

TITLE 19 ZONING

CHAPTER 19.300 USE ZONES

Section 19.322 Water Quality and Natural Resource Overlay

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19.322.1 Intent

- A. Section 19.322 provides protection for water quality resources under Statewide Land Use Planning Goal 6 and Sections 1 - 4 of Title 3 of the Metro's Urban Growth Management Functional Plan (UGMFP). Section 19.322 also provides protection for 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 the intent of Section 19.322 to:
 - 1. Establish Water Quality Resource (WQR) areas 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. Stream flow 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 channel dynamics.
 - g. Organic material resources.
 3. Establish 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 non-discretionary (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 WQR areas and HCAs. This includes restoration of designated natural resource areas 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 or gardens or other non-native plantings.
- D. The water quality and natural resource area regulations allow 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 19.322 to:
1. Impose any obligation on property owners to restore existing developed sites to pre-development or natural conditions when no new activity is proposed.
 2. Impose any hardship or limitation against the continued maintenance of existing legal site conditions.
 3. Apply to activities that do not affect WQR areas or HCAs.
 4. Prohibit normal lawn and yard landscape planting and maintenance. Normal lawn and yard planting and maintenance does not include the planting of invasive non-native or noxious vegetation, including but not limited to species listed as "nuisance" plants or "required eradication" plants on the Milwaukie Native Plant List.
- Section 19.322 is to be interpreted consistently with this intent.
- F. Nonconforming conditions that were legally existing for WQR areas as of December 17, 2002, or that were legally existing for HCAs as of *[insert new adoption date]*, and that are

nonconforming solely because of Section 19.322 shall not be subject to the limitations of MMC Chapter 19.800 Nonconforming Uses. However, any expansion of a nonconforming condition within a WQR area or HCA shall be subject to the applicable standards of Section 19.322.

- G. The Milwaukie Water Quality and Natural Resource Map (hereafter WQNR map) is adopted by reference. The WQNR map shall be used to determine the applicability of Section 19.322 and shall be administered in accordance with Subsection 19.322.16.
- H. A document or other list used to identify native, nuisance, and prohibited plants shall be maintained by the Planning Director and shall be referred to as the “Milwaukie Native Plant List.”
- I. A document or other list used to identify chemicals that have been demonstrated to be detrimental to water quality and habitat health shall be maintained by the Planning Director and shall be referred to as the “Milwaukie Chemicals of Concern List.”

19.322.2 Coordination with Other Regulations

- A. Implementation of Section 19.322 is in addition to and shall be coordinated with MMC Title 19 Zoning, Title 18 Flood Hazard Regulations, and Chapter 16.28 Erosion Control.
- B. For properties along the Willamette River, nothing in Section 19.322 shall prohibit the maintenance of view windows authorized under MMC Section 19.320 Willamette Greenway Zone.
- C. Except as provided for in Subsection 19.322.2.B, provisions of Section 19.322 shall apply where they are more restrictive than MMC Section 19.320 Willamette Greenway Zone.
- D. 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 may also be required. The Planning Director shall 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.
- E. The requirements of Section 19.322 apply in addition to all applicable local, state, regional, and federal regulations, including those for wetlands and flood management areas.

19.322.3 Applicability

- A. The WQNR map shall provide a baseline for determining the applicability of Section 19.322 for any proposed activity. The City shall use the latest available aerial photographs, a copy of the applicable section of the WQNR map, and, in the case of WQR areas, the parameters established in Table 19.322.16-1, to determine whether a proposed activity on a given property will trigger any requirements of Section 19.322. If a property owner or applicant believes that the WQNR map is inaccurate, they may propose corrections according to the standards established in Subsection 19.322.16.
- B. Natural resources are designated on the City’s official WQNR map as follows:
 - 1. Water Quality Resource (WQR) areas, which include protected water features and their associated vegetated corridors, as specified in Table 19.322.16-1. 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 WQNR Map is a general indicator of the location of vegetated corridors; the specific location of vegetated corridors must be determined in accordance with Table 19.322.16-1.

2. Habitat Conservation Areas (HCAs), which include significant Goal 5 wetlands, riparian areas, and fish and wildlife habitat. HCA locations on the WQNR map are assumed to be correct until demonstrated otherwise; verifications and corrections shall be processed in accordance with the procedures established in Subsection 19.322.16.B.
- C. The regulations in Section 19.322 apply to all properties containing a WQR area and/or HCA (including any locally significant Goal 5 wetlands or habitat areas identified by the City of Milwaukie) as shown on the WQNR map.
 - D. As specified in Table 19.322.3-1, the requirements established in Subsections 19.322.9 for construction management plans apply to properties that do not contain but are within 100 feet of a WQR area and/or HCA, as shown on the WQNR map, when more than 150 square feet of disturbance is proposed.
 - E. Proposed activities that occur more than 100 feet from a WQR area or HCA, as shown on the WQNR map, do not require review under the provisions of Section 19.322.
 - F. Those portions of streams, creeks, and other protected water features that appear on the WQNR map but are enclosed in underground pipes, culverts, or similar structures are not subject to the provisions of Section 19.322.
 - G. If more than 150 sq ft of area on the subject property will be disturbed in conjunction with a proposed activity listed as exempt in Subsections 19.322.4.A or 4.B, a construction management plan shall be submitted according to the provisions of Subsection 19.322.9. This requirement applies even when the proposed activity will not occur within a designated natural resource area, in accordance with Table 19.322.3-1.
 - H. The requirements of Section 19.322 apply as shown in Table 19.322.3-1.

Table 19.322.3-1 Applicability of Requirements of Section 19.322		
Situations/activities that trigger 19.322	Prepare Construction Management Plan (19.322.9)	Comply with the rest of 19.322
On properties that include a designated natural resource area (WQR area and/or HCA)		
Activities listed as exempt in 19.322.4.A <i>(exempt for both WQR areas and HCAs)</i>	No, unless more than 150 sq ft of disturbance is proposed	No
Activities listed as exempt in 19.322.4.B <i>(exempt for HCAs only)</i>	No, unless activity is within 100 ft of WQR area and more than 150 sq ft of disturbance is proposed	No
Non-exempt activities outside of WQR area and HCA	No, unless activity is within 100 ft of WQR area or HCA and more than 150 sq ft of disturbance is proposed	No
Non-exempt activities within WQR area or HCA	Yes	Yes
On properties that do not include a designated natural resource area but are within 100 ft of a WQR area or HCA		
Activities listed as exempt in 19.322.4.A <i>(exempt for both WQR areas and HCAs)</i>	No, unless more than 150 sq ft of disturbance is proposed	No
Activities listed as exempt in 19.322.4.B <i>(exempt for HCAs only)</i>	No, unless activity is within 100 ft of WQR area and more than 150 sq ft of disturbance is proposed	No
Non-exempt activities within 100 ft of a WQR area or HCA	No, unless more than 150 sq ft of disturbance is proposed	No

- I. Activities that are not exempt as per Subsection 19.322.4 or prohibited as per Subsection 19.322.5 are subject to the Type I, Type II, or minor quasi-judicial review process as outlined in Table 19.322.3-2.

Table 19.322.3-2 Types of Process Review for Various Activities			
Activity (and applicable code sections)	Type of Review Process		
	Type I (19.1011.1)	Type II (19.1011.2)	Minor Quasi- Judicial (19.1011.3)
Construction management plan (19.322.9)	√		
Agency-approved natural resource management plans (19.322.10.A and C)	√		
Independent natural resource management plans (19.322.10.B and C)		√	
Limited tree removal (19.322.6.B)	√		
Activities within HCA that meet non-discretionary standards (19.322.13.D)	√		
Non-emergency abatement of nuisances or violations (19.322.6.E)	√		
Special use activities (19.322.7.A and 19.322.11)		√	
Limited disturbance to WQR areas (19.322.7.C)		√	
Property line adjustments that balance the HCA distribution (19.322.12.E.1 or 2)	√		
Property line adjustments that otherwise limit HCA disparity (19.322.12.E.3)		√	
Low-impact partitions or replats (put designated natural resource area in separate tract) (19.322.12.G)		√	
Other partitions, replats, subdivisions, and development activities (19.322.8, 19.322.12.H or I, and 19.322.14)			√
Boundary verification (19.322.16)	√		

- J. For any proposed development or activity that will require minor quasi-judicial review, a pre-application conference is required. For any proposed development that will require Type II review, a pre-application conference or meeting is recommended.

19.322.4 Exempt Activities

- A. Exemptions Within All Designated Natural Resource Areas

The following activities are exempt from the provisions of Section 19.322:

1. A building permit for a phased development project for which the applicant has previously met the application requirements of Section 19.322, including the provision of a construction management plan as per Subsection 19.322.9, so long as the building site for new construction was identified on the original permit and no new portion of the WQR area and/or HCA will be disturbed.
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. Landscaping and maintenance of existing landscaping. This exemption extends to landscaping activities that do not involve the removal of native plants or plants required as mitigation, do not involve the planting of vegetation identified as “nuisance” or “required eradication” species on the Milwaukie Native Plant List, and do not produce an increase in impervious area or other changes that could result in increased direct stormwater discharges to the WQR area.
4. Removal of plants identified on the Milwaukie Native Plant List as “nuisance” or “required eradication” species and/or the planting or propagation of plants identified on the list as “native” plants. Removal must be done with handheld tools to be exempt unless done in conjunction with an approved natural resource management plan; otherwise, removal with other than handheld tools is subject to the Type I review process. After removal, all open soil areas shall be replanted and/or protected from erosion.
5. Removal of debris, as defined in MMC 19.103. For removal of debris from within a protected water feature, removal that involves earth disturbance may only be done during the allowable windows for in-water work as designated by the Oregon Department of Fish and Wildlife.
6. Agricultural practices or uses, excluding buildings and structures, provided that such activities or uses do not result in increased direct stormwater discharges to WQR areas.
7. Maintenance, alteration, expansion, replacement, repair, demolition, and/or change of use of existing legal buildings or structures, provided that the following criteria are met:
 - a. There is no change in the location of or increase in the footprint or size of any building, impervious surface, or outdoor storage area within the WQR area or HCA.
 - b. No other site changes are proposed that could result in increased direct stormwater discharges to the WQR area. 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 19.322.14.
8. Maintenance, alteration, and repair of existing utilities, access, streets, driveways, and parking improvements, including asphalt overlays, provided there is no increase in impervious area, reduction in landscaped areas or tree cover, or other changes that could result in increased direct stormwater discharges to the WQR area.
9. Emergency procedures or activities undertaken which are necessary to remove or abate hazards to person or property, provided that the timeframe for such remedial or preventative action is too short to allow for compliance with the requirements of Section 19.322. After the emergency, the person or agency undertaking the action shall repair any impacts to the natural resources resulting from the emergency action (e.g., remove

any temporary flood protection such as sandbags, restore hydrologic connections, replant disturbed areas with native vegetation).

10. Maintenance of public and private storm drainage facilities in accordance with a stormwater management plan approved by the City.
 11. Activities and improvements in existing public rights-of-way, which are subject to MMC Title 12, the Milwaukie Public Works Standards, and related stormwater management requirements.
 12. Removal of trees under any of the following circumstances:
 - a. The tree is a “downed tree” as defined in MMC 19.103, the tree has been downed by natural causes, and no earth disturbance will occur in the process of removing the tree.
 - b. The tree is classified as a “nuisance” or “required eradication” species on the Milwaukie Native Plant List, no more than three such trees will be removed from one property during any 12-month period, and no earth disturbance will occur in the process of removing the tree(s).
 - c. The tree presents an emergency situation with immediate danger to person or property as described in Subsection 19.322.4.A.9. Emergency situations 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 are trees that have fallen into or against a house or other occupied building, or trees downed across power lines or roadways. This exemption is limited to removal of the tree or portion of the tree as necessary to eliminate the hazard. Any damage or impacts to the designated natural resource area shall be repaired after the emergency has been resolved.
 - d. Removal of the tree is in accordance with an approved natural resource management plan per Subsection 19.322.10.
 13. Lot consolidations, as defined in MMC Chapter 17.08.
- B. Additional Exemptions within HCAs

In addition to the activities listed in Subsection 19.322.4.A, within an HCA the following activities are exempt from the provisions of Section 19.322, as long as activities within 100 feet of a WQR area meet the requirement to complete a construction management plan as per Subsection 19.322.9:

1. The alteration, expansion, or replacement of existing structures, provided that both of the following standards are met:
 - a. The alteration, expansion, or replacement of a structure shall not intrude more than 500 square feet into the HCA, in addition to the area defined as the building footprint as of *[insert new adoption date]*.
 - b. No new intrusion into the HCA shall be closer to a protected water feature than the pre-existing structure or improvement.
2. Minor encroachments not to exceed 120 square feet of impervious surface, such as accessory buildings, patios, walkways, retaining walls, or other similar features.
3. Temporary and minor clearing or excavation not to exceed 200 square feet for the purpose of site investigations, pits for preparing soil profiles, installing underground

utilities or other infrastructure, or similar activities, provided that such areas are restored to their original condition when the investigation is complete.

4. Low-impact outdoor recreation facilities for public use, including, but not limited to, multi-use paths, access ways, trails, picnic areas, or interpretive and educational displays and overlooks that include benches and outdoor furniture, provided that such a facility meets the following requirements:
 - a. It contains less than 500 square feet of new impervious surface.
 - b. Its trails shall be constructed using non-hazardous, pervious materials, with a maximum width of 5 feet.
5. Facilities that infiltrate stormwater onsite, including the associated piping, may be placed within the HCA 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. Only native vegetation may be planted in these facilities.

19.322.5 Prohibited Activities

The following activities are prohibited within WQR areas and HCAs:

- A. New structures, development, or activity other than those allowed by Section 19.322.
- B. Uncontained areas of hazardous materials, as defined by the Oregon Department of Environmental Quality.
- C. Planting any vegetation listed as a “nuisance” or “required eradication” species on the Milwaukie Native Plant List.
- D. Outside storage of materials, unless such storage began before the *[insert new adoption date]*; or, unless such storage is approved according to the applicable provisions of Section 19.322.
- E. Application of pesticides with any of the active ingredients listed on the Milwaukie Chemicals of Concern List is prohibited within WQR areas and HCAs. This prohibition shall extend to include any other limitations enacted by federal or state agencies that ban the use of pesticides with certain active ingredients within at least 50 feet of protected water features.

19.322.6 Activities Permitted Under Type I Review

The following activities are allowed within either WQR areas or HCAs, subject to Type I review as per MMC 19.1011.1:

- A. Construction management plans and boundary verifications, as outlined in Subsections 19.322.9 and 19.322.16.
- B. Limited Tree Removal
 1. The Planning Director may approve an application for limited tree removal or significant pruning within WQR areas and HCAs under any of the following circumstances:
 - a. The tree removal is necessary to eliminate a hazardous, non-emergency situation, as determined by the Planning Director. A situation may be deemed hazardous if a tree or portion of a tree has recently undergone a change in health or condition in a manner that may pose a hazard 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 shall be limited to removal of the tree or portion of the tree as necessary to eliminate the hazard.

- b. The tree meets all of the following criteria: (1) it is dead, diseased, or dying; (2) it is not contributing to ecosystem health and function; and (3) it cannot be saved, as determined and documented in a report by a certified arborist.
- c. The proposal would remove 4 or more trees classified on the Milwaukie Native Plant List as “nuisance” or “required eradication” species from a particular location during any 12-month period.
- d. The tree is not exempt as per Subsections 19.322.4.A.12.a or 19.322.4.A.12.b because some earth disturbance is necessary to remove it.
- e. For significant pruning, as defined in MMC 19.103, the tree will survive the proposed significant pruning, as determined and documented in a report by a certified arborist.

This provision does not apply to tree removal proposed in association with development or other activities regulated by Section 19.322, for which other approval criteria and mitigation standards may apply.

2. The Planning Director shall require the application to comply with all of the following standards:
 - a. A construction management plan shall be prepared in accordance with Subsection 19.322.9. When earth disturbance is necessary for the approved removal or pruning, all open soil areas that result from the disturbance shall be replanted and/or protected from erosion.
 - b. All pruning and/or tree removal shall be done in accordance with the standards of the International Society of Arboriculture (ISA).
 - c. Any tree that is removed in accordance with Subsection 19.322.6.B shall be replaced with a new tree, at least 1/2 inch in caliper. 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 the existing site conditions otherwise preclude tree replacement (due to existing dense canopy coverage or other ecological reasons).
 - d. The replacement tree(s) shall be located in the general vicinity of the removed tree(s), somewhere within the designated natural resource area (WQR area or HCA). The replacement tree(s) does not have to be a native species, but, in accordance with Subsection 19.322.5.C, the replacement tree(s) shall not be a species categorized as “nuisance” or “required eradication” on the Milwaukie Native Plant list. The property owner shall ensure that the replacement tree(s) survives at least two years beyond the date of planting.

C. Activities within HCAs in Compliance with Non-Discretionary Standards

Within HCAs, but outside of WQR areas, non-exempt development that is not listed in Subsections 19.322.7 or 19.322.8 and that is in compliance with the non-discretionary standards provided in Subsection 19.322.13.D is subject to Type I review.

D. Natural Resource Management Plans

Natural resource management plans that meet the standards outlined in Subsection 19.322.10.A are subject to Type I review. These are typically plans that have already been approved by a qualified agency.

E. 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 Director prior to the abatement activity. The person or agency undertaking the action shall repair any impacts to the natural resources 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.

19.322.7 Activities Permitted Under Type II Review

Unless otherwise exempt or permitted as a Type I activity, the following activities are allowed within either WQR areas or HCAs, subject to Type II review and approval by the Planning Director as per MMC 19.1011.2:

A. Special Uses

If not listed as exempt in Subsection 19.322.4 and not able to meet the non-discretionary standards for HCAs as established in Subsection 19.322.13.D, any special use activity listed below shall be subject to Type II review if the proposal complies with the applicable standards provided in Subsection 19.322.11:

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

If the proposed special use activity is not in compliance with the standards in Subsection 19.322.11, it shall be subject to minor quasi-judicial review and the general discretionary review criteria provided in Subsection 19.322.14.

B. Natural Resource Management Plans

Natural resource management plans that do not meet the Type I review standards provided in Subsection 19.322.10.A but that meet the standards provided in Subsection 19.322.10.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 particular standards and guidelines related to enhancing natural resources.

C. Partitions that meet the standards provided in Subsection 19.322.12.G.

D. Other Uses and Activities with Minimal Impacts to WQR Areas

The activities listed below are subject to Type II review and the general discretionary review criteria provided in Subsection 19.322.14:

1. Agricultural practices or uses, excluding buildings and structures, that result in increased direct stormwater discharges to WQR areas.

2. Landscaping and maintenance of existing landscaping that would increase impervious area within the WQR area by less than 100 square feet and/or result in increased direct stormwater discharges to the WQR area.
3. Alteration, expansion, and/or replacement of existing legal buildings or structures, provided that the proposed alteration or expansion does not intrude more than 100 square feet into the WQR area, regardless of the ecological quality or condition of the WQR area prior to the proposed activity, and does not encroach closer to the protected water feature than the existing buildings or structures.
4. Alteration and repair of existing utilities, access, streets, driveways, and parking improvements, including asphalt overlays, provided that the proposed improvements do not intrude more than 100 square feet into the WQR area, regardless of the ecological quality or condition of the WQR area prior to the proposed activity, and do not encroach closer to the protected water feature than the existing improvements.

19.322.8 Activities Permitted Under Minor Quasi-Judicial Review

Unless otherwise exempt or permitted as a Type I or Type II activity, the following activities are allowed within either WQR areas or HCAs, subject to minor quasi-judicial review and approval by the Planning Commission under MMC 19.1011.3:

- A. The activities listed below shall be subject to the general discretionary review criteria provided in Subsection 19.322.14:
 1. Any activity allowed in the base zone that is not otherwise exempt or permitted as a Type I or Type II activity.
 2. Within HCAs, development that is not in compliance with the non-discretionary standards provided in Subsection 19.322.13.D.
 3. New roads to provide access to protected water features; necessary ingress and egress across WQR areas; or the widening an existing road.
 4. Improvement of existing public utility facilities that cannot meet the applicable standards of Subsection 19.322.11.
 5. New stormwater pre-treatment facilities that cannot meet the applicable standards of Subsection 19.322.11.
 6. New public or private utility facility construction that cannot meet the applicable standards of Subsection 19.322.11.
 7. Walkways and bike paths that cannot meet the applicable standards of Subsection 19.322.11.
 8. Tree removal in excess of that permitted under Subsections 19.322.4 or 19.322.6.
 9. Landscaping and maintenance of existing landscaping that would increase impervious area by more than 100 square feet.
 10. Maintenance, alteration, expansion, replacement, repair, and/or change of use of existing legal buildings or structures that would disturb more than 100 square feet within the WQR area or would encroach closer to the protected water feature than the existing buildings or structures.
 11. Maintenance, alteration, and repair of existing utilities, access, streets, driveways, and parking improvements, including asphalt overlays, that would disturb more than 100

square feet within the WQR area or would encroach closer to the protected water feature than the existing improvements.

- B. The activities listed below shall be subject to the review criteria for partitions and subdivisions provided in Subsections 19.322.12.H and 19.322.12.I, respectively:
 - 1. The partitioning of land containing a WQR area or HCA that cannot meet the standards provided in Subsection 19.322.12.G.
 - 2. The subdividing of land containing a WQR area or HCA.

19.322.9 Construction Management Plans

- A. Construction management plans are subject to Type I review as per MMC 19.1011.1.
- B. Construction management plans shall provide the following information:
 - 1. Description of work to be done.
 - 2. Scaled site plan showing a demarcation of WQR areas 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 area and/or HCA. A root protection zone shall be established around each tree in the WQR area or HCA that is adjacent to any approved work area. The root protection zone shall extend from the trunk to the outer edge of the tree's canopy, or as close to the outer edge of the canopy as is practicable for the approved project. The perimeter of the root protection zone shall be flagged, fenced, or otherwise marked and shall remain undisturbed. Material storage and construction access is prohibited within the perimeter. The root protection zone shall be maintained until construction is complete.

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

19.322.10 Natural Resource Management Plans

Natural resource management plans that authorize limited disturbance within the WQR area or HCA may be approved with Type I or Type 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), Oregon Division of State Lands (DSL), Oregon Watershed Enhancement Board (OWEB), Metro, Clackamas County Soil and Water Conservation District, or other agency approved by the Planning Director.

- 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, or DSL's Hydrogeomorphic (HGM) approach of assessment for wetland and riparian functions.

C. Approval Criteria

Every plan prepared for approval under Section 19.322 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 possible within developed areas where no reasonable expectation of returning to natural conditions exists.

D. A construction management plan prepared in accordance with Subsection 19.322.9 is required with each natural resource management plan.

E. Natural resource management plans shall address a minimum activity period of five years and 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 shall be valid for five 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 19.322.10.C.

19.322.11 Special Uses

Unless they are exempt as per Subsection 19.322.4 or do not meet the non-discretionary standards for HCAs provided in 19.322.13.D, the special uses listed in Subsection 19.322.7.A are subject to Type II review if they comply with the applicable standards in Subsection 19.322.11. Otherwise, the special uses listed in Subsection 19.322.7.A are subject to minor quasi-judicial review and the general discretionary review criteria provided in Subsection 19.322.14.

A. General Standards for Special Uses

Except for stormwater management plans, all non-exempt special uses listed in Subsections 19.322.11.B through 19.322.11.E that do not meet the non-discretionary standards for HCAs provided in Subsection 19.322.13.D shall comply with the specific applicable standards in Subsection 19.322.11, as well as with the following general standards:

1. In addition to a construction management plan prepared according to the standards of Subsection 19.322.9, a mitigation plan shall be submitted as per Subsections 19.322.13.D.2 or 19.322.14.C.2 for HCAs, as applicable, or as per Subsection 19.322.13.C for WQR areas. WQR areas and HCAs shall be restored and maintained in accordance with the approved mitigation plan.
2. Existing vegetation outside of approved work areas shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to WQR

areas and HCAs. Trees in WQR areas or HCAs shall not be used as anchors for stabilizing construction equipment.

3. Where existing vegetation has been removed or the original land contours disturbed, the site shall be revegetated and the vegetation shall be established as soon as practicable. Nuisance plants, as identified by the City, may be removed at any time. Interim erosion control measures such as mulching shall be used to avoid erosion on bare areas. Nuisance plants shall be replaced with native plants by the next growing season.

B. Public or Private Utility Facilities

In addition to the requirements of Subsection 19.322.11.A, the following disturbance area limitations apply to all public and private utilities, private connections to existing or new utility lines, and upgrades that are not exempted by Subsection 19.322.4 or that do not meet the non-discretionary standards for HCAs provided in Subsection 19.322.13.D:

1. The disturbance area for connections to utility facilities shall be no greater than 10 feet wide.
2. The disturbance area for the upgrade of existing utility facilities shall be no greater than 15 feet wide.
3. The disturbance area for new underground utility facilities shall be no greater than 25 feet wide and disturb no more than 200 linear feet of WQR area within any 1,000-linear-foot stretch of WQR area. Such a disturbance area shall be restored with the exception of necessary access points to the utility facility.
4. No fill or excavation is allowed within the ordinary high water mark of a stream, unless a permit is obtained from the U.S. Army Corps of Engineers through the Standard Local Operating Procedures for Endangered Species (SLOPES) process.

C. New Stormwater Pre-treatment Facilities

In addition to the requirements of Subsection 19.322.11.A, new stormwater pre-treatment facilities that are not exempted by Subsection 19.322.4 or that do not meet the non-discretionary standards for HCAs provided in Subsection 19.322.13.D shall not encroach more than 25 feet into the outer boundary of the WQR area adjacent to a primary protected water feature.

D. Walkways and Bike Paths

In addition to the requirements of Subsection 19.322.11.A, walkways and bike paths that are not exempted by Subsection 19.322.4 or that do not meet the non-discretionary standards for HCAs provided in Subsection 19.322.13.D and that are proposed to be constructed or improved with gravel, pavement, pavers, wood or other materials, shall comply with the following standards:

1. Walkways and bike paths within WQR areas or HCAs shall not exceed 10 feet in width.
2. If the proposed walkway or bike path will be located within a WQR area and will be paved, then, for the purposes of evaluating the proposed project, the vegetated corridor shall be widened by the width of the walkway or bike path.
3. The walkway or bike path shall be designed to avoid WQR areas and HCAs and shall be constructed so as to minimize disturbance to existing vegetation and slope stability.
4. The walkway or bike path shall be a minimum of 10 feet from the boundary of the protected water feature.

5. Where practicable, the types, sizes, and intensities of any lights associated with the walkway or bike path shall be placed so that they do not shine directly into any WQR area and/or HCA locations.
- E. Stormwater Management Plans
- Stormwater management plans that authorize disturbance within the WQR area or HCA may be approved subject to the following standards:
1. Stormwater facilities will be designed to provide an environmentally beneficial hydrological impact on protected water features.
 2. Protected water features will be protected from erosion by implementing a stream protection strategy and quantity control strategies.
 3. Watershed health will be improved through the use of vegetated facilities to meet pollution reduction, flow control, and infiltration goals and these facilities will be maintained in a manner which ensures a continued benefit to watershed health.
 4. Proposed stormwater management facilities will correct or improve conditions caused by past management and/or disturbance events, if any are present.
 5. Where no reasonable expectation of returning to natural conditions exists, beneficial habitat, vegetation, and stream function and hydrology will be restored to the fullest extent possible within developed areas.

19.322.12 Land Division and Property Line Adjustments

These standards apply to property line adjustments and all forms of land division defined in MMC Chapter 17.08. These standards apply in addition to the applicable requirements provided in MMC Title 17 Land Division and elsewhere in Title 19 Zoning. Lot consolidations, as defined in MMC Chapter 17.08, are not subject to the provisions of Section 19.322.

A. Boundary Verification

Whether or not an applicant believes the WQNR map is accurate, the applicant shall verify the boundaries of the WQR area and HCA on the property according to Subsection 19.322.16.

B. Construction Management Plans

1. Applications for land division that will require physical site improvements (e.g., grading and/or the construction of structures, streets, or utilities) within, or within 100 feet of, a WQR area or HCA shall include a construction management plan in accordance with Subsection 19.322.9.
2. Applications for land division that do not require grading or constructing structures, streets, or utilities or making other physical improvements to the site are not required to include a construction management plan.

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 area or HCA shall comply with the relevant standards for disturbance limitation and mitigation provided in Subsections 19.322.11, 19.322.13, and/or 19.322.14, as applicable.

D. Mitigation for Future Structures or Improvements

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

1. Complete the mitigation requirements for any impacts to the WQR area or HCA in accordance with the requirements of Section 19.322 and thereby exempt all subsequent development on lots containing a WQR area and/or HCA from further review.
2. Not complete the mitigation requirements, thus requiring that any subsequent development be subject to review under Section 19.322.

When mitigation is required for new streets created as part of a subdivision, as outlined in Subsection 19.322.12.I, the required mitigation must be completed prior to approval of the final plat for the subdivision, unless the Planning Commission's approval includes a different schedule.

E. Property Line Adjustments

Applications for property line adjustment between two properties, when one or both properties include HCAs, shall 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 shall be 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 shall be subject to the Type I review process.
3. The proposed property line adjustment cannot meet the standard of E-1, above, but will result in the smallest practicable percentage-point difference in the percentage of HCA coverage on each property. Furthermore, the new boundary configuration will mitigate, to the extent possible, the potential future impacts to the HCA from access and development. Such an adjustment shall be subject to the Type II review process.

F. Replats

For the purpose of compliance with Section 19.322, replats that result in three or fewer lots shall be processed as partitions; replats that result in four or more lots shall be processed as subdivisions.

G. Low-Impact Partitions

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

1. For properties that contain HCAs but no WQR areas, the partition shall achieve either of the following results:
 - a. There shall 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 produces one parcel that is 55% HCA and the other that is 30% HCA is permissible; whereas a two-lot partition that produces one parcel that is 75% HCA and the other that is 40% HCA is not permissible.
 - 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 WQR areas, the applicant shall place 100% of the WQR area in a separate unbuildable tract, protected by a conservation restriction.
3. For properties that contain both WQR areas and HCAs, the applicant shall comply with both of the standards listed above in Subsections 19.322.12.G.1 and 19.322.12.G.2.

H. All Other Partitions

Applications for partitions that cannot comply with Subsection 19.322.12.G are subject to minor quasi-judicial review and one of the following two standards:

1. For properties that do not contain any WQR areas but for which it is not practicable to comply with the partition standards in Subsection 19.322.12.G.1, the application shall meet the following standards and is not subject to the requirements of Subsection 19.322.14:
 - a. The partition plan shall result in the smallest practicable percentage point difference in the percentage of HCA coverage on the parcels created by the partition.
 - b. To the extent possible, the parcel configuration shall mitigate the potential future impacts to the HCA from access and development.
2. For properties that contain WQR areas but cannot comply with Subsection 19.322.12.G.2, or that contain both WQR areas and HCAs but cannot comply with Subsection 19.322.12.G.3, the application shall be reviewed against the following standards:
 - a. To the extent possible, the parcel configuration shall mitigate the potential future impacts to WQR areas from access and development.
 - b. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with the relevant portions of Subsection 19.322.14.A.

I. Subdivisions

Applications for subdivisions are subject to minor quasi-judicial review and one of the following two standards:

1. At least 90% of the property's HCA and 100% of the property's WQR area shall be located in a separate tract. Applications that meet this standard are not subject to the discretionary review requirements of Subsection 19.322.14.
2. If a subdivision cannot comply with the standards in Subsection 19.322.12.I.1, the application shall be reviewed against the following standards:
 - a. All proposed lots shall have adequate buildable area outside of the WQR area and HCA.
 - b. To the extent possible, the lot and access configurations shall mitigate the potential future impacts to the WQR area and HCA from access and development.
 - c. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with the relevant portions of Subsection 19.322.14.A.

J. Putting the Resource Area in a Separate Tract

Where required by Section 19.322, the new subdivision or partition plat shall delineate and show all WQR areas and HCAs as a separate unbuildable tract(s) according to the following process:

1. Prior to preliminary plat approval, the designated natural resource area (whether WQR area or HCA, or both) shall be shown as a separate tract(s), which shall not 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) shall 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 19.322.
 - c. Public natural area where the tract has been dedicated to the City of Milwaukie or a private non-profit with the mission of land conservation.
3. The boundaries of all such separate tracts shall 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 shall not be installed within any tract.

19.322.13 Development Standards

A. Protection of Habitat During Site Development

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

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

9. Where practicable, the types, sizes, and intensities of lights shall be placed so that they do not shine directly into any WQR area and/or HCA locations.
10. All work on the property shall conform to a construction management plan prepared according to Subsection 19.322.9.

B. General Standards for Required Mitigation

Where mitigation is required by Section 19.322 for disturbance to WQR areas and/or HCAs, the following general standards shall apply:

1. Disturbance: Temporary and Permanent

Temporary disturbances are those that occur during the approved development or activity but that 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.

Permanent disturbances are those that remain in place after the approved development or activity is completed. Permanent disturbances include, but are not limited to, buildings, driveways, walkways, and other permanent structures.

Designated natural resource areas that are affected by temporary disturbances shall be restored, and those affected by permanent disturbances shall be mitigated, in accordance with the standards provided in Subsection 19.322.13.C for WQR areas and Subsection 19.322.13.D.2 for HCAs, as applicable.

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).

Within WQR areas, proposed activities that would disturb existing structures and development such as patios, walkways, lawns and other non-natural landscaped areas are not exempt from the regulations of MMC 19.322 except as provided in Subsection 19.322.4.

2. Required Plants

All trees, shrubs and ground cover must be native plants as identified on the Milwaukie Native 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

Replacement trees must be at least 1/2 inch in caliper, measured at 6 inches above the ground level for field-grown trees or above the soil line for container-grown trees (the 1/2-inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone, which may be 1-gallon size. Shrubs must be in at least a 1-gallon container or the equivalent in ball and burlap and must be at least 12 inches in height.

4. Plant Spacing

Trees shall be planted between 8 and 12 feet on-center and shrubs shall be planted between 4 and 5 feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between 8 and 10 feet on center. When planting

near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

5. Plant Diversity

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

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 area that is disturbed or in an area contiguous to the resource area; provided, however, that if the vegetation is planted outside of the resource then the applicant shall preserve the contiguous planting area by executing a deed restriction such as a restrictive covenant.

b. Off-site Mitigation

For disturbances allowed within WQR areas, off-site mitigation shall not be used to meet the mitigation requirements of Section 19.322.

For disturbance allowed within HCAs, mitigation vegetation may be planted off-site 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 shall 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 non-native or noxious vegetation, including but not limited to species listed as "nuisance" or "required eradication" plants on the Milwaukie Native Plant List, must be removed within the mitigation area prior to planting.

8. Ground Cover

Bare or open soil areas remaining after the required tree and shrub plantings shall be planted or seeded to 100% surface coverage with grasses or other ground cover species identified as native on the Milwaukie Native Plant List.

9. Tree and Shrub Survival

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

a. Required Practices

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

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

b. Recommended Practices

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

- (1) Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.
- (2) Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and the resulting damage to plants.
- (3) Water new plantings 1 inch per week between June 15th and October 15th for the first three 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. The Planning Director may require a maintenance bond to cover the continued health and survival of all plantings. An annual report on the survival rate of all plantings shall be submitted for three years.

10. Light Impacts

Where practicable, the types, sizes, and intensities of lights shall be placed so that they do not shine directly into any WQR areas or HCA locations.

C. Mitigation Requirements for Disturbance within WQR Areas

The requirements for mitigation vary depending on the existing condition of the WQR area on the project site at the time of application. The existing condition of the WQR area shall be assessed in accordance with the categories established in Table 19.322.13-1 and by considering the entire WQR area on the project site and not solely the specific location where disturbance will occur.

When disturbance within a WQR area is approved according to the standards of Section 19.322, the disturbance shall be mitigated according to the requirements outlined in Table 19.322.13-1 and the standards established in Subsection 19.322.13.B. Allowed disturbance shall be mitigated within the entire WQR area on the project site and not solely in the specific location where disturbance will occur.

Table 19.322.13-1 Restoration and Mitigation Requirements for WQR Areas	
Existing Condition of WQR Area	Requirements Applicable within entire WQR Area on Site where Disturbance is Allowed
Good	
<p><u>Vegetation and canopy coverage:</u> Combination of trees, shrubs, and groundcover are 80% present.</p> <p><u>Tree canopy:</u> More than 50% tree canopy coverage in vegetated corridor.</p>	<ul style="list-style-type: none"> • Submit an inventory of vegetation in areas proposed to be disturbed and 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. • Revegetate disturbed and bare areas with native species from the Milwaukie Native Plant List. • Revegetation must occur during the next planting season following site disturbance. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. • Inventory and remove debris and noxious materials.
Marginal	
<p><u>Vegetation and canopy coverage:</u> Combination of trees, shrubs, and groundcover are 80% present.</p> <p><u>Tree canopy:</u> 25 - 50% canopy coverage in vegetated corridor.</p>	<ul style="list-style-type: none"> • Revegetate disturbed and bare areas with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site. • Revegetation must occur during the next planting season following site disturbance. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. • Inventory and remove debris and noxious materials.
Degraded	
<p><u>Vegetation and canopy coverage:</u> Combination of trees, shrubs, and groundcover are less than 80% present.</p> <p><u>Tree canopy:</u> Less than 25% canopy coverage in vegetated corridor.</p> <p style="text-align: center;">and/or</p> <p>Greater than 10% surface coverage by any non-native species.</p>	<ul style="list-style-type: none"> • Remove non-native species. • Revegetate disturbed and bare areas with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site. • Plant and seed to provide 100% surface coverage. • Revegetation must occur during the next planting season following site disturbance. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. • Inventory and remove debris and noxious materials.

D. Non-Discretionary Standards for HCAs

The following non-discretionary standards may be applied to proposals that are subject to Type I review and located within HCAs only; these standards do not apply to activities proposed within WQR areas:

1. Disturbance Area Limitations in HCAs

To avoid or minimize impacts to HCAs, activities that are not otherwise exempt from the requirements of Section 19.322 and that would disturb an HCA are subject to the following disturbance area limitations, as applicable:

a. Detached and Attached Single-family Residential Uses

The amount of disturbance allowed within an HCA for detached and attached single-family residential uses, including any related public facilities as required by MMC 19.1400, shall be determined by subtracting the area of the lot or parcel outside of the HCA from the maximum disturbance area calculated as described in Figure 19.322.13-1. Such disturbance shall be subject to the mitigation requirements described in Subsection 19.322.13.D.2.

Figure 19.322.13-1 Method for Calculating Allowable Disturbance within an HCA
<p>X = The net amount of disturbance area allowed within the HCA ($X = Y - Z$)</p> <p>Y = The maximum potential disturbance area within the HCA is 50% of the total HCA, up to a maximum of 5000 square feet.</p> <p>Z = The area of the lot or parcel outside the total resource area (WQR and HCA).</p> <p>If (Z) is greater than (Y), then development shall not be permitted within the HCA; otherwise the applicant may disturb up to the net amount of disturbance area allowed (X) within the HCA.</p>
<p><i><u>Example 1:</u> 8000-sq-ft lot with 3000 sq ft of HCA and 5000 sq ft outside of HCA/WQR</i></p> <p><i>Y = 1500 sq ft (50% of HCA)</i></p> <p><i>Z = 5000 sq ft outside of HCA/WQR</i></p> <p><i>X = - 3500 sq ft (1500 sq ft – 5000 sq ft)</i></p> <p>Conclusion: <i>Z is greater than Y; therefore, development is not permitted within the HCA.</i></p> <p><i><u>Example 2:</u> 8000-sq-ft lot with 6000 sq ft of HCA and 2000 sq ft outside of HCA/WQR</i></p> <p><i>Y = 3000 sq ft (50% of HCA)</i></p> <p><i>Z = 2000 sq ft outside of HCA/WQR</i></p> <p><i>X = 1000 sq ft (3000 sq ft – 2000 sq ft)</i></p> <p>Conclusion: <i>Z is not greater than Y; therefore, the applicant may disturb up to the value of X (1000 sq ft) within the HCA).</i></p>

b. All Other Uses

A net amount of disturbance area of 10% of the HCA on the site is allowed by right, subject to the mitigation requirements described in Subsection 19.322.13.D.2.

c. 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 as per Subsection 19.322.4 shall not be counted against the amount of disturbance allowed by Subsection 19.322.

d. Disturbance in Excess of that Allowed by Section 19.322

In accordance with Subsection 19.322.8, proposed development that would disturb more HCA than allowed by Subsections 19.322.13.D.1.a and 19.322.13.D.1.b shall be subject to the minor quasi-judicial review process and general discretionary review criteria as outlined in Subsection 19.322.14.C.1.

e. Disturbance Changes HCA Status

As established in Subsection 19.322.16.C.3, when disturbances within HCAs are allowed in accordance with the applicable provisions of Section 19.322, the City shall remove the HCA designation from such disturbance areas on the WQNR map.

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 19.322.12, the calculation of the new amount of disturbance area allowed within the HCA on the property shall 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 19.322.1, when development intrudes into a 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 19.322. They do not apply to situations in which tree removal is exempt as per Subsection 19.322.4 or approvable through Type I review.

An applicant must meet Mitigation Option 1 or 2, whichever results in more tree plantings; except that where the disturbance area is 1 acre or more, the applicant shall comply with Mitigation Option 2.

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 shall be replaced as shown in Table 19.322.13-2. Conifers shall be replaced with conifers. Bare ground shall 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 19.322.13-2 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 a HCA. Native trees and shrubs are required to be planted at a rate of 5 trees and 25 shrubs per 500 square feet 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 square feet 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 shall 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 19.322.13.D.2 shall be subject to the minor quasi-judicial review process and the requirements of Subsection 19.322.14.C.2.

19.322.14 General Discretionary Review

Subsection 19.322.14 establishes a discretionary process by which the City shall analyze the impacts of development on WQR areas and HCAs, including measures to prevent negative impacts and requirements for mitigation and enhancement. The Planning Director may consult with a professional with appropriate expertise to evaluate an application or 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.

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

1. Identification of the ecological functions of riparian habitat found on the property as described in Subsection 19.322.1.C.2.

2. An inventory of vegetation, including the percentage of ground and canopy coverage materials within the WQR area, sufficient to categorize the existing condition of the WQR area as outlined in Table 19.322.13-1.
3. An assessment of the water quality impacts related to the development, including sediments, temperature and nutrients, sediment control, and temperature control, or addressing 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 demonstrating that:
 - a. No practicable alternatives to the requested development exist that will not disturb the WQR area or HCA.
 - b. Development in the WQR area and/or HCA has been limited to the area necessary to allow for the proposed use.
 - c. If disturbed, the WQR area can be restored to an equal or better condition in accordance with Table 19.322.13-1 and the HCA can be restored consistent with the mitigation requirements of Subsection 19.322.13.D.2.
 - d. Road crossings will be minimized as much as possible.

The analysis shall provide an explanation of the rationale behind choosing the alternative selected, including how adverse impacts to natural resource areas will be avoided and/or minimized.

5. For applications proposing an alteration, addition, rehabilitation, or replacement of existing structures located within the WQR area, the applicant shall do the following:
 - a. Demonstrate that no reasonably practicable alternative design or method of development exists that would have a lesser impact on the WQR area than the one proposed. If no such reasonably practicable alternative design or method of development exists, the project shall be conditioned to limit its disturbance and impact on the WQR area to the minimum extent necessary to achieve the proposed addition, alteration, restoration, replacement, or rehabilitation.
 - b. Provide mitigation to ensure that impacts to the functions and values of the WQR area will be mitigated or restored to the extent practicable.
6. A mitigation plan for the designated natural resource area that contains the following information:
 - a. A description of adverse impacts that will be caused as a result of development.
 - b. An explanation of how adverse impacts to designated natural resource areas will be avoided, minimized, and/or mitigated in accordance with, but not limited to, Table 19.322.13-1 for WQR areas and Subsection 19.322.13.D.2 for HCAs.
 - c. A description of how the following standards will be achieved:
 - (1) Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.
 - (2) Where practicable, the types, sizes, and intensities of lights shall be placed so that they do not shine directly into the WQR area and/or HCA locations.
 - (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 natural resource area and to provide opportunity for food, water, and cover for animals located within the WQR area.

- d. A map showing where the specific mitigation activities will occur. Off-site mitigation related to WQR areas shall not be used to meet the mitigation requirements of Section 19.322.
- 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 shall be done in accordance with the allowable windows for in-water work as designated by the Oregon Department of Fish and Wildlife.

B. Approval Criteria

Applications subject to the discretionary review process shall demonstrate how the proposed activity complies with the following criteria:

1. Avoid

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

2. Minimize

If the applicant demonstrates that there is no practicable alternative that will not avoid disturbance of the designated natural resource area, then the proposed activity within the resource area shall minimize detrimental impacts to the extent practicable.

- a. 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.
- b. To the extent practicable within the designated natural resource area, the proposed activity shall be designed, located, and constructed to:
 - (1) Minimize grading, removal of native vegetation, and disturbance and removal of native soils by using the approaches described in Subsection 19.322.13.A, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation).
 - (2) Minimize adverse hydrological impacts on water resources.
 - (3) Minimize impacts on wildlife corridors and fish passage.
 - (4) Consider using 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 landscaping required by other parts of MMC Title 19 Zoning adjacent to the resource area, reduce 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.

3. Mitigate

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

- a. The mitigation plan shall demonstrate that it compensates for detrimental impacts to ecological functions provided by resource areas, after taking into consideration the applicant's efforts to minimize such detrimental impacts.
- b. Mitigation shall occur on the site of the disturbance, to the extent practicable. Off-site mitigation for disturbance of WQR areas shall not be approved. Off-site mitigation for disturbance of HCAs shall be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and that the applicant has documented that they can carry out and ensure the success of the off-site mitigation as outlined in Subsection 19.322.13.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 shall 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.

- c. All re-vegetation plantings shall be with native plants listed on the Milwaukie Native Plant List.
 - d. All in-stream work in fish-bearing streams shall be done in accordance with the allowable windows for in-water work as designated by the Oregon Department of Fish and Wildlife.
 - e. A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting, and compliance with the plan shall be a condition of development approval.
4. Municipal Water Utility Facilities Standards

In addition to all other applicable criteria of Subsection 19.322.14.B and if not already exempted by Subsection 19.322.4, 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 shall not have to comply with the requirements of Subsection 19.322.14.B.1 to avoid the resource area, 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, 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. Disturbance of HCAs: Limitations and Mitigation

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 19.322.13.D.1 shall submit an Impact Evaluation and Alternatives Analysis as outlined in Subsection 19.322.14.A and shall be subject to the approval criteria provided in Subsection 19.322.14.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 19.322.13.D.2 (for example, 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 19.322.13 shall be subject to the following process:

a. The applicant shall submit the following information:

- (1) A calculation of the number of trees and shrubs the applicant would be required to plant under Subsection 19.322.13.D.2.
- (2) The numbers and sizes of trees and shrubs that the applicant proposes to plant.
- (3) An explanation of why the numbers and sizes of trees and shrubs that the applicant proposes to plant will achieve, at the end of the third year after initial planting, comparable or better mitigation results as the results that would be achieved if the applicant complied with all of the requirements of Subsection 19.322.13.D.2. Such explanation shall be prepared and signed by a knowledgeable and qualified natural resources professional or a certified landscape architect and shall include discussion of site preparation including soil additives and removal of invasive and noxious vegetation, plant diversity, plant spacing, planting season, and immediate post-planting care including mulching, irrigation, wildlife protection, and weed control.
- (4) A mitigation site-monitoring and -reporting plan.

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 as the results that would

be achieved if the applicant complied with all of the requirements of Subsection 19.322.13.D.2.

- (2) Whether the proposed mitigation adequately addresses the plant diversity, plant survival, and monitoring practices established in Subsection 19.322.13.B.

19.322.15 Adjustments and Variances

To encourage applicants to avoid or minimize impacts to WQR areas and/or HCAs, several types of adjustments and variances are available for use on sites subject to Section 19.322. These include adjustments to specific base zone and lot design standards, discretionary variances, and allowances for residential cluster development.

A. Adjustments

The following adjustments are allowed by right as part of any Type I, Type II, or minor quasi-judicial application:

1. Adjustments to Base Zone Standards

a. Yard setback standards (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 the additional yard requirements for conditional uses or community service uses, nor to any of the yard exceptions established in MMC 19.401.2.

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 19.322.12.J and the tract is adjacent to the rear yard of the subject property, the minimum rear yard requirement may be reduced to 10 feet.

2. Adjustments to Lot Design Standards

When property boundaries are changed as provided in MMC Title 17 Land Division, an applicant may utilize the following adjustments to avoid or minimize impacts to a WQR area 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%.

The adjustments provided in Subsection 19.322.15.A shall not be used to avoid the requirement to submit a construction management plan if deemed applicable as per Subsection 19.322.3.

B. Variances

1. Requests to vary any standards beyond the adjustments allowed in Subsections 19.322.15.A or 19.322.15.B shall be subject to the review process and approval criteria for variances as established in MMC 19.700.
2. In granting any variance request related to Section 19.322, the Planning Commission may impose such conditions as are deemed necessary to minimize adverse impacts

that may result from granting relief from provisions of Section 19.322. 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 area for which the adjacent vegetated corridor width can be reduced.

C. Residential Cluster Development

For residential proposals, development may be clustered, enabling the allowable density to be transferred on site so that land can be developed at allowed densities while avoiding or minimizing impacts to WQR areas or HCAs. A residential cluster development may be permitted in any residential or mixed-use zoning district, subject to minor quasi-judicial review and approval by the Planning Commission.

1. Calculation of Permitted Number of Dwelling Units

- a. The maximum number of dwelling units proposed for a residential cluster development shall not exceed the number of dwelling units otherwise permitted for the residential zoning district in which the parcel is located. The number of units allowed on a parent lot may be transferred to one or more newly created lots or parcels on the site. The cumulative density for all lots or parcels shall not exceed the density allowed for the parent lot.
- b. The number of permitted dwelling units on a site shall be calculated in the following manner:
 - (1) Measure the gross area of the proposed cluster development site in acres and tenths of an acre.
 - (2) From the gross area, subtract the area of public streets, other publicly dedicated improvements, and common open space (whether or not it is conveyed pursuant to Subsection 19.322.15.C.2.c), measured in acres and tenths of an acre. The remainder shall be the net buildable area.
 - (3) Convert the net buildable area from acres to square feet, using the equivalency of 43,560 sq ft = 1 acre.
 - (4) Divide the net buildable area by the smallest minimum lot size (in square feet) per unit for a dwelling unit permitted in the zoning district. This figure shall be rounded to the nearest lower number to establish the maximum number of dwelling units permitted in the cluster development.

2. Development Standards

- a. All principal and accessory uses authorized in the underlying zoning district(s) shall be allowed in the cluster development. In addition, single-family attached dwellings, multi-family dwellings, and town houses may be permitted for a cluster development located in a residential zoning district that does not otherwise allow attached dwelling units.
- b. Maximum lot coverage, building height, and off-street parking requirements for the applicable zoning district shall apply to the cluster development. Maximum lot coverage, floor area ratios, and off-street parking requirements shall be applied to the entire site rather than to any individual lot.
- c. The following provisions shall apply to any residential cluster development, regardless of the general requirements of the applicable residential zoning district:
 - (1) Minimum lot width and lot depth standards shall not apply.

- (2) A minimum separation of 10 feet shall be provided between all principal buildings and structures.
- (3) A minimum yard or common open space shall be provided, with a minimum depth of 25 feet, as measured from all public streets and from the side and rear lot lines of the entire cluster development.
- (4) Each lot shall provide at least 12 feet of frontage on a public street.
- (5) More than one principal building or structure may be placed on a lot.
- (6) Not less than 25 percent of the site shall be conveyed as common open space.
- (7) No less than 50 percent of the designated natural resources on the site shall be included in calculating the common open space.

3. Site Plan Requirements

The preliminary and final site plans for a residential cluster development shall include the following information, in addition to the items listed on the City's site plan checklist:

- a. The maximum number and type of dwelling units proposed.
- b. The areas of the site on which the dwelling units are to be constructed or are currently located and their size. This may take the form of the footprint of the dwelling unit or a building envelope showing the general area in which the dwelling unit is to be located.
- c. The calculations for the permitted number of dwelling units, derived pursuant to Subsection 19.322.15.C.2.
- d. The areas of the site on which other principal and accessory uses are proposed to be located and their size.
- e. The areas of the site designated for common open space and their size.

4. Approval Criteria

Proposals for residential cluster development shall demonstrate compliance with the following criteria:

- a. The site plan satisfies the requirements of Subsections 19.322.15.C.1 and C.2.
- b. Buildings and structures are adequately grouped so at least 25 percent of the total area of the site is set aside as common open space. To the greatest degree practicable, common open space shall be designated as a single tract and not divided into unconnected small parcels located in various parts of the development. Common open space shall be conveyed as allowed by Subsection 19.322.12.J.
- c. Individual lots, buildings, structures, streets, and parking areas are situated to minimize the alteration of natural features, natural vegetation, and topography.
- d. Impacts to WQR areas and HCAs are avoided or minimized to the greatest degree practicable.
- e. The cluster development advances the purposes of the Water Quality and Natural Resource overlay zone, as established in Subsection 19.322.1.

In addition, the Planning Commission may apply such conditions or stipulations to its approval as may be required to maintain harmony with neighboring uses and to promote the objectives and purposes of the comprehensive plan and the zoning and land division ordinances.

19.322.16 Boundary Verification and Map Administration

For purposes of determining whether the standards of Section 19.322 apply to a proposed activity at any given location, the Milwaukie Water Quality and Natural Resource map (WQNR map) is assumed to be accurate. An applicant's agreement with the accuracy of the WQNR map does not constitute or require a land use decision.

A. Boundary Verification

An applicant may challenge the accuracy of the WQNR map through the boundary verification process, which is subject to Type I review as per MMC 19.1011.1.

1. Verifying WQR Areas

WQR areas are defined according to the parameters established in Table 19.322.16-1. To verify the boundary of a WQR area shown on the WQNR map, the applicant shall 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 shall submit a hydrology report prepared by a professional engineer 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 shall provide a topographic map of the site with contour intervals of 5 feet or less that shows the specific location of the drainage on the subject property.

b. Wetlands

In the case of wetlands, the applicant shall submit a wetland delineation report prepared by a professional wetland specialist, following the wetlands delineation process established by the Department of State Lands (DSL). 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 shall provide a topographic map of the site with contour intervals of 5 feet or less that shows the specific location of the wetland on the subject property.

When Type II or minor quasi-judicial applications involve wetlands, the applicant is required to follow this boundary verification process to identify the specific location of wetlands on the subject property.

Table 19.322.16-1 Vegetated Corridor Measurement by Protected Water Feature Type			
Protected Water Feature Type	Slope Adjacent to Protected Water Feature	Starting Point for Measurements from Protected Water Feature	Width of Vegetated Corridor²
Primary Protected Water Features ¹	< 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 ft
Primary Protected Water Features ¹	> 25% for 150 ft or more ³	<ul style="list-style-type: none"> • Bankful stage or 2-year flood elevation • Delineated edge of Title 3 wetland 	200 ft
Primary Protected Water Features ¹	> 25% for less than 150 ft 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 ft. ⁵
Secondary Protected Water Features ⁶	< 25%	<ul style="list-style-type: none"> • Bankful stage or 2-year flood elevation 	15 ft
Secondary Protected Water Features ⁶	> 25% ³	<ul style="list-style-type: none"> • Bankful stage or 2-year flood elevation 	50 ft

¹ Primary Protected Water Features include: all perennial streams and streams draining greater than 100 acres, Title 3 wetlands, and natural lakes and springs. See MMC 19.103 for the full definition.

² Vegetated corridor width shall be applied to the outer boundaries of water features, such as the edge of a wetland and both banks of a watercourse.

³ Vegetated corridors in excess of 50 feet for primary protected features, or in excess of 15 feet 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 feet 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 should be measured in 25-foot 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 MMC 19.103 for the full definition.

2. Verifying HCAs

a. Options for HCA Verification

To verify the boundary of an HCA when an applicant believes the WQNR map is inaccurate, the applicant may propose corrections according to one of the following procedures, as applicable:

(1) Simple Incongruities

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

inaccurate based on such an obvious misalignment shall submit the following information regarding the property:

- (a) A detailed property description and site plan of the property that includes all existing conditions information listed on the site plan checklist provided by the City.
- (b) A copy of the applicable WQNR map section.
- (c) The latest available aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to 50 feet for lots of 20,000 or fewer square feet, and a scale of one map inch equal to 100 feet for larger lots.
- (d) A documented demonstration of the misalignment between the WQNR map and the property's tax lot boundary lines and/or the location of existing legally established development.
- (e) Any other factual information that the applicant wishes to provide to support boundary verification.

(2) Legal Development Prior to Adoption Date

If a property was legally developed between the summer of 2002 (when the aerial photo used to determine the regional habitat inventory was taken) and *[insert new adoption date]*, the applicant shall submit the following information regarding the property:

- (a) The information described in Subsection 19.322.16.A.2.a(1).
- (b) A summer 2002 aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to 50 feet for lots of 20,000 or fewer square feet, and a scale of one map inch equal to 100 feet for larger lots.
- (c) Any approved building permits or other development plans and drawings related to the development of the property that took place between summer 2002 and *[insert new adoption date]*.
- (d) 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.

(3) Other Corrections

An applicant who believes that an HCA shown on the WQNR map should be corrected for a reason other than those described in Subsections 19.322.16.A.2.a(1) or 2.a(2) may propose a detailed verification. The applicant shall submit a report prepared and signed by either a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist; or by a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, stormwater facilities, or other similar facilities. The report shall 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 19.322.16.A.2.a(1).
 - (c) The information described in Subsection 19.322.16.A.2.a(2), 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 two-foot vertical contours in areas of slopes less than 15%, and at 5-foot vertical contours of slopes 15% or greater.
 - (f) Any additional information necessary to address each of the detailed verification criteria provided in Subsection 19.322.16.A.3, 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.
3. Detailed Verification Criteria for Substantial Changes to HCAs

A boundary verification request submitted under Subsection 19.322.16.A.2.a(3) shall be evaluated according to the following three-step process:

a. Step 1 - Verify the Boundaries of Inventoried Riparian Habitat

Locating habitat and determining the riparian habitat class of the designated natural resource area is a four-step process:

- (1) Locate the water feature that is the basis for identifying riparian habitat.
 - (a) Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.
 - (b) Locate all flood areas within 100 feet of the property.
 - (c) Locate all wetlands within 150 feet of the property based on the WQNR map. Identified wetlands shall be further delineated consistent with methods currently accepted by DSL and the Corps.
- (2) Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas and within 100 feet of flood areas.
 - (a) Vegetative cover status shall be as identified on the latest Metro Vegetative Cover Map (available from the City and/or the Metro Data Resource Center).
 - (b) The vegetative cover status of a property may be adjusted only if: (1) the property was legally developed prior to the time Section 19.322 was adopted (see Subsection 19.322.16.A.2.a(2)), or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type of error, applicants shall submit an analysis of the vegetative cover

on their property, using the aerial photographs on which the latest Metro Vegetative Cover Map is based and the definitions of the different vegetative cover types identified in Table 19.322.16-2.

- (3) Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% using the methodology outlined in Table 19.322.16-1.
- (4) Identify the riparian habitat classes applicable to all areas on the property using Table 19.322.16-2 and the data identified in Subsections 19.322.16.A.3.a(1) through 3.a(3).

Table 19.322.16-2			
Method for Determining Classification of Riparian Areas			
Distance from Protected Water Feature	Development/Vegetation Status¹		
	Low structure vegetation or open soils²	Woody vegetation (shrub and scattered forest canopy)³	Forest Canopy (closed to open forest canopy)⁴
(a) Surface Streams			
0 to 50 ft	Class I ⁵	Class I	Class I
50 to 100 ft	Class II ⁶	Class I	Class I
100 to 150 ft	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%	Class II ⁶
150 to 200 ft	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%	Class II ⁶ if slope>25%
(b) Wetlands (Wetland feature itself is a Class I Riparian Area)			
0 to 100 ft	Class II ⁶	Class I	Class I
100 to 150 ft			Class II ⁵
(c) Flood Areas			
Within 300 ft of river or surface stream	Class I	Class I	Class I
More than 300 ft from river or surface stream	Class II ⁶	Class II ⁶	Class I
0 to 100 ft from edge of flood area		Class II ^{6,7}	Class II ⁶
<p>¹ The vegetative cover type assigned to any particular area was based on two factors: the type of vegetation observed in aerial photographs and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belonged.</p> <p>² "Low structure vegetation or open soils" means areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream. Low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, crop-lands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger.</p> <p>³ "Woody vegetation" means areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown closure) located within 300 feet of a surface stream.</p> <p>⁴ "Forest canopy" means areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.</p> <p>⁵ Except that areas within 50 feet of surface streams shall be Class II riparian areas if their vegetation status is "Low structure vegetation or open soils," and if they are high gradient streams. High gradient streams are identified on the Metro Vegetative Cover Map. If a property owner believes the gradient of a stream was incorrectly identified, then the property owner may demonstrate the correct classification by identifying the channel type using the methodology described in the Oregon Watershed Assessment Manual, published by the Oregon Watershed Enhancement Board, and appended to the Metro's Riparian Corridor and Wildlife Habitat Inventories Report, Attachment 1 to Exhibit F to Metro Ordinance No. 05-1077C.</p> <p>⁶ Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (on file in the Metro Council office), shall be treated as Class I riparian habitat areas in all cases, subject to the</p>			

provision of additional information that establishes that they do not meet the criteria used to identify habitats of concern as described in Metro's Technical Report for Fish and Wildlife. Examples of habitats of concern include: Oregon white oak woodlands, bottomland hardwood forests, wetlands, native grasslands, riverine islands or deltas, and important wildlife migration corridors.

⁷ Only if within 300 feet of a river or surface stream.

b. Step 2 - Determine the Urban Development Value of the Property

The urban development value of property designated as regionally significant habitat is depicted on the Metro Habitat Urban Development Value Map (available from the Metro Data Resource Center).

- (1) A property's urban development value designation shall be adjusted upward if the Metro 2040 Design Type designation for the property lot or parcel has changed from a category designated as a lower urban development value category to one designated as a higher urban development value category. 2040 Design Type designations are identified on the Metro 2040 Applied Concept Map (available from the Metro Data Resource Center).
- (2) Properties in areas designated on the 2040 Applied Concept Map as the Central City, Regional Centers, Town Centers, and Regionally Significant Industrial Areas are considered to be of high urban development value; properties in areas designated as Main Streets, Station Communities, Other Industrial Areas, and Employment Centers are of medium urban development value; and properties in areas designated as Inner and Outer Neighborhoods and Corridors are of low urban development value.
- (3) As designated in Title 13 of Metro's Urban Growth Management Functional Plan, properties owned by a regionally significant educational or medical facility are designated as high urban development value.

c. Step 3 - Cross-Reference Habitat Class with Urban Development Value

City verification of the locations of HCAs shall be consistent with Table 19.322.16-3.

Table 19.322.16-3 Method for Identifying Habitat Conservation Areas (HCAs)				
Fish & wildlife habitat classification	High Urban development value¹	Medium Urban development value²	Low Urban development value³	Other areas: Parks and Open Spaces, no design types outside UGB
Class I Riparian	HCA	HCA	HCA	HCA
Class II Riparian	HCA	HCA	HCA	HCA
Class A Upland Wildlife	No HCA	No HCA	No HCA	No HCA / HCA ⁴
Class B Upland Wildlife	No HCA	No HCA	No HCA	No HCA / HCA ⁴

NOTE: The default urban development value of property is as depicted on the Metro Habitat Urban Development Value Map. The Metro 2040 Design Type designations provided in the following footnotes are only for use when a city or county is determining whether to make an HCA adjustment.

¹ Primary 2040 design type: Regional Centers, Central City, Town Centers, and Regionally Significant Industrial Areas

² Secondary 2040 design type: Main Streets, Station Communities, Other Industrial areas, and Employment Centers

³ Tertiary 2040 design type: Inner and outer neighborhoods, Corridors

⁴ All Class A and B upland wildlife habitat in publicly-owned parks and open spaces, except for parks and open spaces where the acquiring agency clearly identified that it was acquiring the property to develop it for active recreational uses, shall be considered HCA.

B. Map Administration

When boundary verifications conducted in accordance with the standards of Subsections 19.322.16 demonstrate errors in the WQR areas or HCAs shown on the WQNR map, the City shall update the WQNR map to incorporate the corrected information. Changes to the WQNR map do not require changes to the City's zoning map or comprehensive plan.

1. Corrections to WQR Areas

Protected water features, including their associated vegetated corridors or buffers, that are perceived to be improperly mapped on the WQNR map or missing from the map altogether may be corrected or added by Type II review, subject to the following applicable procedures and criteria:

a. The applicant shall submit the appropriate technical report:

- (1) In the case of wetlands, the applicant shall submit a wetland delineation report prepared by a professional wetland scientist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology, demonstrating the location of any wetlands on the site.
- (2) In the case of drainages, the applicant shall submit a hydrology report prepared by a professional engineer, demonstrating whether the drainage meets the definition of a protected water feature.

b. The Planning Director shall 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 deletion.

c. The City shall amend the WQNR map if the wetland or hydrology report demonstrates any of the following:

- (1) An error in the original mapping.
- (2) That the boundaries of the WQR area have changed since adoption of the WQNR map.
- (3) That a primary protected water feature no longer exists because the area has been legally filled, culverted, or developed prior to the adoption of Section 19.322.

d. In addition, for modifications of protected water features shown on the WQNR map, the applicant shall demonstrate that the modification will offer the same or better protection of the protected water feature, WQR area, and flood management area by doing all of the following:

- (1) Preserving a vegetated corridor that will separate the protected water feature from proposed development.

- (2) Preserving existing vegetated cover or enhancing the WQR area sufficient to assist in maintaining or reducing water temperatures in the adjacent protected water feature.
- (3) Enhancing the WQR area sufficient to minimize erosion, nutrient and pollutant loading into the adjacent protected water feature.
- (4) Protecting the vegetated corridor sufficient to provide filtration, infiltration, and natural water purification for the adjacent protected water feature.
- (5) Stabilizing slopes adjacent to the protected water feature.

2. Corrections to HCAs

Following approval of an application for boundary verification according to the provisions of Subsection 19.322.16.A.2, the City shall modify the WQNR map to correct errors to mapped HCAs. The City shall issue an official boundary verification letter to document the correction.

3. Mapping Implications of Allowed Disturbances

a. WQR Areas

Permanent disturbances within a WQR area, whether they occurred prior to the adoption of the City's zoning ordinance or are allowed according to the standards of MMC 19.322, do not affect how the related WQR areas are shown on the WQNR map.

b. HCAs

When disturbances are allowed within HCAs in accordance with the applicable standards of Section 19.322, the City shall update the WQNR map to show that the disturbed area is no longer considered HCA.

CHAPTER 19.100 INTRODUCTORY PROVISIONS

Section 19.103 Definitions

Definitions to be amended (related to natural resources):

“Bankful stage” means the stage or elevation at which water overflows the natural banks of a stream or other waters of the state and begins to inundate upland areas. In the absence of physical evidence, the two-year ~~recurrent~~ recurrence interval flood elevation may be used to approximate the bankful stage. Also referred to as “top of bank.”

“Direct stormwater discharge” means stormwater that does not ~~have a chance to sufficiently infiltrate into the ground~~ before reaching a designated natural resource area.

“Downed Tree” means any tree that is no longer standing upright as the result of natural or human forces and that has come to rest, whether leaning or completely down, within a protected water feature, a WQR area, or an HCA.

“Habitat Conservation Area (HCA)” means significant Goal 5 wetlands, riparian areas, and fish and wildlife habitat, as established in MMC Section 19.322.

“Native vegetation or native plant” means any vegetation native to the Portland metropolitan area or listed on the Milwaukie Native Plant List, provided that it is not listed as a nuisance plant or a required eradication plant on the Milwaukie Native Plant List.

“Net acre” means an area measuring 43,560 square feet excluding the following: rights-of-way; floodplains; protected water features and their associated vegetated corridors as established in MMC Section 19.322; natural resource areas protected under Statewide Planning Goal 5; slopes in excess of 25%; and publicly owned land designated for park, open space, and resource protection. These excluded areas do not include lands for which the zoning code provides a density bonus or other mechanism that allows the transfer of the allowable density or use to another area or to development elsewhere on the same site.

“Protected water features”:

“Primary protected water features” means and includes any of the following:

- a. Title 3 wetlands, which means wetlands of metropolitan concern as shown on the Metro Water Quality and Flood Management Area Map and other wetlands added to City-adopted Water Quality and Flood Management Area maps consistent with the criteria in Title 3 of Metro’s Urban Growth Management Functional Plan, Section 3.07.340(E)(3). Title 3 wetlands do not include artificially constructed and managed stormwater and water quality treatment facilities.
- b. Rivers, streams and drainages downstream from the point at which 100 acres or more are drained to that water feature (regardless of whether it carries year-round flow).
- c. Streams carrying year-round flow.
- d. Springs which feed streams and wetlands and have year-round flow.
- e. Natural lakes.

“Secondary protected water features” means and includes intermittent streams and seeps downstream of the point at which 50 acres are drained and upstream of the point at which 100 acres are drained to that water feature.

“Significant Pruning” means removal of more than 20% of a tree’s canopy, or injury or cutting of over 10% of the root system, during any 12-month period.

“Tree” means a living or dead, standing or downed, woody plant characterized by one main stem or trunk and many branches, or a multi-stemmed trunk system with a definitely formed crown, and having a trunk 4 inches or more in diameter (maximum cross section) at a point 24 inches above mean ground level at the base of the trunk.

“Vegetated corridor” means the area of setback between the top of the bank of a protected water feature or the edge of a delineated wetland and the delineated edge of the WQR water quality resource area as defined in Table 19.322.17-1 Table 4.

“Water quality resource (WQR) areas” means a protected water feature(s) and the adjacent vegetated corridors and the adjacent water feature as established in Chapter MMC Section 19.322. The following definitions relate to WQR areas and Habitat Conservation Areas in particular:

“Mitigation” means the reduction of adverse effects of a proposed project on the natural environment by considering, in this order: (1) avoiding the impact altogether by not taking a certain action or parts of an action; ~~(42)~~ minimizing impacts by limiting the degree or magnitude of the action and its implementation; ~~(23)~~ rectifying the impact by repairing, rehabilitating, or restoring the affected environment; ~~(34)~~ reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate measures; and/or ~~(45)~~ compensating for the impact by replacing or providing comparable substitute WQR water quality resource areas or HCAs.

“Significant negative impact” means an impact the affects the natural environment, considered individually or cumulatively with other impacts on the WQR water quality resource area and/or HCA, to the point where the existing water quality functions and values of water quality and/or fish and wildlife habitat are degraded.

“Water quality and floodplain management area” means the area that identifies where the WQR water quality resource area and floodplain management area overlay zone is applied.

“Wetlands” means those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are those areas identified and delineated by a qualified wetland specialist as set forth in the 1987 Corps of Engineers Wetland Delineation Manual.

Other Definitions related to natural resources (no proposed changes):

“Debris” means discarded man-made objects that would not occur in an undeveloped stream corridor or wetland. Debris includes, but is not limited to, tires, vehicles, litter, scrap metal, construction waste, lumber, plastic, or styrofoam. Debris does not include objects necessary to a use allowed by this ordinance or ornamental and recreational structures. Debris does not include existing natural plant materials or natural plant materials which are left after flooding, downed or standing dead trees, or trees which have fallen into protected water features.

“Disturb” means to make changes to the existing physical status of the land that are made in connection with development. The following changes are excluded from the definition:

enhancement or restoration of the Water Quality Resource Area and planting native cover identified in the Milwaukie Native Plant List.

“Landscaping” means vegetation and materials, including, but not limited to, shrubs, grass, trees, planting beds, and bark dust.

“Restoration” means the process of returning a disturbed or altered area or feature to a previously existing natural condition. Restoration activities reestablish the structure, function and/or diversity to that which occurred prior to impacts caused by human activity.

“Watershed” means a geographic unit defined by the flows of rainwater or snowmelt. All land in a watershed drains to a common outlet, such as a stream, lake, or wetland.