TITLE 19 ZONING

CHAPTER 19.300 USE ZONES

Section 19.322 Water Quality and Natural Resource Regulations

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19.322.1 Intent

A. This section 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). This section 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 the city's original 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 this section to:

1. Establish water quality resource areas to protect the functions and values of water quality resource areas 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 clear and objective standards and 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. Provide mitigation standards for the replacement of ecological functions and values lost through development in wetlands, water quality resources, and HCAs.

D. It is not the intent of this section to:
1. Impose any obligation on property owners to restore existing developed sites to pre-development or natural condition when no new activity is proposed.
2. Impose any hardship or limitation against the continued maintenance of existing legal site conditions.
3. Restrict activities that do not constitute development or to apply to activities that do not affect water quality or natural resource areas.
4. Prohibit normal lawn and yard landscape planting and maintenance. Normal lawn and yard planting and maintenance does not include planting of invasive non-native or noxious vegetation.

This section is to be interpreted consistently with this intent.

E. The Milwaukie Water Quality and Natural Resource Area Map (hereafter WQNR Map) is incorporated by reference as part of this section.

F. 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.

G. Conditions legally existing as of December 17, 2002, with regard to water quality resource areas and as of *[insert new adoption date]* with regard to HCAs, that are inconsistent with this section are declared legal nonconforming situations.

H. A document or other list used to identify native, noxious, and invasive plants shall be maintained by the Planning Director and shall be referred to as the "Milwaukie Native Plant List."

19.322.2 Coordination with Other Regulations

A. Implementation of this section is in addition to and shall be coordinated with Milwaukie Municipal Code Title 19 Zoning, Title 18 Flood Hazard Regulations, and Chapter 16.28 Erosion Control.

B. For properties along the Willamette River, nothing in this section shall prohibit the maintenance of view windows authorized under Section 19.320 Willamette Greenway Zone.

C. Except as provided for in Subsection 19.322.2.B, provisions of this section shall apply where they are more restrictive than 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 they prepare their development plans.

E. The requirements of this section 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 water quality and natural resource area regulations in this section apply to activities proposed within, or within 100 feet of, a water quality resource area and/or HCA (including any locally significant Goal 5 wetlands or habitat areas identified by the City of Milwaukie) as shown on the City's official WQNR Map.

B. Proposed activities which are more than 100 feet from a water quality resource area or HCA do not require review under the provisions of this section.

C. Natural resources are designated on the City's official WQNR Map as follows:

1. Water Quality Resource Areas – Water quality resource areas include protected water features and their associated vegetated corridors, as specified in Table 19.322.17-1. The vegetated corridor (buffer) is a facility required to prevent damage to the protected water feature that may be caused by development impacts. 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 19.322.17-1.

2. Habitat Conservation Areas (HCAs) – Habitat Conservation Areas include significant Goal 5 wetlands, riparian areas, and fish and wildlife habitat. HCA locations on the WQNR Map are assumed to be correct; verifications and corrections must be processed in accordance with Subsection 19.322.17.

D. For development within, or within 100 feet of, a water quality resource and/or HCA, construction management plans prepared in accordance with Subsection 19.322.9 and

boundary verifications prepared in accordance with Subsection 19.322.17 shall be required as follows:

1. Exempt activities pursuant to Subsection 19.322.4.A – No construction management plan or boundary verification are required.
2. Exempt activities pursuant to Subsection 19.322.4.B – A construction management plan and boundary verification are required only if the proposed activity is within, or within 100 feet of, a water quality resource area.
3. Non-exempt activities:
    a. A construction management plan is required if the proposed activity is within, or within 100 feet of, a water quality resource area or HCA.
    b. Boundary verification is required if the proposed activity is within, or within 100 feet of, a water quality resource area or within, or within 50 feet of, an HCA.

E. Following completion of a construction management plan and boundary verification, an applicant may utilize the Adjustments to Use Zone Standards in Subsection 19.322.16.A in order to avoid impacts to a water quality resource area or HCA.

F. The applicability of the requirements of this section is summarized in Table 19.322.3-1.

Table 19.322.3-1
Applicability of Requirements of Section 19.322

Proposed Activity	Code Requirements							
	Construction Management Plan w/in 100 ft of WQR/HCA	WQR Boundary Verification w/in 100 ft of WQR	HCA Boundary Verification w/in 50 ft of HCA	Tree Removal Criteria (Subsection 19.322.6.A)	Clear & objective standards (Subsection 19.322.12)	Special Use Standards (Subsection 19.322.13)	Partition and Subdivision standards (Subsection 19.322.14)	Discretionary Standards (Subsection 19.322.15)
Exempt activities per Subsection 19.322.4.A	No	No	No	No	No	No	No	No
Exempt activities within an HCA per Subsection 19.322.4.B	Yes, if w/in 100 ft of a WQR		No	No	No	No	No	No
Non-exempt activities entirely outside of a water quality resource area or HCA	Yes	Yes	Yes	No	No	No	No	No
Type I Tree Removal within a water quality resource area or HCA	Yes	Yes	Yes	Yes	No	No	No	No
Type I activities within an HCA	Yes	Yes	Yes	No	Yes	No	No	No
Non-emergency abatement of nuisances or violations per Subsection 19.322.6.D	Yes	Yes	Yes	No	No	No	No	No
Type II Special Uses within a water quality resource area or HCA	Yes	Yes	Yes	No	No	Yes	No	No
Type II Minor Modifications within a water quality resource area or HCA	Yes	Yes	Yes	No	No	No	No	Yes
Minor Quasi-Judicial – All other activities within a water quality resource area or HCA	Yes	Yes	Yes	No	No	No	No	Yes
Partitions and subdivisions on land including a water quality resource area or HCA	Yes*	Yes	Yes	No	No	No	Yes	No

* Per Subsection 19.322.14, construction management plans are not required for partitions and subdivisions where no grading, utility installation, or other physical improvements are being proposed within 100 feet of a water quality resource area or HCA.

19.322.4 Exempt Activities

A. The following activities are exempt from the provisions of this section:

1. A building permit for a phased development project for which the applicant has previously met the application requirements of this section, so long as the building site for new construction was identified on the original permit and no new portion of the water quality resource 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. Landscape planting and maintenance that does not involve the planting of invasive or noxious vegetation or an increase in impervious area or other changes that could result in increased direct stormwater discharges to the water quality resource area.

4. Removal of plants identified by the City as invasive or noxious plants and the planting or propagation of plants identified as native plants. After removal of invasive or noxious plants, all open soil areas greater than 25 square feet must be replanted.

5. Farming practices or farm uses, excluding buildings and structures, except if such activities or uses increase direct stormwater discharges to water quality resource areas.

6. Maintenance, alteration, expansion, replacement, repair, and/or change of use of existing legal buildings or structures, provided that:

   a. There is no change in the location of the existing area of disturbance within the water quality resource area or HCA.

   b. There is no increase in building footprint or size, impervious surface, or outdoor storage area(s) within the water quality resource area or HCA.

   c. There are no other site changes proposed that could result in increased direct stormwater discharges to the water quality resource area.

7. 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 water quality resource area.

8. Emergency procedures or activities undertaken which are necessary to remove or abate hazards or for the protection of public health, safety, and welfare; provided that such remedial or preventative action must take place within a timeframe too short to allow for compliance with the requirements of this section. 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).

9. Maintenance of public and private storm drainage facilities in accordance with a stormwater management plan approved by the City.

10. Activities and improvements in public rights-of-way.

B. In addition to the activities listed in Subsection A, above, within an HCA the following activities are exempt from the provisions of this section (except that activities within 100 feet of a water quality resource area require a construction management plan and water quality resource boundary verification for Type I review in accordance with Subsection 19.322.6):

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, eave overhangs, exterior building improvements for access and exiting requirements, or other similar features.

3. Temporary and minor clearing not to exceed 200 square feet for the purpose of site investigations and pits for preparing soil profiles, provided that such areas are restored to their original condition when the investigation is complete.

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

Following adoption of this section, the following activities are prohibited within water quality resource areas and HCAs:

A. New structures, development, or activity other than those allowed by this section.

B. Uncontained areas of hazardous materials.

C. The planting of any invasive or noxious vegetation.

D. Outside storage of materials, unless such storage began before the *[insert new adoption date]*; or, unless such storage is approved according to the provisions of this section.

19.322.6 Activities Permitted Under Type I Application Review

A. Construction management plans and boundary verifications, as outlined in Subsection 19.322.9, are subject to Type I review as per Subsection 19.1011.1.

B. Tree Removal. Within water quality resource areas and HCAs, tree removal is subject to Type I review as per Subsection 19.1011.1. The Planning Director shall approve an application if the following criteria are met:

   1. The tree removal is necessary to eliminate an imminent hazard to person or property;

   2. *[Tree removal criteria to be listed here.]*

C. Activities within HCAs in Compliance with Clear and Objective Standards. Within HCAs, but outside of water quality resource areas, development that is in compliance with the non-discretionary standards of Subsection 19.322.12 is subject to Type I review as per Subsection 19.1011.1.

D. 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 water quality resource areas or HCAs subject to approval by the Planning Director under Subsection 19.1011.2, Type II Review:

A. Special Uses. If in compliance with the Special Use standards in Subsection 19.322.13, the activities listed below shall be subject to Type II review:

   1. Improvement of existing public utility facilities.

   2. New stormwater pre-treatment facilities.

   3. Walkways and bike paths.

   4. New public or private utility facility construction.

   5. Natural resource management plans and stormwater management plans.

   If the proposed activity is not in compliance with the standards in Subsection 19.322.13, it shall be subject to minor quasi-judicial review as per Subsection 19.1011.3 and the discretionary standards of 19.322.15.

B. Minor Modifications. The activities listed below shall be subject to Type II review and the discretionary standards in Subsection 19.322.15:

   1. Farming practices or farm uses, excluding buildings and structures, which increase direct discharges to water quality resource areas.

   2. Landscape planting and maintenance that would increase impervious area within the water quality resource area by less than 100 square feet and/or result in increased direct stormwater discharges to the water quality resource area.

   3. Maintenance, alteration, expansion, replacement, repair, and/or change of use of existing legal buildings or structures, provided that the proposed alteration or expansion does not disturb more than 100 square feet within the water quality resource area and does not encroach closer to the protected water feature than the existing buildings or structures.

4. Maintenance, alteration, and repair of existing utilities, access, streets, driveways, and parking improvements, including asphalt overlays, provided that the proposed improvements do not disturb more than 100 square feet within the water quality resource area and do not encroach closer to the protected water feature than the existing improvements.

C. Partitions that meet the standards in Subsection 19.322.14.E.

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 water quality resource areas or HCAs, subject to approval by the Planning Commission under Subsection 19.1011.3 Minor Quasi-Judicial Review:

A. The activities listed below shall be subject to the discretionary standards in Subsection 19.322.15:

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 of Subsection 19.322.12.
3. New roads to provide access to protected water features; necessary ingress and egress across water quality resource areas; or the widening an existing road.
4. Improvement of existing public utility facilities that cannot meet the standards of Subsection 19.322.13.
5. New stormwater pre-treatment facilities that cannot meet the standards of Subsection 19.322.13.
6 New public or private utility facility construction that cannot meet the standards of Subsection 19.322.13.
7 Walkways and bike paths that cannot meet the standards of Subsection 19.322.13.
8. Tree removal in excess of that permitted under Subsections 19.322.4 or 19.322.6.
9. Landscape planting and maintenance 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 water quality resource 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 water quality resource area or would encroach closer to the protected water feature than the existing improvements.

B. The activities listed below shall be subject to the discretionary standards in Subsection 19.322.14:

1. The partitioning of land containing a water quality resource area or HCA that cannot meet the standards in Subsection 19.322.14.E.
2. The subdividing of land containing a water quality resource area or HCA.

19.322.9 Construction Management Plans

A. Construction management plans shall provide the following information:

1. Description of work to be done.
2. Location of site access and egress that construction equipment will use.
3. Equipment and material staging and stockpile areas.
4. Erosion and sediment control measures.
5. Measures to protect trees and other vegetation located within the water quality resource area and/or HCA, but outside of the approved disturbance.

B. To ensure that trees and vegetation are not damaged during construction, construction management plans shall ensure that:

1. Prior to construction, the water quality resource area and/or HCA shall be flagged, fenced, or otherwise marked and shall remain undisturbed except as may be allowed by this section. Such markings shall be maintained until construction is complete.
2. Site preparation and construction practices shall be followed that prevent drainage of hazardous materials or erosion, pollution, or sedimentation to the adjacent water quality resource area.
3. Storm water flows as a result of proposed development within and to natural drainage courses shall not exceed pre-development flows.
4. The construction phase of the development will be done in such a manner to safeguard the resource portions of the site that have not been approved for development.

C. Construction management plans are subject to Type I review. If the construction management plan, together with a boundary verification prepared in accordance with Subsection 19.322.17, shows that the proposed non-exempt development and construction activities will not occur within a water quality resource area and/or an HCA, the development standards of this section shall not apply.

19.322.10 Submittal Requirements

Except for boundary verifications and construction management plans, all Type I, Type II, and minor quasi-judicial applications shall include the following information:

A. For that portion of the subject property within, or within 100 feet of, a water quality resource area or HCA, applicants must submit a scale map of the property that includes:

1. Location of any wetlands or water bodies on the property and the boundary of all water quality resource areas and HCAs on the property. The boundary shall be verified in accordance with the requirements of Subsection 19.322.17.
2. Location of 100-year floodplain and floodway boundary as defined by the Federal Emergency Management Agency and the area of the 1996 flood inundation.
3. Outline of any existing disturbance area, including the location of existing adjacent streets and paved areas, utilities, culverts, stormwater management facilities, or bridges.
4. Topography shown by two-foot vertical contours in areas of slopes less than 15%, and at 5-foot vertical contours of slopes 15% or greater. On properties that are 2 acres or

larger, such a contour map is required only for the portion of the property to be developed.

B. A site plan of the proposed development outlining the total disturbance area, including proposed building footprints, site property improvements, utilities and landscaping. The types, sizes, and intensities of lights must be placed so that they do not shine directly into the water quality resource area or HCA.

C. If grading will occur within a water quality resource area or HCA, a grading plan showing the proposed alteration of the ground at 2-foot vertical contours in areas of slopes less than 15%, and at 5-foot vertical contours of slopes 15% or greater.

D. Additional information as necessary to demonstrate compliance with the applicable standards.

E. All information contained in the submission requirements and site plan checklist forms prescribed by the Planning Director.

F. The application fee as adopted by the City Council.

G. Applications for Type II (other than for special uses identified in Subsection 19.322.7.A) and minor quasi-judicial review shall provide the following additional information:

1. The location of all existing natural features including, but not limited to, all trees of a caliper greater than 6 inches in diameter at breast height (DBH), natural drainages on the site, springs, seeps, and outcroppings of rocks or boulders within the water quality resource area or HCA.

2. Where wetlands are identified, the applicant shall follow the DSL wetlands delineation process. The delineation shall be prepared by a professional wetlands specialist and will be accepted only after approval by DSL.

3. An inventory and location of existing debris and noxious materials within the water quality resource area or HCA.

4. An inventory of vegetation, including the percentage of ground and canopy coverage materials within the water quality resource area or HCA.

19.322.11 Approval Criteria

Applications for Type I, Type II, and minor quasi-judicial review within a water quality resource area or HCA shall demonstrate compliance with the applicable approval criteria as outlined in Table 19.322.11-1.

Table 19.322.11-1 Approval Criteria for Various Activities			
Activity	**Subsection outlining Applicable Criteria**		
	Type of Review		
	Type I	**Type II**	**Minor Quasi-Judicial**
Construction management plan (19.322.9)	19.322.9		
Boundary verification (19.322.17)	19.322.17		
Tree removal under 19.322.6.B	19.322.6.B		
Activities allowed under 19.322.6.C	19.322.12		
Non-emergency abatement of nuisances or violations as per 19.322.6.D	19.322.9		
Activities allowed under 19.322.7.A (Special Uses)		19.322.13	
Activities allowed under 19.322.7.B (Minor modifications)		19.322.15	
Partitions allowed under 19.322.7.C		19.322.14	
Activities allowed under 19.322.8			19.322.15

19.322.12 Non-Discretionary Development Standards for HCAs

Non-Discretionary Development Standards for HCAs. The clear and objective standards can be applied to developments within HCAs subject to Type I review. These standards do not apply to projects within water quality resource areas.

A. Disturbance area limitations to minimize impact to HCA.

1. Detached and attached single-family residential uses. The amount of disturbance allowed within an HCA is determined by subtracting the area of the lot or parcel outside of the HCA from the maximum disturbance area calculated as described in Figure 19.322.12-1. Such disturbance is subject to the mitigation requirements described in Subsection C, below.

Figure 19.322.12-1
Method for Calculating Allowable Disturbance within an HCA

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

Y = The maximum potential disturbance area is 50% of the total HCA, up to a maximum of 5,000 square feet.

Z = The area of the lot or parcel outside the HCA.

If the area of the lot or parcel outside the HCA (Z) is greater than the maximum potential disturbance area (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).

Example 1: 8,000-sq-ft lot with 3,000 sq ft of HCA and 5000 sq ft outside of HCA

Y = 1500 sq ft (50% of HCA)

Z = 5000 sq ft outside of HCA

X = - 3500 sq ft (1500 sq ft – 5000 sq ft)

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

Example 2: 8,000-sq-ft lot with 6,000 sq ft of HCA and 2000 sq ft outside of HCA

Y = 3000 sq ft (50% of HCA)

Z = 2000 sq ft outside of HCA

X = 1000 sq ft (3000 sq ft – 2000 sq ft)

***Conclusion:** Z is not greater than Y; therefore, the applicant may disturb up to the value of X (1000 sq ft) within the HCA).*

2. 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 C, below.
3. Development within an HCA in accordance with these provisions shall not result in a change of the HCA status of such developed areas on a property. In the case of a later development request seeking to develop within previously undisturbed HCAs on a property where a prior development request was subject to these provisions, the calculation of the MDA allowed on the property shall be based on the location of the HCA, notwithstanding the location of any authorized development within the HCA.
4. In accordance with Subsection 19.322.8, proposed development that would disturb more HCA than allowed by Subsections 1 and 2, above, shall be subject to minor quasi-judicial review.

B. Protection of habitat during site development. During development of any site containing a HCA, the following standards shall apply:

1. Work areas shall be marked to reduce potential damage to the HCA.
2. Trees in 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. Prior to construction, the HCA that is to remain undeveloped shall be flagged, fenced, or otherwise marked and shall remain undisturbed.
6. All work on the property shall conform to a construction management plan prepared according to Subsection 19.322.9.

C. Mitigation requirements for disturbance in HCAs. In order to achieve the goal of reestablishing forested canopy that meets the ecological values and functions described in Subsection 19.322.1, tree replacement and vegetation planting are required when

development intrudes into a HCA according to the following standards, except for wetlands mitigation requirements imposed by state and federal law:

1. Required plants and plant densities. All trees, shrubs and ground cover must be native plants as identified by the City. 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 19.322.12-1. 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 19.322.12-1
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.

2. 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.

3. 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.

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

5. Location of mitigation area. All vegetation must be planted on the applicant's site within the HCA or in an area contiguous to the HCA; provided, however, that if the vegetation is planted outside of the HCA then the applicant shall preserve the contiguous area by executing a deed restriction, such as a restrictive covenant.
6. Invasive vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.
7. Tree and shrub survival. A minimum of 80% of the trees and shrubs planted shall remain alive on the fifth anniversary of the date that the mitigation planting is completed.
8. 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 developer shall submit a two-year maintenance bond covering the continued health and survival of all plantings.
9. To enhance survival of the mitigation plantings, the following practices are required:
    a. Mulching. Mulch new plantings a minimum of 3 inches in depth and 18 inches in diameter to retain moisture and discourage weed growth.
    b. Irrigation. Water new plantings 1 inch per week between June 15th and October 15th for the three years following planting.
    c. Weed control. Remove or control non-native or noxious vegetation throughout the maintenance period.
10. To enhance survival of tree replacement and vegetation plantings, the following practices are recommended:
    a. Planting season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.
    b. Wildlife protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

19.322.13 Special Use Standards

A. Except for natural resource management plans and stormwater management plans, all Type II Special Uses listed in Subsections B through E, below, shall comply with the following standards:

1. A mitigation plan shall be submitted as per Subsections 19.322.12.C or 19.322.15.A for HCAs, as applicable, or as per Subsection 19.322.15.B.2.e for water quality resource areas. Water quality resource 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 water quality resource areas and HCAs. Trees in the water quality resource 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. New stormwater pre-treatment facilities. In addition to the requirements of Subsection A, above, new stormwater pre-treatment facilities shall comply with the following standards:

1. The stormwater pre-treatment facility shall encroach no more than 25 feet into the outside boundary of the water quality resource area of a primary water feature.
2. The area of encroachment into the water quality resource area shall be replaced by adding an equal area to the water quality resource area on the property.

C. Improved pedestrian and bike paths. In addition to the requirements of Subsection A, above, pedestrian and bike paths, which are proposed to be constructed or improved with gravel, pavement, pavers, wood or other materials, shall comply with the following standards:

1. Pedestrian and bike paths within HCAs or water quality resource areas shall not exceed 10 feet in width.
2. If the proposed path will be located within a water quality resource 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 path.
3. The path shall be designed to avoid water quality resource areas and HCAs where possible and shall be constructed so as to minimize disturbance to existing vegetation and slope stability.
4. The path shall be a minimum of 10 feet from the boundary of the protected water feature.

D. New public or private utility facility construction. In addition to the requirements of Subsection A, above, the following disturbance area limitations apply to new utilities, private connections to existing or new utility lines, and upgrades:

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 shall disturb no more than 200 linear feet of water quality resource area within any 1,000-linear-foot stretch of water quality resource area; provided that this 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.

E. Natural resource management plans and stormwater management plans that authorize disturbance within the water quality resource area or HCA may be approved subject to the following standards:

1. The plan has been approved by the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Oregon Department of Fish and Wildlife (ODFW), Oregon Division of State Lands (DSL), Oregon Watershed Enhancement Board (OWEB), Clackamas County Water Environmental Services, or other natural resource agency. Or, 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.

2. The plan encourages restoration and stormwater management activities that have any of the following effects:

    a. Change 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.

    b. Correct or improve conditions caused by past management and/or disturbance events.

    c. Maximize beneficial habitat in the short term where watershed degradation has been extensive and natural processes will need substantial time to restore habitat.

    d. Create beneficial habitat and restore stream function and hydrology to the fullest extent possible within developed areas where no reasonable expectation of returning to natural conditions exists.

19.322.14 Standards for Partitions and Subdivisions

These standards apply in addition to the other land division requirements of the City's municipal code, as provided in Title 17 Land Division and Title 19 Zoning.

A. Boundary Verification. The applicant shall verify the boundaries of the HCA and water quality resources on the property according to Subsection 19.322.17.

B. Construction Management Plans. Subdivision and partition applications that will require physical improvements (e.g., grading and/or the construction of structures, streets, or utilities) within, or within 100 feet of, a water quality resource or HCA shall include a construction management plan in accordance with Subsection 19.322.9. Applicants who are partitioning or subdividing land but are not grading or constructing structures, streets, or utilities or making other physical improvements to the site do not have to submit a construction management plan.

C. Impacts from site improvements. Subdivision and partition applications that will require site improvements (e.g., grading and/or the construction of streets, sidewalks, culverts, bridges, or utilities) within a water quality resource or HCA shall comply with the applicable standards in Subsections 19.322.12, 19.322.13, and 19.322.15.

D. Mitigation for future structures. Applicants who are partitioning or subdividing land where future construction may impact water quality resource areas or HCAs may choose either of the following options:

    1. Complete the mitigation requirements for any impacts to water quality resources or HCAs in accordance with the requirements of this section and thereby exempt all subsequent development on lots containing HCA and/or water quality resources from further review.

    2. Not complete the mitigation requirements, thus requiring that any subsequent development be subject to review under this section.

E. Type II Partitions. Applications for partitions that are in compliance with the standards below are subject to Type II review:

1. For properties that do not contain any water quality resource areas, when partitioning a property into parcels there shall be no more than a 30% point difference in the percentage of HCA on each of the parcels. For example, a two-lot partition that produces one parcel that is 55% HCA and the other that is 35% HCA is permissible; whereas a two-lot partition that produces one parcel that is 75% HCA and the other that is 30% HCA is not permissible. However, an applicant may partition a property such that 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 water quality resource areas, the applicant must place 100% of the water quality resource area in a separate tract.
3. For properties that contain both water quality resource areas and HCAs, the applicant must comply with both of the above standards.

F. All other partitions. Applications for partitions that cannot comply with Subsection E, above, are subject to minor quasi-judicial review and the following standards:

1. For properties that do not contain any water quality resource areas but for which it is not practicable to comply with the partition standards in Subsection E-1, above, the following standards shall be met:
   a. The applicant's partition plan shall result in the smallest practicable percentage point difference in the percentage of HCA 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 water quality resource areas but cannot comply with Subsection E-2, above, or that contain both water quality resource areas and HCAs but cannot comply with Subsection E-3, above, the following standards shall be met:
   a. To the extent possible, the parcel configuration shall mitigate the potential future impacts to the water quality resource from access and development.
   b. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with Subsection 19.322.15.

G. Subdivisions. Applications for subdivisions are subject to minor quasi-judicial review and the following standards:

1. The applicant shall place at least 90% of the property's HCA and 100% of the property's water quality resource area in a separate tract.
2. For subdivisions that cannot comply with standard in Subsection G-1, above, the following standards shall be met:
   a. All parcels being created shall have adequate buildable area outside of the water quality resource area and HCA.
   b. To the extent possible, the parcel configuration shall mitigate the potential future impacts to the water quality resource area and HCA from access and development.
   c. An Impact Evaluation and Alternatives Analysis shall be prepared in accordance with Subsection 19.322.15.

H. Where required by this section, the new subdivision or partition plat shall delineate and show all water quality resource areas and HCAs as a separate unbuildable tract(s) according to the following process:

1. For residences, if the separate tract is adjacent to the rear yard, the minimum rear yard requirement is reduced to 10 feet.

2. Prior to preliminary plat approval, the designated natural resource area (whether water quality resource area or HCA, or both) shall be shown as a separate tract(s), which shall not be a part of any lot used for construction of any structures.

3. Prior to final plat approval, ownership of the separate natural resource tract(s) shall be identified to distinguish it from lots intended for sale. The tract(s) may be identified as any one of the following:

   a. Private natural area held by the owner or homeowners association by 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 purpose of this section.

   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.

19.322.15 Discretionary Development Standards

Except for the minor modifications listed in Subsection 19.322.7.B, which are subject to Type II review, all applications for discretionary review are subject to minor quasi-judicial review.

A. 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 19.322.12 (for example, to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs) but who will comply with all other provisions of Subsection 19.322.12 may seek review under this subsection if the all of the following standards are met:

1. The applicant has provided all of the following information:

   a. A calculation of the number of trees and shrubs the applicant would be required to plant under Subsection 19.322.12.

   b. The numbers and sizes of trees and shrubs that the applicant proposes to plant.

   c. 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 fifth 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 19.322.12. 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.

d. A mitigation site-monitoring and -reporting plan.

2. The proposed planting will achieve, at the end of the fifth 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 19.322.12.

3. The proposed mitigation adequately addresses the plant diversity, plant survival, and monitoring practices in Subsection 19.322.12.

B. General Discretionary Review. This subsection provides a discretionary process by which the City analyzes the impacts of development on water quality resource areas and HCAs, as well as measures to prevent negative impacts, and also provides mitigation and enhancement requirements.

1. Professional Consultation. The Planning Director may consult with a professional with appropriate expertise to evaluate an applicant's application prepared under this section or may rely on appropriate staff expertise in order to properly evaluate the report's conclusions.

2. Impact Evaluation and Alternatives Analysis. An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria and to evaluate development alternatives for a particular property. The alternatives must be evaluated on the basis of their impact on water quality resource 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:

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

b. 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.

c. An Alternatives Analysis demonstrating that:

(1) No practicable alternatives to the requested development exist that will not disturb the water quality resource area or HCA.

(2) Development in the water quality resource area and/or HCA has been limited to the area necessary to allow for the proposed use.

(3) The water quality resource area can be restored to an equal or better condition in accordance with Table 19.322.15-1.

(4) 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 resource areas will be avoided and/or minimized.

d. For applications seeking an alteration, addition, rehabilitation, or replacement of existing structures located within the water quality resource area, the applicant shall do the following:

(1) Demonstrate that no reasonably practicable alternative design or method of development exists that would have a lesser impact on the water quality resource 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 water quality resource area to the minimum extent necessary to achieve the proposed addition, alteration, restoration, replacement, or rehabilitation.

(2) Provide mitigation to ensure that impacts to the functions and values of the water quality resource area will be mitigated or restored to the extent practicable.

e. A water quality resource area mitigation plan that contains the following information:

(1) A description of adverse impacts that will be caused as a result of development.

(2) An explanation of how adverse impacts to resource areas will be avoided, minimized, and/or mitigated in accordance with, but not limited to, Table 19.322.15-1.

(3) A description of how the following standards will be achieved:

(a) Where existing vegetation has been removed, the site shall be revegetated as soon as practicable.

(b) Where practicable, the types, sizes, and intensities of lights shall be placed so that they do not shine directly into the water quality resource area and/or HCA locations.

(c) 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 and to provide opportunity for food, water, and cover for animals located within the water quality resource area.

(4) A list of all responsible parties including, but not limited to, the owner, applicant, contractor, or other persons responsible for work on the development site.

(5) A map showing where the specific mitigation activities will occur. Offsite mitigation related to water quality resource areas shall not be used to meet mitigation requirements of this section.

(6) 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 Oregon Department of Fish and Wildlife in-stream timing schedule.

Table 19.322.15-1 Restoration and Mitigation Requirements for Water Quality Resource Areas	
Existing Condition of Water Quality Resource Area	**Requirements Applicable to Portions of the Water Quality Resource Area Disturbed During Development or Land Disturbance**
Good Existing Corridor	
Combination of trees, shrubs and groundcover are 80% present, and there is more than 50% tree canopy coverage in the vegetated corridor.	• 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 and nutrients, sediment control, and temperature control, or addressing any other condition that may have caused the Protected Water Feature to be listed on DEQ's 303 (d) list. • Inventory and remove debris and noxious materials.
Marginal Existing Vegetated Corridor	
Combination of trees, shrubs and groundcover are 80% present, and 25 - 50% canopy coverage in the vegetated corridor.	• Vegetate disturbed and bare areas with non-nuisance plantings from the Milwaukie Native Plant List. • Revegetate with native species 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. • Restore and mitigate according to approved plan using non-nuisance plantings from the Milwaukie Native Plant List. • Inventory and remove debris and noxious materials.
Degraded Existing Vegetated Corridor	
Less vegetation and canopy coverage than Marginal Vegetated Corridors, and/or greater than 10% surface coverage of any non-native species.	• Vegetate disturbed and bare areas with non-nuisance plantings from the Milwaukie Native Plant List. • Remove non-native species and revegetate with non-nuisance plantings from the Milwaukie Native Plant List. • Plant and seed to provide 100% surface coverage. • Restore and mitigate according to a City-approved plan using non-nuisance plantings from the Milwaukie Native Plant List. • Inventory and remove debris and noxious materials.

19.322.16 Adjustments and Variances

A. Adjustments to Use Zone Standards. To avoid or minimize impacts to water quality resource areas and HCAs, the following adjustments to the standards of the underlying use zone shall be allowed for development on parcels that include a water quality resource area or HCA. These adjustments may not be used to avoid the requirement to submit a construction management plan or boundary verification but may be used with a Type I, Type II, or minor quasi-judicial application:

1. The required building setback of the base zone may be reduced the minimum amount necessary to any distance between the base-zone minimum and zero, unless this reduction conflicts with applicable fire or life safety requirements.

2. Landscaping requirements, apart from those required for parking lots, may be met by preserving the water quality resource area and/or HCA.

3. To accommodate the allowable residential density, dimensional standards and lot sizes may be adjusted by up to 30 percent.

4. All area within a water quality resource area or HCA, or any portion of it, may be subtracted from the calculations of net acreage for purposes of determining the minimum number of units that must be built on the property, provided that such area is protected, such as by making a public dedication or executing a restrictive covenant.

B. Variance. A variance to avoid the unreasonable loss of economically viable use of a lot that contains water quality resource areas and/or HCAs may be granted by the Planning Commission through minor quasi-judicial review. Such a variance request is not subject to the requirements of Chapter 19.700. Applicants must demonstrate that without the proposed variance, the reasonable economic use of the property would be denied. The applicant must show that no other development proposal could result in permission for an economically viable use of the property.

C. Variance Conditions. In granting a variance request, the Planning Commission may impose such conditions as are deemed necessary to minimize adverse impacts that may result from granting relief from provisions of this section.

If a variance is granted to allow an encroachment into a water quality resource area, it may be subject to conditions that could include but are not limited to the following:

1. The minimum width of the vegetated corridor shall be 25 feet on each side of a primary protected water feature.

2. No more than 25% of the length of the water quality resource area for a primary protected water feature within a development site shall be less than 25 feet in width on each side of the water feature.

19.322.17 Boundary Verification and Map Administration

A. Water quality resource areas – boundary verification. In order to verify the boundary of a water quality resource area, the applicant shall provide a topographic map of the site at contour intervals of 5 feet or less, showing a delineation of the water quality resource area, which includes areas shown on the WQNR map and areas that meet the definition of water quality resource areas in Table 19.322.17-1.

Table 19.322.17-1
Vegetated Corridor Measurement by Protected Water Feature Type

Protected Water Feature Type (see definitions)	**Slope Adjacent to Protected Water Feature**	**Starting Point for Measurements from Water Feature**	**Width of Vegetated Corridor**[2]
Primary Protected Water Features[1]	< 25%	• Edge of bankful flow or 2-year storm level • Delineated edge of Title 3 wetland	50 ft
Primary Protected Water Features[1]	> 25% for 150 ft or more[3]	• Edge of bankful flow or 2-year storm level • Delineated edge of Title 3 wetland	200 ft

Primary Protected Water Features[1]	> 25% for less than 150 ft[3]	• Edge of bankful flow or 2-year storm level • 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%	• Edge of bankful flow or 2-year storm level • Delineated edge of Title 3 wetland	15 ft
Secondary Protected Water Features[6]	> 25%[3]	• Edge of bankful flow or 2-year storm level • Delineated edge of Title 3 wetland	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.

[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 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 slope is less than 25% (top of ravine).

[6] Secondary Protected Water Features include intermittent streams draining 50 to 100 acres.

B. HCA – Boundary verification and correction. The boundary verification approaches described below are available for applicants who believe: (1) that the WQNR map is accurate, (2) that there is a simple incongruity between the WQNR map and the lot-line boundaries of a property, (3) that the property was developed prior to *[insert new adoption date]*; or (4) that the WQNR map is inaccurate for a reason other than as described in points 2 and 3, above.

1. Applicant Believes WQNR Map is Accurate. An applicant who believes that the WQNR map is accurate shall submit the following information regarding the real property lot or parcel:

   a. A detailed property description.

   b. A copy of the applicable WQNR map.

   c. A summer 2005 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. The information required to be submitted under Subsections 19.322.12 through 19.322.15, as appropriate, if the applicant proposes development within any HCA under those provisions.

   e. Any other factual information that the applicant wishes to provide to support map verification.

2. Obvious Misalignment Between Mapped Habitat and Property Lot Lines or Existing Development. In some cases, the mapped vegetative cover data might not align precisely with the tax lot layer that shows property lines or with the location of existing legally established development. An applicant who believes that the WQNR map is inaccurate based on such an obvious misalignment shall submit the following information regarding the real property lot or parcel:

    a. The information described in Subsection 1, above.

    b. 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. In order to demonstrate misalignment with a property boundary, for example, an applicant could compare the boundary lot lines shown for roads within 500 feet of a property with the location of such roads as viewed on the aerial photograph of the area surrounding a property to provide evidence of the scale and amount of incongruity between the WQNR map and the property lot lines, and the amount of adjustment that would be appropriate to accurately depict habitat on the property. In order to demonstrate misalignment with existing development, an applicant could provide information such as aerial photographs, site photographs, and approved building permits and site plans, which show that the area in question was legally developed as of *[insert new adoption date]* and therefore does not provide any vegetative cover and is more than 50 feet from a protected water feature.

3. Property Developed Between Summer 2002 and *[insert new adoption date]*. Where a property was 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 real property lot or parcel:

    a. The information described in subsection 1, above.

    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 an 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.

4. WQNR Map is Inaccurate for Other Reasons. The applicant shall submit a report prepared and signed by either: (1) a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist; or (2) a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, storm water 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 1, above.

c. The information described in Subsections 2-b and/or 3-b through 3-d, 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 verification criteria in Subsection 5, below, a description of where any HCAs are located on the property based on the application of the verification criteria, and factual documentation to support the analysis.

5. Verification Criteria. The verification of the location of HCAs shall be according to the three-step process described below. A verification application shall not be considered complete and shall not be granted unless all the information required to be submitted with the verification application has been received.

   a. Step 1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class 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 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 this section was adopted (see Subsection 19.322.17.B.3, above), 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 summer 2002 aerial photographs and the definitions of the different vegetative cover types identified in Table 19.322.17-2.

      (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 percent using the methodology outlined in Table 19.322.17-1.

(4) Identify the riparian habitat classes applicable to all areas on the property using Table 19.322.17-2 and the data identified in Subsections 19.322.17.B.5.a(1) through a(3), above.

Table 19.322.17-2
Method for Determining Classification of Riparian Areas

Distance from Protected Water Feature	Development/Vegetation Status[1]		
	Low structure vegetation or open soils[2]	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]

[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.

[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.

[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.

[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.

[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.

[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 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. 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 High, Moderate, and Low Habitat Conservation Areas shall be consistent with Table 19.322.17-3.

Table 19.322.17-3
Method for Identifying Habitat Conservation Areas (HCAs)

Fish & wildlife habitat classification	**High Urban development value[1]**	**Medium Urban development value[2]**	**Low Urban development value[3]**	**Other areas: Parks and Open Spaces, no design types outside UGB**
Class I Riparian	HCA	HCA	HCA	HCA / HCA+[4]
Class II Riparian	No HCA	No HCA	HCA	HCA / HCA+[4]
Class A Upland Wildlife	No HCA	No HCA	No HCA	No HCA / HCA[5] / HCA+[4]
Class B Upland Wildlife	No HCA	No HCA	No HCA	No HCA / HCA[5] / 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] Cities and counties shall give Class I and II riparian habitat and Class A and B upland wildlife habitat in parks designated as natural areas even greater protection than that afforded to High Habitat Conservation Areas.

[5] 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 High HCAs.

C. Water Quality and Natural Resource Area Map Corrections: Deletions.

1. Improperly mapped water features shown on the WQNR Map may be deleted by administrative review in accordance with Subsection 19.1011.2, subject to the following criteria:

   a. In the case of wetlands, submission of a wetland delineation prepared by a professional wetland scientist in accordance with the 1996 Oregon Freshwater Wetland Assessment Methodology, demonstrating that the site does not contain wetlands.

   b. In the case of drainages, submission of a hydrology report prepared by a professional engineer, demonstrating that the drainage does not meet the definition of a protected resource.

2. 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.

3. The city shall amend the WQNR Map if the wetland or hydrology report demonstrates any of the following:

   a. That a primary protected water feature no longer exists because the area has been legally filled, culverted, or developed prior to the adoption of this section.

   b. That the boundaries of the water quality resource area have changed since adoption of the WQNR Map.

   c. An error in the original mapping.

D. Water Quality and Natural Resource Area Map Corrections: Additions and Modifications.

1. Map corrections that require the addition of a protected water feature to the WQNR map shall be made in accordance with Chapter 19.900 Amendments.

2. To modify the water quality resource area, the applicant shall demonstrate that the modification will offer the same or better protection of the protected water feature, water quality resource area, and flood management area by doing all of the following:

   a. Preserving a vegetated corridor that will separate the protected water feature from proposed development.

   b. Preserving existing vegetated cover or enhancing the water quality resource area sufficient to assist in maintaining or reducing water temperatures in the adjacent protected water feature.

c. Enhancing the water quality resource area sufficient to minimize erosion, nutrient and pollutant loading into the adjacent protected water feature.

d. Protecting the vegetated corridor sufficient to provide filtration, infiltration, and natural water purification for the adjacent protected water feature.

e. Stabilizing slopes adjacent to the protected water feature.

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."

"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 prohibited plant on the Milwaukie Native Plant List.

"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.

"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 water quality resource area as defined in Table 19.322.17-1 ~~Table 1~~.

"Water quality resource areas" means the protected water feature and the adjacent vegetated corridors ~~and the adjacent water feature~~ as established in ~~Chapter~~ Section 19.322. The following definitions relate to water quality resource 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; (~~1~~2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (~~2~~3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (~~3~~4) 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 (~~4~~5)

compensating for the impact by replacing or providing comparable substitute water quality resource areas or habitat conservation areas.

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

"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):

"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.

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

"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.