as provided in Subsection 16.32.042.A.
2. The removal is of trees that are grown for commercial, agricultural, or horticultural purposes including fruit trees, nut trees, or holiday trees.
3. The removal is of a tree(s) within a designated natural resource area as regulated by Section 19.402. Such removal will be governed by the applicable standards of Section 19.402 unless otherwise noted. If the removal does not meet the approval criteria for a Type A permit as outlined in Subsection 16.32.044.D.2, a Type B permit will be required (including applicable mitigation fees as listed in the Consolidated Fee Schedule).

D. Type A Tree Removal Permit

2. Approval Criteria

A Type A permit will be issued only if the following criteria are met, as determined by the Urban Forester:

- a. The proposed tree removal will be performed according to current ISA Best Management Practices.
- b. The tree proposed for removal meets one or more of the following criteria:
 - (1) The tree is dead or dying and cannot be saved as determined by an ISA Certified Arborist in accordance with ISA standards.
 - (2) The tree has sustained physical damage that will cause it to die or enter an advanced state of decline. The City may require additional documentation from an ISA Certified Arborist to demonstrate that this criterion is met.
 - (3) The tree is having an adverse effect on adjacent infrastructure or buildings that cannot be mitigated by pruning, reasonable alternative construction techniques, or accepted arboricultural practices.
 - (4) The tree poses an unreasonable risk to the occupants of the property, the adjacent property, or the general public, as determined by an ISA Certified Arborist that is Tree Risk Assessment Qualified (TRAQ) in accordance with current ISA Tree Risk

Assessment Best Management Practices.

- (5) The tree is on the Oregon State Noxious Weed List or the Milwaukie Invasive Tree List; or, if located within a designated natural resources area as regulated by Section 19.402, the tree is listed as a nuisance species on the Milwaukie Plant List.
- (6) The tree is part of a stormwater management system and has grown too large to remain an effective part of the system.
- (7) The tree location conflicts with areas of public street widening, construction, or extension as shown in the Transportation System Plan and there is no practicable alternative to removing the tree.
- (8) Tree removal is required for the purposes of a building or land use permit, utility or infrastructure installation, or utility or infrastructure repair and there is no practicable alternative to removing the tree.
- (9) The tree is recommended for removal by a designated fire marshal for Clackamas County because it presents a significant fire risk to habitable structures or limits emergency access for rescue workers, and the risk or access issue cannot be abated through pruning or other means that would result in tree retention.
- (10) An ISA Certified Arborist determines that thinning of interior trees within a stand of trees is necessary for overall stand health, the thinning will result in no less than 80% canopy cover at maturity for the area to be thinned, and that thinning of non-native trees is maximized prior to thinning of native trees.
- (11) Healthy trees. One healthy tree may be removed per tax lot per twelve-month period if the tree is less than 12 inches in diameter at breast height and is not required to be preserved by a condition of a land use review, a provision of Chapter 16.32 or Title 19, or as part of a required stormwater facility.