

1002 PROTECTION OF NATURAL FEATURES (1/5/09)

1002.01 PURPOSE

Section 1002 is adopted to: (1/5/09)

- A. Protect the natural environmental and scenic features of the County; (3/24/05)
- B. Encourage site planning and development practices which protect and enhance significant natural features such as streams, swales, hillsides, ridges, rock outcroppings, views, large trees, and wooded areas; (3/24/05)
- C. Provide ample open space; and (3/24/05)
- D. Create a manmade environment compatible and harmonious with the natural environment. (3/24/05)

1002.02 GENERAL TERRAIN PREPARATION

- A. All developments shall be planned, designed, constructed, and maintained with maximum regard to significant natural terrain features and topography, such as hillside areas, floodplains, and other significant land forms. (3/24/05)
- B. Developments shall be planned, designed, constructed, and maintained to: (3/24/05)
 - 1. Avoid substantial probability of: (3/24/05)
 - a. Accelerated erosion;
 - b. Pollution, contamination, or siltation of lakes, rivers, and streams; (3/24/05)
 - c. Damage to vegetation; and (3/24/05)
 - d. Injury to wildlife and fish habitats; and (3/24/05)
 - 2. Minimize the removal of trees and other native vegetation that stabilize hillsides; retain moisture; reduce erosion, siltation, and nutrient runoff; and preserve the natural scenic character. (3/24/05)

1002.03 HILLSIDES

All development proposed on slopes of 20 percent or greater shall be limited to the extent that: (3/24/05)

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- A. No partition or subdivision shall create any new lot or parcel which cannot be developed under the provisions of this section.
- B. Development on land over 35-percent slope—and residential development on land over 25-percent slope in the RR, MRR, and HR zoning districts—shall be subject to Planning Director review pursuant to Subsection 1305.02. Approval shall not be granted unless the following conditions are satisfied: (3/24/05)
1. An engineering geologic study approved by the County establishes that the site is stable for the proposed development, and any conditions and recommendations based on the study are incorporated into the plans and construction of the development. The study shall include the items listed in Subsection 1003.02(B)(2). (3/24/05)
 2. Access to the site is approved by the County and the affected fire district pursuant to the engineering geologic study and associated conditions. Design review shall be required if construction of such access requires cut and fill, blasting, tree cutting, retaining walls, or other terrain alterations which detract from the natural scenic quality of the site. (3/24/05)
 3. Design review of the proposed design of structures and re-vegetation plans shall be required to ensure preservation or rapid reestablishment of the scenic quality of the site. (3/24/05)
 4. A plan for storm drainage and erosion control is approved by the County pursuant to Subsection 1008.02. (3/24/05)
 5. Other provisions of this section are addressed and satisfied by the proposal.
 6. When a building is proposed, the applicant shall, in addition to satisfying the above conditions, demonstrate that at least one of the following conditions applies: (3/24/05)
 - a. It is not feasible to either transfer the density (in the case of residential development) or to develop on a portion of the site which is less sloped; or (3/24/05)
 - b. Unique characteristics of the site, such as, but not limited to, vistas or solar exposure, could be better utilized by the proposed siting of structures with less or equal overall disturbance of the property than would occur otherwise under the provisions of this Ordinance. (3/24/05)
- C. Grading, stripping of vegetation, and lot coverage by structures and impervious surfaces shall be limited to no more than 30 percent of slopes 20 percent or greater. Variances to this standard may be granted pursuant to Section 1205. A variance shall not be granted unless the proposed development satisfies the

following conditions: (1/5/09)

1. The proposed lot coverage shall not exceed the maximum lot coverage standard of the zoning district; (3/24/05)
 2. The additional lot coverage, grading, or stripping shall not: (3/24/05)
 - a. Decrease the stability of the slope;
 - b. Appreciably increase erosion, sedimentation, or drainage flow from the property; or (3/24/05)
 - c. Adversely impact high priority open space as defined in Section 1011. (3/24/05)
 3. Measures shall be employed to minimize grading or filling to accomplish the development. (3/24/05)
 4. Disturbed areas shall be compacted if necessary and re-vegetated as soon as practical and before the annual wet season. (3/24/05)
- D. Buildings shall be clustered to reduce alteration of terrain and provide for preservation of natural features.
- E. Creation of building sites through mass pad grading and successive padding or terracing of building sites shall be avoided.
- F. Roads shall be of minimum width, with grades consistent with County specifications. One-way streets may be allowed. (3/24/05)
- G. Re-vegetation of all graded areas shall be the responsibility of the developer and shall occur as soon as feasible following the final grading. Maintenance of the slopes shall be the responsibility of the developer until the property ownership is transferred. (3/24/05)

1002.04 TREES AND WOODED AREAS

- A. Existing wooded areas, significant clumps or groves of trees and vegetation, consisting of conifers, oaks and large deciduous trees, shall be incorporated in the development plan wherever feasible. Site planning and design techniques which address this standard include, but are not limited to, the following:
1. Siting of roadways and utility easements to avoid substantial disturbance of significant clumps or groves of trees; (3/24/05)
 2. Preservation of existing trees within rights-of-way and easements when such

trees are suitably located, healthy, and when approved grading allows;
(3/24/05)

3. Use of flexible road standards as provided in Subsection 1007.03(A), including one-way roads or split-level roads, to preserve significant trees and avoid unnecessary disturbance of terrain; (3/24/05)
 4. Retention of specimen trees or clumps of trees in parking area islands or future landscape areas of the site as provided for in Section 1009.
 5. Use of wooded areas of the site for recreation, or other low-intensity uses, or structures, not requiring extensive clearing of large trees, grading, or filling activity which substantially alters the stability or character of the wooded area; (3/24/05)
 6. Retention of trees which are necessary to ensure the stability of clumps or groves of trees considering the type of trees, soil and terrain conditions, exposure to prevailing winds, and other site-specific considerations; (3/24/05)
 7. Use of trees and wooded areas to buffer, screen, or provide transitions between different or conflicting uses on and off the site; (3/24/05)
 8. Use of flexible-lot-size and planned unit development designs to minimize disturbance of wooded areas; (3/24/05)
 9. Siting of uses and structures to utilize the natural microclimates created by wooded areas and trees to reduce extremes in temperature, provide wind protection, filter pollutants, and replenish oxygen and moisture to the air; and (3/24/05)
 10. Use of other development techniques described in Subsection 1011.03(C).
(3/24/05)
- B. Trees and wooded areas to be retained shall be protected during site preparation and construction according to County design and specifications by:
1. Avoiding disturbance of the roots by grading activity; (3/24/05)
 2. Providing for water and air filtration to the roots of trees which will be covered with impermeable surfaces; (3/24/05)
 3. Pruning or topping of trees which will be in parking areas or near buildings, as necessary, to maintain proper balance between top growth and roots, reduce windfall potential, and provide adequate vision clearances for safe vehicular circulation; and (3/24/05)

4. Requiring, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection of specified wooded areas or specimen trees, as recommended by the arborist or horticulturist.

1002.05 RIVER AND STREAM CORRIDORS (3/24/05)

The following standards shall apply to land that is outside both the Metropolitan Service District Boundary and the Portland Metropolitan Urban Growth Boundary. (1/5/09)

A. Developments shall be planned, designed, constructed, and maintained so that: (1/5/09)

1. River and stream corridors are preserved to the maximum extent feasible and water quality is protected through adequate drainage and erosion control practices; and (3/24/05)
2. Buffers or filter strips of natural vegetation are retained along all river and stream banks.

B. Except in the case of a river or stream subject to Section 704 or 705, the minimum structure setback from a river or perennial streambed shall be equal to the distance necessary to maintain or improve upon existing water quality. This distance shall be determined by a site investigation, but will not exceed 150 feet. Investigation shall consider: (1/5/09)

1. Soil types; (3/24/05)
2. Types and amount of vegetative cover; (3/24/05)
3. Bank stability; (3/24/05)
4. Slope of the land abutting the river or stream; (3/24/05)
5. Hazards of flooding; (3/24/05)
6. River or stream character; and (3/24/05)
7. Any special Comprehensive Plan designation or management program. (1/5/09)

C. For water impoundments, diversions, and hydropower facilities, reasonable mitigation of adverse impacts to fisheries, wildlife, water quality, and flow shall be required commensurate with the intensity of the proposed use and resulting generating capacity. (3/24/05)

1002.06 WILDLIFE HABITATS AND DISTINCTIVE RESOURCE AREAS

- A. Developments on land that is outside both the Metropolitan Service District Boundary and the Portland Metropolitan Urban Growth Boundary shall be designed to: (1/5/09)
 - 1. Protect native plant species, aquatic habitats, and endangered or otherwise important wildlife species; and (3/24/05)
 - 2. Minimize adverse wildlife impacts in sensitive habitat areas, such as deer and elk winter range below 3,000 feet in elevation, riparian areas, and wetlands. (3/24/05)

- B. Development in areas shown as Resource Protection Open Space on Comprehensive Plan Maps X-MH-1 through X-MH-3 proposed in or within 100 feet of natural wetlands shall be designed to: (1/5/09)
 - 1. Preserve functions of groundwater recharge, water storage, turbidity reduction, nutrient filtration, biologic or botanical production, and protective habitat cover; (3/24/05)
 - 2. Provide compatibility with the continued performance of wetland functions, such as:
 - a. Conservation of soil, vegetation, water, fish, and wildlife; (3/24/05)
 - b. Low-intensity, dispersed outdoor recreation, such as hiking and nature study; and (3/24/05)
 - c. Utility easements, but only on peripheral areas and where alternative alignments are impractical; (3/24/05)
 - 3. Eliminate the need for filling, dumping, and/or excavating in the wetland proper, unless approved pursuant to Subsection 1011.04; and (3/24/05)
 - 4. Maintain the runoff coefficient and erosion equilibrium for lands bordering the wetland substantially the same as if such lands were undeveloped. Pier construction, elevated pedestrian boardwalks, semi-impervious surfacing, bridging of natural drainageways, and retention of vegetation in areas not intended for buildings or roads are recommended design methods.

- C. In significant natural areas identified by the County, building and road construction, filling and excavation, paving, and tree removal shall be restricted to the extent necessary to protect the unique or fragile character or features that are the basis for their designation in the Comprehensive Plan. Restrictions may be

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modified pursuant to Subsection 1011.04. Outside the Portland Metropolitan Urban Growth Boundary, commercial forest activities and harvesting practices shall be subject to the Oregon Forest Practices Act. (3/24/05)

1009 LANDSCAPING (3/24/05)

1009.01 PURPOSE

- A. To complement the color, texture, scale and building materials used in a development, while taking into account existing landscape elements and native plant materials.
- B. To provide landscaped areas within parking lots which are designed to facilitate movement of traffic, breakup large areas of impervious surfaces, provide shade, buffer and screen adjacent properties, and promote a safe environment with a pleasant appearance.
- C. To promote energy efficiency and conservation of water and other resources.
- D. To guide the planting and maintenance of landscaping materials.
- E. To provide pedestrian amenities along streets and within new development. (12/23/98)
- F. Promote the retention and use of natural features on a site. (12/23/98)
- G. Highlight public access to buildings for streets, parking areas and structures, and public spaces such as plazas. (12/23/98)
- H. Promote compatibility between land uses by reducing visual, noise, and lighting impacts of development on users of the site and abutting uses, with particular attention to off-site impacts when abutting a residential area. (12/23/98)
- I. Enhance the overall appearance of a development. (12/23/98)

1009.02 MINIMUM AREA STANDARDS

The minimum area requirements may include landscaping around buildings and in parking and loading areas, outdoor recreational use areas, and buffering as required under this Section (1009). Exceptions to these requirements for development within the Clackamas Regional Center Area Design Plan, Comprehensive Plan Map X-CRC-1, are specified in Section 1700. (5/3/01)

- A. Medium and High Density Residential: A minimum of 25 percent of the gross land area shall be used for landscaping in medium and high density districts. This requirement may be reduced to a minimum of 20 percent when any combination of the following is substituted for gross land area: (3/24/05)
 - 1. Interior courtyards.

2. Atriums, solar greenhouses, solariums
3. Roof gardens
4. Indoor recreation areas
5. Other comparable amenities as determined by the Design Review Committee

Redevelopment or additions to multifamily developments shall meet the minimum area requirements of this section.

- B. Special High Density Residential: The minimum area requirements shall be as specified under subsections 304.10(D) and (E). Reductions in the forty (40) percent requirement may be allowed as provided under subsection 304.10(E), for indoor recreational facilities over and above the minimum requirements. (3/14/02)
- C. Commercial and industrial districts: The minimum area requirement for landscaping shall be fifteen (15) percent of the total developed land area in Commercial, Light Industrial and General Industrial districts; twenty (20) percent in Business Park districts; and twenty-five (25) percent in Campus Industrial districts.
- D. The minimum landscaping requirement may include natural features and areas as specified in Section 1011.
- E. Additions or alterations to nonconforming uses and nonconforming development on a commercial or industrial site which do not comply with the landscaping requirements of this Ordinance must provide landscaping in scale with the modification, as follows: (8/27/93)
1. Structural additions of 1,000 to 1,999 square feet are required to landscape at least five (5) percent of the developed site area.
 2. Structural additions of 2,000 to 4,999 square feet are required to landscape at least ten (10) percent of the developed site area.
 3. Structural additions of 5,000 square feet or more are required to meet the current minimum landscape requirement for new development.
 4. Where successive structural additions occur the landscape requirement shall accumulate until total conformance is reached. (8/27/93)

1009.03 GENERAL PROVISIONS

- A. For purposes of satisfying the minimum requirements of this Ordinance, a "landscaped area" must be planted in lawn, groundcover plants, shrubs, annuals, perennials or trees, or desirable native vegetation, or pedestrian amenities (e.g. plazas, pocket parks, courtyards, seating areas that provide usable pedestrian spaces, and street furniture). Up to one-third (1/3) of the landscape area requirement may be met by pedestrian amenities. Landscaped areas shall not be used for other purposes such as storage or display of automobiles, equipment, and other uses. (12/13/89)
- B. Landscaping shall be designed, developed and maintained to satisfy the specific functional and aesthetic objectives appropriate to the development and the district, considering the following:
 - 1. Type, variety, scale and number of plants used;
 - 2. Placement and spacing of plants;
 - 3. Size and location of landscaped areas;
 - 4. Contouring, shaping and preparation of landscaped areas;
 - 5. Use and placement of nonplant elements within the landscaping;
- C. The landscape design shall incorporate existing significant trees and vegetation preserved on the site.
- D. Landscape materials shall be selected and sited to produce a hardy and drought-resistant landscaped area. Selection shall include consideration of soil type and depth, spacing, exposure to sun and wind, slope and contours of the site, building walls and overhangs, and compatibility with existing native vegetation preserved on the site.
- E. Street-side landscaping within the right-of-way shall be required when there are no immediate plans to develop or otherwise disturb the portion of the right of way between the road and the property line, and one of the following applies:
 - 1. Street trees are to be provided, under provisions of subsection 1009.09.
 - 2. Landscaping is necessary to present an appearance consistent with the proposed development as viewed from the road. (8/31/81)
 - 3. Landscaping is necessary to reduce dust, noise, erosion, or fire hazard.

4. The road is designated as a scenic road in the Comprehensive Plan.
5. The street design standards for the road, as described in the Comprehensive Plan, include a landscaped buffer between the curb and sidewalk. (5/24/01)

1009.04 SURFACE PARKING AND LOADING AREA LANDSCAPING

- A. A mixture and grouping of deciduous and evergreen plant material shall be provided throughout an automotive use area. (12/13/89)
- B. The following interior landscaping requirements shall apply to multifamily parking areas for twenty (20) or more automobiles, and commercial and industrial use parking areas for thirty (30) or more automobiles: (12/13/89)
 1. Ten (10) square feet of landscaping per parking space, excluding perimeter spaces.
 2. Landscaped areas shall be distributed to provide maximum shading and should divide parking into bays.
 3. The number of trees required shall be determined on the basis of the growth habit of the tree species. The minimum number of trees shall be no less than an average of one (1) tree per 25 feet of planter length, or portion thereof. (8/31/81)
 4. Landscaped islands shall be a minimum of fifty (50) square feet.
 5. Evergreen ground cover and shrubs shall be no more than thirty (30) inches in height at the end of planting areas, to insure adequate traffic visibility.
- C. Perimeter landscaping requirements for vehicular use areas adjacent to abutting properties are as follows:
 1. A minimum strip width of five (5) feet adjacent to perimeter. (12/23/98)
 2. The minimum number of trees required is one (1) tree per forty-five (45) feet of perimeter length.
 3. Provide ground cover and shrubs. Where the boundary of a parking lot adjoins or is within a residential district, such parking lot shall be screened as per Section 1009.05.
 4. Areas adjacent to railroad rights-of-way on an industrial site may be exempt from perimeter landscaping requirements.

D. Perimeter landscaping requirements when adjacent to streets and walks are as follows:

1. A minimum strip width of five (5) feet adjacent to street.
2. The minimum number of trees required shall be one (1) tree for every forty-five (45) feet of perimeter length.
3. Plantings shall reflect the landscaping objectives of the district.
4. Areas adjacent to road and driveway intersections may be exempt.

1009.05 SCREENING AND BUFFERING

A. Screening shall be used to eliminate or reduce the visual impacts of the following:

1. Service areas and facilities, including garbage and waste disposal containers, recycling bins, and loading areas.
2. Storage areas.
3. Parking lots as specified in subsection 1009.04.
4. On and above-grade electrical and mechanical equipment, such as transformers, heat pumps, and air conditioners.
5. Any other area or use as required by this Ordinance.

B. Screening may be accomplished by the use of sight-obscuring plant materials (generally evergreens), earth berms, walls, fences, building parapets, proper siting of disruptive elements, building placement or other design techniques.

C. Screening is required to substantially block any view of material or equipment from any point located on a street adjacent to the site. A sight-obscuring fence at least six (6) feet in height up to a maximum of ten (10) feet is required around the material or equipment. (8/27/93)

D. Buffering shall be used to mitigate adverse visual impacts, dust, noise, or pollution, and to provide for compatibility between dissimilar adjoining uses. Special consideration will be given to the buffering and screening between residential uses and commercial or industrial uses, and in visually sensitive areas. (8/27/93)

E. Methods of achieving adequate buffers include: (08/27/93)

1. Width not less than fifteen (15) feet.
 - a) At least one row of deciduous and evergreen trees staggered and spaced not more than fifteen (15) feet apart.
 - b) At least one row of evergreen shrubs, spaced not more than five (5) feet apart, which will grow to form a continuous hedge at least five (5) feet in height within one (1) year of planting.
 - c) Lawn, low-growing evergreen shrubs and evergreen ground cover covering the balance of the area.
2. Width not less than ten (10) feet - berm plus planting.
 - a) Berm forms should not slope more than forty (40) percent (1:2.5) on the side away from the area screened from view. The slope for the other side (screened area) may vary.
 - b) A dense evergreen hedge.
3. Width not to be less than five (5) feet - wall/fence plus planting.
 - a) A masonry wall or sight-obscuring fence not less than 5 feet in height.
 - b) An evergreen hedge, vines, trees, or shrubs.
 - c) Lawn, low-growing evergreen shrubs, and evergreen ground cover covering the balance of the area.
4. Other methods which produce an adequate buffer considering the nature of the impacts to be mitigated, as approved by the Design Review Committee.

1009.06 RECREATION AREAS - MEDIUM AND HIGH DENSITY RESIDENTIAL

- A. Two hundred (200) square feet of usable outdoor recreation space (passive or active) shall be provided for studio, and one- and two-bedroom units; and three hundred (300) square feet of usable outdoor recreation space (passive or active) shall be provided for three- or more bedroom units.
- B. Outdoor recreation areas in multifamily development shall be designed for adequate surveillance opportunities.
- C. Recreation areas shall be conveniently located and accessible to all living units.

1009.07 ENERGY CONSERVATION

- A. Use berms and plant materials where practical to assist in energy conservation and efficiency. Suggested alternatives are as follows:
 - 1. Locate and form berms to protect buildings and exterior use spaces against winter winds.
 - 2. Utilize dense evergreens or conifers to screen winter wind and protect against hostile winter elements.
 - 3. Utilize deciduous trees to provide summer shade and allow winter sun.
 - 4. Utilize deciduous vines on fences, trellises and arbors to provide summer shade.
- B. Landscape materials should not block solar access to buildings.

1009.08 EROSION CONTROL

- A. Revegetate graded areas to insure erosion control. Plant disturbed areas with suitable plant material.
- B. Provide netting, where necessary, on sloped areas while ground cover is being established.

1009.09 STREET TREES

- A. All developments fronting on designated boulevards in the Comprehensive Plan shall be required to plant street trees in accordance with the standards of this section. Street trees shall be encouraged in all developments and/or may be required in accordance with any adopted community plan.
- B. Exemptions from the street tree requirements may be granted by the Planning Director or staff on a case-by-case basis. Exemptions may be granted, for example, if existing trees are to be saved which can be used as a substitute for street trees, or where trees approved under subsection 1009.09C, below, are to be planted on the property adjoining the street right-of-way.
- C. Street trees to be planted shall be chosen from an approved list of street trees (if adopted) unless approval for planting of another species is given by the Planning Director or staff.

- D. Planting of street trees shall be coordinated with other uses which may occur within the street right-of-way, such as bikeways, pedestrian paths, storm drains, utilities, street lights, shelters and bus stops.
- E. Location and planting of street trees also may be influenced by such conditions as topography, steep terrain, soil conditions, existing trees and vegetation, preservation of desirable views, and solar access.
- F. Street trees at maturity shall be of appropriate size and scale to complement the width of the street or median area.

1009.10 PLANTING AND MAINTENANCE

- A. No sight-obscuring plantings exceeding thirty (30) inches in height shall be located within a twenty (20) foot radius of the corner nearest the intersection of any road, driveway or easement. Trees located within a twenty (20) foot radius of any such intersection shall be maintained to allow eight (8) feet of visual clearance below the lowest hanging branches in areas facilitating automobiles and ten (10) feet in areas facilitating truck traffic.
- B. Plant materials shall not cause a hazard. Landscape plant materials over walks, pedestrian paths and seating areas shall be pruned to a minimum height of eight (8) feet and to a minimum height of fifteen (15) feet over streets and vehicular traffic areas.
- C. Landscape plant materials shall be selected which do not generally interfere with utilities above or below ground at maturity.
- D. Landscape plant material will be installed to current nursery industry standards.
- E. Landscape plant materials shall be property guyed and staked to current industry standards as necessary. Stakes and guy wires shall not interfere with vehicular or pedestrian traffic.
- F. All landscape materials will be guaranteed in writing by the developer for a period of one year from the date of installation. A copy of the guarantee will be furnished to the county by the developer. The developer shall also submit a signed maintenance contract, or post a bond or other surety acceptable to Clackamas County, covering the landscape maintenance costs during the guarantee period. See Section 1104 for bonding requirements. (12/13/89)

- G. Plant materials shall be suited to the conditions under which they will be growing. As an example, plants to be grown in exposed, windy areas which will not be irrigated should be sufficiently hardy to thrive under these conditions. Plants should have vigorous root systems, and be sound, healthy, free from defects, diseases, and infections.
- H. Deciduous trees should be fully branched, have a minimum caliper of one and one-quarter (1 1/4) inches, and a minimum height of eight (8) feet at the time of planting.
- I. Evergreen trees shall be a minimum of six (6) feet in height, fully branched.
- J. Shrubs should be supplied in one (1) gallon containers or eight (8) inch burlap balls with a minimum spread of twelve (12) to fifteen (15) inches.
- K. Most ground cover plantings should be planted on a maximum of thirty (30) inches on center and thirty (30) inches between rows. Rows of plants are to be staggered for a more effective covering. Ground cover shall be supplied in a minimum four (4) inch size container or a two and one-quarter (2-1/4) inch container or equivalent if planted eighteen (18) inches on center.
- L. All developments are required to provide appropriate methods of irrigation for the landscaping. It is recommended that large landscape areas be irrigated with automatic sprinkler systems to insure the continued health and attractiveness of the plant materials. Sprinkler heads shall not cause any hazard to the public. Hose bibs and manually operated methods of irrigation may be appropriate for small landscaping areas. Irrigation shall not be required in wooded areas, wetlands, floodplains, and along natural drainage channels or streambanks.
- M. Appropriate methods of care and maintenance of landscape plant material shall be provided by the owner of the property.
- N. Landscape plant material shall be protected from damage due to heavy foot traffic or vehicular traffic by protective tree grates, pavers or other suitable method.

1011 OPEN SPACE AND PARKS (1/5/09)

1011.01 PURPOSE

Section 1011 is adopted to: (1/5/09)

- A. Preserve a network of open space resources within the urban area; (1/5/09)
- B. Protect sensitive or hazardous open space resources from incompatible development; and (1/5/09)
- C. Provide land that meets the open space and recreation needs of the people. (1/5/09)

1011.02 AREA OF APPLICATION (1/5/09)

- A. Section 1011 applies to areas generally indicated as Open Space on Map IV-6 of the Comprehensive Plan or on the Mt. Hood Community Plan Map when one or more of the following open space resources is present: (1/5/09)
 - 1. Willamette River Greenway; (1/5/09)
 - 2. Distinctive urban forests; (1/5/09)
 - 3. Hillsides of more than 20 percent slope; (1/5/09)
 - 4. Areas of confirmed land movement hazard; (1/5/09)
 - 5. Areas of severe erosion or unstable soil; (1/5/09)
 - 6. Areas of high visual sensitivity; (1/5/09)
 - 7. Significant natural areas; and (1/5/09)
 - 8. Other distinctive or unique natural areas, or areas of serious natural hazard. (1/5/09)
- B. Section 1011 also applies to areas generally indicated as Open Space on the Mt. Hood Community Plan Map when one or more of the following open space resources is present: (1/5/09)
 - 1. Bodies of water, such as rivers, lakes, or lagoons; (1/5/09)
 - 2. Special flood hazard areas, as defined in Section 703; (1/5/09)

3. Land within 100 feet of mean low water of all major rivers and 50 feet of other perennial streams; and (1/5/09)
 4. Wetlands, including recharge areas. (1/5/09)
- C. Open space regulated pursuant to Subsection 1011.02(A) or (B) shall be categorized as follows: (1/5/09)
1. "High priority" open space shall be the following:
 - a. Land or water necessary to assure a continuous network of open space (e.g., stream corridor, forested hillside); (1/5/09)
 - b. Land over 35 percent slope; (1/5/09)
 - c. Confirmed land movement hazard areas; (1/5/09)
 - d. Areas judged to have severe erosion potential due to soil type, geologic structure, and vegetation; (1/5/09)
 - e. Bodies of water such as rivers, lakes, or lagoons; (1/5/09)
 - f. Wetlands; and (1/5/09)
 - g. Significant natural areas. (1/5/09)
 2. "Second priority" open space shall be the following:
 - a. Land greater than 20 percent slope and less than 35 percent slope; (1/5/09)
 - b. Distinctive urban forests; (1/5/09)
 - c. Land within a special flood hazard area, as defined in Section 703, or within 25-year flood limits where special flood hazard areas have not been designated; (1/5/09)
 - d. Land used as a recharge area for wetlands; and (1/5/09)
 - e. Areas of high visual sensitivity. (1/5/09)

1011.03 DEVELOPMENT STANDARDS AND LIMITATIONS

- A. Site planning and development shall avoid disturbance of identified open space resources, except as provided in Subsections 1011.03(B) and (C). Full use should be made of density transfers pursuant to Section 1012, siting of structures and roads, and other appropriate means of designing the development around the open space. (3/24/05)

- B. "High priority" open space shall be preserved outright, except:
 - 1. Development on hillsides over 35 percent slope shall be subject to Subsection 1002.03(B). (1/5/09)

 - 2. Commercial or industrial developments affecting wetlands or significant natural areas may be allowed, subject to Subsection 1011.04 and when permitted by the U.S. Army Corps of Engineers and the Oregon Division of State Lands. (1/5/09)

- C. "Second priority" open space shall be preserved to the maximum extent possible making full use, as necessary, of techniques which reduce the need for land coverage, and disturbance of open space features. Various site plan and development options shall be identified and applied on a case-by-case basis pursuant to the open space review process under Section 1103. Site plan and development techniques may include but are not limited to:
 - 1. Multistory construction; (1/5/09)

 - 2. Elevated pole structures; (1/5/09)

 - 3. Understructure parking; (1/5/09)

 - 4. Reduction of parking requirements as provided under Subsection 1007.07(B);

 - 5. Clustering of buildings; (1/5/09)

 - 6. Minimized driveway areas, use of shared driveways and loading areas; (1/5/09)

 - 7. Reduction of road widths or use of one-way roads to accommodate terrain or other features; and (1/5/09)

 - 8. Siting of buildings to maximize transit and pedestrian orientation.

- D. Satisfying the requirement for open space in commercial and industrial developments may count for up to 60 percent of the landscape requirement. Satisfying the open space requirement in residential developments may count for all of the 20-percent open space requirement in planned unit developments and up to 80 percent of the multifamily landscape requirements, including outdoor recreation space. (See Subsection 1009.02 for landscape requirements.) (1/5/09)
- E. All open space requirements of Section 1011 shall be met using one or more of the following options: (1/5/09)
 - 1. Dedication to the public; (1/5/09)
 - 2. Placement under a legally responsible group, such as a homeowner's association; (1/5/09)
 - 3. Preservation through conservation easements but maintained by individual land owners; or (1/5/09)
 - 4. Some other suitable mechanism acceptable to the County.

1011.04 CONFLICT RESOLUTION FOR WETLANDS AND SIGNIFICANT NATURAL AREAS (1/5/09)

High priority open space wetlands and significant natural areas shall not be disturbed unless approved by the Planning Director, pursuant to Subsection 1305.02, for a specific commercial or industrial development plan. Approval shall not be granted unless the applicant demonstrates that the following social, economic, energy, and appropriate environmental considerations are addressed and satisfied: (1/5/09)

- A. Social: The proposed development would not result in the loss of a rare, irretrievable, or irreplaceable natural feature or scientific opportunity, or the disturbance of a substantially unaltered natural feature or area in or adjacent to the proposed site, unless the benefit to the public from the proposed use clearly outweighs the public good from retaining the feature or area. (1/5/09)
- B. Economic:
 - 1. The wetland or significant natural area must be disturbed for reasonable use of the site and, if not disturbed, the applicant would be substantially damaged. (1/5/09)
 - 2. The use proposed is a benefit to the community and meets a substantial public need or provides for a public good which clearly outweighs retention of the wetland or significant natural area. (1/5/09)

C. Energy:

1. Disturbance of the open space will not require public costs, including maintenance, due to secondary impacts, or exacerbate existing conditions.
2. The development, as proposed, supports the Comprehensive Plan policies for energy efficient land use considering such things as transportation costs, efficient utilization of urban services, area self-sufficiency, and retention of natural features which create microclimates conducive to energy efficiency.

D. Environmental: Disturbance of the wetland or significant natural area is minimized, as provided under Subsection 1011.03(C) and the review process and conditions of development pursuant to Section 1103, and the following specific conditions are satisfied: (1/5/09)

1. Wetlands:

- a. The wetland can be altered without substantial adverse impact upon the character of the area, and function of the wetland.
- b. The wetland does not support rare or endangered species.
- c. Elimination, alteration, or relocation does not significantly alter water movement, including normal levels or rates of runoff into and from wetlands. (1/5/09)
- d. The proposed use or alteration of the wetland is approved by the U.S. Army Corps of Engineers and the Oregon Division of State Lands. (1/5/09)

2. Significant Natural Areas: A study conducted by a person or persons with expertise related to the natural features of the site identified by the County shall be required. The study shall include: (7/15/81)

- a. An evaluation of the sensitivity or fragility of the elements of the natural area to be affected, including types of activity, development, or alteration which is likely and unlikely to disturb or destroy those elements; (1/5/09)
- b. An evaluation of the preservation value of the natural area, or portion thereof, to be disturbed or destroyed by the proposed development, addressing status, need for representation, diversity, naturalness, viability, defensibility, and security; (1/5/09)

- c. An evaluation of the proposed development, and alternative development proposals, as they relate to the fragility and/or preservation value of the natural area identified under Subsection 1011.04(D)(2)(a) and (b); and (1/5/09)
- d. Findings to support the following:
 - i. The proposed development will not disturb the significant feature(s) of the site identified by the County; or (1/5/09)
 - ii. The proposed development will disturb or destroy only an area or areas of low preservation value, and will not significantly alter or disturb other portions of the natural area on or adjacent to the site; and (1/5/09)
 - iii. The site is suitable for the type of development proposed from a geologic standpoint. This may require an engineering geologic study. (1/5/09)

1011.05 PARK AND EASEMENT DEDICATIONS

- A. The standards and requirements of Section 1011 shall be applied whenever land is to be dedicated for a park, recreation area, or easement. (1/5/09)
- B. The park classifications and standards of Policies 1.1 through 1.5 in the Parks and Recreation section of Chapter 9 of the Comprehensive Plan shall be followed in the dedication and development of parks and recreation areas. (1/5/09)

1600 VILLAGE GENERAL PROVISIONS (5/3/01)

A. PURPOSE

This section implements the policies of the Sunnyside Village Plan providing for a mixture of single family, townhouse, and multifamily residential as well as retail/office, commercial and business park uses. These uses are located in areas where suitable services and facilities are currently provided or can be provided as development occurs. In addition, this plan area allows for pedestrian friendly development with good connections via the sidewalks, trails and street system from residential areas to parks, open spaces, commercial and office uses.

B. AREA OF APPLICATION

The Sunnyside Village Plan is applied within the area located generally east of I-205 along the south side of Sunnyside Road between 142nd and 152nd Avenues, including portions of land west of 142nd and east of 152nd, in addition to a section north of the intersection of 142nd and Sunnyside Road. The Sunnyside Village Plan is illustrated on Comprehensive Plan Map X-SV-1. (5/3/01)

1600.01 ACCESSWAYS

A system of interconnecting accessways shall be provided from subdivisions and multifamily developments to commercial facilities and public amenities such as existing or planned transit stop or facility, school, park, church, day care center, children's play area, outdoor activity areas, plazas, library, or similar facility and to a dead-end street, loop, or mid-block where the block is longer than 600 feet.

- A. The accessway shall include at least a 15' right-of-way and a 10' wide paved surface.
- B. Accessways shall be illuminated so that they may be safely used at night.
- C. The maximum height of a fence along such a facility shall not exceed 4'.
- D. Bollards or other similar types of treatment may be required in order to prevent cars from entering the accessway.
- E. The designated East-West pedestrian accessway shall include a minimum 10 ft. wide concrete surface within a 10 ft. wide right-of-way, easement, or other legal form satisfactory to the county. Planting areas adjacent to the easement with street trees should be provided along at least one side of this accessway. However, alternatives to this standard may be considered through the Design Review process. If the accessway is within a parking area, it shall be lined by parking lot trees planted at a maximum of 30 ft. on-center along both sides.

1600.02 ONSITE WALKWAYS FOR COMMERCIAL, MULTIFAMILY (4 OR MORE

UNITS), INSTITUTIONAL AND OFFICE DEVELOPMENT.

- A. A walkway shall be provided connecting the street to a main entrance of the primary structure and shall be designed to minimize the distance from a business entrance to street side sidewalks.
- B. Walkways shall connect other areas of the site such as buildings, parking lots, children's play areas and outdoor activity areas such as plazas, resting areas and viewpoints.
- C. Walkways shall be constructed of concrete, paving bricks, textured and colored concrete, e.g. bomonite or other similar material and be at least five (5) feet in unobstructed width.
- D. Walkways shall be illuminated.
- E. Walkways and pedestrian areas shall be separated from automobile and truck circulation, parking, and loading whenever possible.
- F. Where a walkway crosses driveways, parking areas, and loading areas, the walkway shall be clearly identifiable through the use of elevation changes, speed bumps, a different paving material, or other similar method.
- G. Where the walkway is parallel and adjacent to an auto travel lane, the safety of the pedestrian shall be assured through a raised path or shall be separated from the auto travel lane by a raised curb, bollards, landscaping or other physical barrier. If a raised path is used the ends of the raised portions shall be equipped with curb ramps.
- H. Walkways shall connect the site to all adjacent streets and developments, when feasible. Stub connections shall be required between developments and neighboring sites not yet developed, underdeveloped or capable of being further subdivided or partitioned. The connections shall be completed when the neighboring site is developed.
- I. Walkways bordering parking spaces shall be at least 7' wide and a minimum of 5' wide when concrete bumpers, bollards, curbing, landscaping, or other similar improvements are provided which prevent parked vehicles from obstructing the walkway.

1600.03 STREETS/SIDEWALKS

A. The following streets are unique to the Sunnyside Community Plan area in addition to the arterial and collector streets. (Comprehensive Plan Map X-SV-3, Street Classifications). (5/3/01)

1. Connector streets with bike lanes shall include two 10-ft. wide travel lanes, two 6 in. wide standard curbs, two 7-ft. wide parking strips, two 4 to 5-ft. wide planting strips, two 4- ft. wide bike lanes and two 5- ft. wide sidewalks. The minimum right-of-way width shall be 61 to 63 ft. depending on the planting strip width. If commercial/retail are adjacent to the site, then 9 ft. wide sidewalks are required (Comprehensive Plan Figure X-SV-1). (5/3/01)
2. Connector streets without bike lanes shall include two 10-ft. wide travel lanes, two 6 in. wide standard curbs, two 7-ft. wide parking strips, two 4 to 5-ft. wide planting strips and two 5- ft. wide sidewalks. The minimum right-of-way width shall be 53 to 55 ft. If commercial/retail is adjacent to the site, then 9-ft. wide sidewalks are required (Comprehensive Plan Figure X-SV-2). (5/3/01)
3. Local streets shall include two 8-ft. wide travel lanes, two 6-in. wide standard curbs, one 8-ft. wide parking strip, two 5-ft. wide sidewalks and two 4-ft. wide tree planting strips. The minimum right-of-way width shall be 43 ft. (Comprehensive Plan Figure X-SV-5). (5/3/01)

Cul-de-sacs are permitted only when topographic conditions or existing street patterns preclude extension of streets. The maximum radius shall be 40'.

4. All streets adjacent to Resource Protection Areas shall have at least one 5 ft. wide sidewalk along one side of the street. If there are no significant trees (at least 8 in. in diameter) along the Resource Protection area adjacent to the street, then a minimum 4 ft. wide planting strip is required along both sides of the street. If it is determined that a unique view is to be preserved, then staff will determine if street trees are required.

5. Access Spacing - New street connections and private access driveways should be located along arterial and collector roadways within Sunnyside Village to provide safe and efficient traffic operations. New Street connections along arterial streets are shown on Map X-SV-3 of the Sunnyside Village Community Plan. New Street connections to collector roadways shall be a minimum of 150 feet apart, measured road centerline to centerline. (5/3/01)

New individual driveway connections shall not be permitted along arterial and collector roadways. The removal and/or consolidation of existing private driveways on arterial and collector streets should be investigated as redevelopment of properties occur.

At existing or future major street intersection (existing or proposed traffic signals), no new driveways or street connections shall be allowed within the influence area of the intersection. The influence area is defined as the distance that vehicles will queue from the signalized intersection. The influence area shall be based upon traffic volumes summarized in the Sunnyside Area Master Plan (November 1994) or based upon information acceptable to DTD Traffic Engineering. This influence area shall include an additional 100 feet beyond the queue length for back-to-back left turns.

The preferred minimum intersection spacing on minor arterials is 500 feet, measured road centerline to centerline. Major arterial intersection spacing is preferred to be between 600 feet and 1,000 feet, measured road centerline to centerline.

6. Roadway Design - The interior angles at intersection roadways shall be as near to ninety (90) degrees as possible, and in no case shall it be less than eighty (80) degrees or greater than 100 degrees. Minimum centerline radius for local roadways shall be 100 feet unless the alternative horizontal curve illustrated on Figure X-SV-9 is used. (5/3/01)
7. Alleys shall be private streets with rights-of-way of 16 feet. (Comprehensive Plan Figure X-SV-6). (5/3/01)
8. Traffic Circle.

A traffic circle will mark the heart of the Sunnyside/Rock Creek Neighborhood and will provide suitable geometrics for the five radial streets that converge at this point. Travel on the circle shall occur in one direction. This shall be facilitated by traffic diverters that guide vehicles but still allow comfortable pedestrian movement. The raised diverters should consist of low raised curbs and/or special paving. The travel lane within the circle should allow for easy merging.

Special paving shall demark crosswalks. Bike lanes shall be clearly marked and shall occur at the edge of the travel lane and define the inner boundary of the crosswalks and bus loading areas. The bus loading areas shall be located adjacent to the Village Retail area. On the other side of the circle, this added dimension shall be used for planting strips with street trees, adjacent to 9' wide sidewalks.

The center island shall have a radius of at least 30 feet and shall be landscaped. A vertical feature or monument identifying the entrance to the Sunnyside Village area should mark the center of the circle and shall be framed by blossoming trees.

9. Intersection Dimensions

Intersection dimensions should be minimized to reduce pedestrian crossing-distances and slow vehicles. Curb radiuses should not exceed 25 feet at corners.

10. For properties with frontage along SE 152nd Drive, adjacent to the proposed realignment of SE 152nd Drive, the applicant's share of costs associated with the realignment of 152nd Drive shall be limited to the dedication of required on-site right-of-way for the realignment of SE 152nd Drive as a collector street, and the guarantee of financing for the required on-site improvements, to collector-street standards, according to the requirements of the County Engineer. (11/06/97)

- B. Planting strips which include street trees are part of the street cross sections, see Section 1600.04 for details.
- C. Sidewalks within the Village shall have a minimum unobstructed width of 5 ft. No street lights, mailboxes, fire hydrants, etc. are allowed within the sidewalk.

1600.04 STREET TREES

Street trees are required along both sides of all connector and local streets within the Sunnyside Community Plan. One to two street trees are required per interior lot, and 2-4 for corner lots depending on the canopy of the tree species proposed. If a small canopy (less than or equal to 25 ft. in diameter at maturity) is proposed, then 2 per interior lots and 4 per corner lots are required. If a larger canopy (greater than 25 ft. in diameter at maturity) is proposed, then 1 per interior lot and 2 per corner lots are required.

CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE

As each portion of the project is developed, a specific species of street tree will be chosen for each street. The developer may choose the species of street tree to be planted so long as the species is not known to cause sidewalks to buckle, does not have messy fruits or pods, is not prone to insects or having weak wood and is not on the list of prohibited trees. The County will have final approval regarding the type of street tree to be planted.

The following is a list of prohibited street trees:

Acer macrophyllum Leaves block drainage Roots buckle sidewalks	Big-leaf Maple
Acer negundo Insect prone, weak wood	Box Elder
Acer saccharinum Shallow rooted, weak wooded	Silver Maple
Aesculus hippocastanum Messy fruits	Common Horsechestnut
Betulus species Insect prone, weak wood	Birches
Carya species Fruits cause litter and safety problems	Hickories
Catalpa species Seed pods cause litter problems	Catalpas
Corylus species Fruits cause litter and safety problems	Filberts
Crataegus species Thorns, fruits cause litter and safety problems	Hawthorns
Fraxinus species Seed pods cause litter problem	Ashes
Gleditsia triacanthos Seed pods cause(does not include litter problem horticultural variants)	Honey Locust (species)
Juglans species Fruits cause litter problem	Walnuts
Morus species Fruits cause litter and safety problems	Mulberries
Populus species	Poplars

CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE

Weak wood, shallow roots	
Robinia species	Locusts
Weak wood, suckers	
Salix species	Willows
Weak wood, shallow roots	
Ulmus fulva	Slippery Elm
Insect prone, weak wood shallow roots	
Ulmus pumila	Siberian Elm
Weak wood, shallow roots	

Along connector streets or streets with a higher classification, metal grating, non-mortared brick, grasscrete or similar material shall be installed at grade over the planting area around street trees, or raised planters shall be constructed to prevent soil compaction and damage to the trunk. Planting strips or tree wells are required along streets with a classification below connector status.

1600.05 BICYCLE PARKING

- A. Bicycle parking racks shall be located in close proximity to an entrance but shall not conflict with pedestrian needs.
- B. When more than 7 bicycle parking spaces are required, 50% of the spaces shall be covered.
- C. When more than 15 covered bicycle parking spaces are required, 50% of the covered spaces shall be enclosed and offer a high level of security, i.e. bicycle lockers or a locked cage or room with locking facilities inside, to provide safe long-term parking.

1600.06 INTERSECTION SIGHT DISTANCE REQUIREMENTS

All development shall meet the intersection sight distance requirements as established by Clackamas County Engineering Department.

1600.07 TRAILS AND PEDESTRIAN CONNECTIONS

An interconnecting system of trails and accessways throughout the Sunnyside Community Plan area shall be provided. The general trail locations are shown on Comprehensive Plan Map X-SV-1. The location of the trails shall be set at the time a land use application is approved. The locations of the trails are based on achieving connections to streets and/or pedestrian ways and protection of the significant features of the Resource Protection areas. (5/3/01)

The trail system will generally occur along the creeks and resource protection areas. The accessways and/or trail system will provide connections to parks, the elementary

school and to adjacent commercial and residential developments.

There shall also be an east-west accessway between 142nd and 152nd, south of Sunnyside Road and above the connector street located north of the neighborhood green and community service area.

The trail system shall be designed to provide multiple access points for the public. The trails shall be constructed by the developer.

All trails and accessways within the resource protection areas shall either be dedicated or an easement granted to the North Clackamas Parks District in conjunction with development. These connections shall be maintained by and constructed to the standards established by the North Clackamas Parks District.

The maintenance of all pedestrian connections and trails located outside the resource protection areas as identified on Comprehensive Plan Map X-SV-1 shall be the responsibility of the property owner(s). (5/3/01)

1600.08 SIGNS

Signs shall be as per Section 1010 unless otherwise stated. When Section 1010 conflicts with this section, the standards of this section shall apply. Freestanding signs shall be constructed of brick, masonry, wood or other materials that are compatible with the development. (11/06/97)

1600.09 STREET LIGHTS ARE REQUIRED PURSUANT TO SUBSECTION 1006.

1600.10 REVIEW PERIOD

Two years from the date of the signing of the Board Order (August 26, 1993) for ZDO-112, it shall be brought back to the Planning Commission and Board of County Commissioners for a hearing to review and evaluate its progress. At that time, a decision shall be made to continue, modify, or revoke ZDO-112.

1600.11 EXEMPTIONS

- A. The requirements of 1603.09 do not apply to new homes developed in subdivisions which have received final plat approval prior to August 26, 1993, if there are homes developed or under construction on existing lots within the subdivision.
- B. New homes developed within subdivisions which have received preliminary plat approval within the VR 4/5 District shall meet the standards of either 1603.09A 6.a. and 1603.09B 2.e., or 1603.09A 6.b. and 1603.09B 2.f.

705 WILLAMETTE RIVER GREENWAY (WRG) (1/5/09)

705.01 PURPOSE

Section 705 is adopted to: (1/5/09)

- A. Protect, conserve, enhance, and maintain the natural, scenic, historical, agricultural, economic, and recreational qualities of lands along the Willamette River; (1/5/09)
- B. Maintain the integrity of the Willamette River by minimizing erosion, promoting bank stability, and maintaining and enhancing water quality and fish and wildlife habitats; and (1/5/09)
- C. Implement the Willamette River Design Plan set forth in Chapter 3 of the Comprehensive Plan. (1/5/09)

705.02 DEFINITIONS (1/5/09)

Unless specifically defined in Subsection 705.02, words or phrases used in Section 705 shall be interpreted to give them the same meaning as they have in common usage and to give Section 705 its most reasonable application. (1/5/09)

- A. Change of Use: Making a different use of the land or water which requires construction, alterations of the land, water, or other areas outside of existing structures and which substantially alters or affects the land or water. (1/5/09)
- B. Develop: To bring about growth or availability; to construct or alter a structure; to conduct a mining operation; to make a physical change in the use or appearance of land; to divide land into parcels; to create or terminate rights of access.
- C. Development: The act, process, or result of developing. (1/5/09)
- D. Intensification: Any addition or action which increases or expands the area or amount of an existing use, or the level of activity, including remodeling the exterior of a structure if the remodeling substantially alters the appearance of the structure.
- E. Water-Dependent Use: A use or activity that can be carried out only on, or adjacent to water areas because the use requires access to the water body for water borne transportation, recreation, energy production, or source of water. (1/5/09)

705.03 AREA OF APPLICATION

Section 705 applies to development, change of use, or intensification of use on lands and water within the Willamette River Greenway, except: (1/5/09)

- A. A change of use of a building or other structure which does not substantially alter or affect the land or water upon which it is situated; (1/5/09)
- B. Landscaping, driveway construction, modifications of existing structures, and the construction or placement of subsidiary structures or facilities which are usual and necessary to the use and enjoyment of existing improvements; (1/5/09)
- C. Changes, modifications, and other practices customarily related to those farm uses described in Section 401; (1/5/09)
- D. Gravel removal from the bed of the Willamette River when conducted under a permit from the State of Oregon, and when compatible with the purposes stated in Subsection 705.01; (1/5/09)
- E. Customary dredging and channel maintenance; (1/5/09)
- F. The placing, by a public agency, of signs, workers, or aids to serve the public; (1/5/09)
- G. Activities to protect, conserve, enhance, and maintain public recreational, scenic, historical, and natural uses on public lands; (1/5/09)
- H. Acquisition and maintenance of scenic easements by the Oregon Parks and Recreation Department; and (1/5/09)
- I. The partial harvest of timber beyond the vegetative fringes in areas not covered by a scenic easement when the harvest is consistent with an approved plan under the Forest Practices Act. If such activity is not covered by the Forest Practices Act, it shall be reviewed pursuant to Subsection 104.01(C) to assure consistency with the purposes stated in Subsection 705.01. Commercial forest activities and harvesting practices shall provide for vegetation buffers and the intended shading, soil stabilizing, and water filtering effects required by the Forest Practices Act. (1/5/09)

705.04 STANDARDS FOR INTENSIFICATION, CHANGE OF USE, OR DEVELOPMENT WITHIN THE WILLAMETTE RIVER GREENWAY (1/5/09)

- A. All intensification, change of use, or development shall require a greenway conditional use permit. A greenway conditional use permit shall be granted

only if the applicant demonstrates that the request will provide the maximum possible landscaped area, open space, or vegetation between the activity and the river. The depth of this area need not exceed 150 feet. Additionally, the applicant shall demonstrate the following: (1/5/09)

1. Approval of the request will be consistent with the purposes stated in Subsection 705.01. (1/5/09)
 2. Where necessary, public access has been provided by appropriate legal means to and along the river. (1/5/09)
 3. The request complies with Subsections 705.04(D) and 705.04(E). (1/5/09)
- B. A greenway conditional use permit shall be granted only if the applicant demonstrates that the request will result in the preservation of a buffer or filter strip of natural vegetation along the river bank. The depth of this vegetative buffer or filter strip need not exceed 150 feet, and shall be determined by consideration of the following: (1/5/09)
1. The character of the use of development; (1/5/09)
 2. The width of the river; (1/5/09)
 3. Steepness of the terrain; (1/5/09)
 4. Type and stability of the soil; and (1/5/09)
 5. The type and density of the existing vegetation.
- C. Structures shall observe a minimum setback between 100 and 150 feet from the mean low water level. The setback shall be determined by evaluation of the criteria stated in Subsection 705.04. Residential lots of record and water-dependent uses unable to meet this requirement shall be exempt from this setback. (1/5/09)
- D. The maximum height of a dwelling or a structure accessory to a dwelling shall be 35 feet. (1/5/09)
- E. Private noncommercial docks and boathouses shall be subject to the standards listed below, in addition to the other standards in Subsection 705.04: (1/5/09)
1. General Provisions:
 - a. Private noncommercial docks, boathouses, and pilings shall either be dark natural wood colors, or painted dark earth tones (dark brown or green). (1/5/09)

- b. The square footage of docks and boathouses is measured as the length times the width of the outer edge of the structure. (1/5/09)
 - c. The length-to-width ratio of a private noncommercial dock shall not exceed 3:1. (1/5/09)
 - d. Only one dock and boathouse is allowed per riverfront lot of record.
2. Oregon City Falls to Multnomah County line:
- a. Private noncommercial docks shall not exceed 400 square feet. (1/5/09)
 - b. Private boathouses are prohibited.
3. Oregon City Falls to Marion County line:
- a. Private noncommercial docks shall not exceed 700 square feet. (1/5/09)
 - b. Private noncommercial boathouses shall not exceed 500 square feet. (1/5/09)
 - c. Private noncommercial boathouses shall not exceed 12 feet in height, measured from the platform of the dock to the roof peak. (1/5/09)
4. All docks located on state-owned submerged and/or submersible land must be leased or registered with the Oregon Division of State Lands, according to state law. (1/5/09)

705.05 PROHIBITED USES (1/5/09)

The following uses are prohibited: (1/5/09)

- A. Low head hydroelectric dam facilities, which adversely impact fisheries or the scenic and water quality of the river; and (1/5/09)
- B. Private noncommercial docks and moorages in the limited use rural portions of the Willamette River Greenway identified on Map III-1e of the Comprehensive Plan. (1/5/09)

705.06 SUBMITTAL REQUIREMENTS (1/5/09)

An application for a greenway conditional use permit shall include the following: (1/5/09)

CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE

- A. A completed land use application on a form provided by the County Planning Division; (1/5/09)
- B. A site plan showing existing vegetation and development, and locations of proposed development or activity; (1/5/09)
- C. Elevations of any proposed structures; (1/5/09)
- D. Exterior materials list for any proposed structures, including type and colors of siding and roofing; and (1/5/09)
- E. Cross section of any area within the vegetative buffer or filter strip where grading, filling, or excavating will occur. (1/5/09)

705.07 ADMINISTRATION OF SECTION 705 (1/5/09)

- A. An application for a greenway conditional use permit shall be reviewed pursuant to Subsection 1305.02. (1/5/09)
- B. Written notice, including a copy of the application, will be sent immediately upon receipt of an application to the Oregon Parks and Recreation Department, by certified mail-return receipt requested. The Oregon Division of State Lands shall also be notified of the application. The Parks and Recreation Department and Division of State Lands will have 15 working days from the date of mailing to respond before a decision is rendered. (1/5/09)

706 HABITAT CONSERVATION AREA DISTRICT (HCAD) (1/5/09)

706.01 PURPOSE

Section 706 is adopted to implement the policies of the Comprehensive Plan for Habitat Conservation Areas.

706.02 AREA OF APPLICATION

- A. Section 706 applies in the Habitat Conservation Area District (HCAD). The HCAD applies to all parcels containing a Habitat Conservation Area (HCA). The HCAD also applies to any area that is less than 100 feet outside the boundary of an HCA even if the area is not located on the same parcel as the HCA. HCAs are identified on maps adopted by reference in Chapter 3 of the Comprehensive Plan (hereinafter referred to as the HCA Map) and are categorized as High, Moderate, or Low HCA. Notwithstanding the HCA Map, however, Section 706 does not apply to areas that are outside both the Metropolitan Service District Boundary and the Portland Metropolitan Urban Growth Boundary.
- B. An applicant may dispute the location of an HCA by submitting an application for HCA Map Verification pursuant to Subsection 706.06(B) or by applying for a Comprehensive Plan amendment to modify the HCA Map. HCA Map Verification does not amend the Comprehensive Plan.
- C. Development within an HCA in accordance with the provisions of Section 706 shall not result in removal of such developed areas from the HCA and shall not change the applicable HCA category.

706.03 DEFINITIONS

Unless specifically defined in Subsection 706.03, words or phrases used in Section 706 shall be interpreted to give them the same meaning as they have in common usage and to give Section 706 its most reasonable application.

- A. **Bankfull Stage:** The stage or elevation at which water overflows the natural banks of streams or other waters of the state and begins to inundate the upland. The bankfull stage may be approximated using either the two-year recurrence interval flood elevation or one foot measured vertically above the ordinary mean high water line.
- B. **Building Footprint:** The area that is covered by buildings or other roofed structures. A roofed structure includes any structure more than six feet above grade at any point, and that provides an impervious

cover over what is below. Building footprint also includes uncovered horizontal structures such as decks, stairways, and entry bridges that are more than six feet above grade. Eaves are not included in the building footprint. Underground facilities and structures are defined based on the foundation line.

- C. Developed Areas Not Providing Vegetative Cover: Areas that do not meet the definition of Forest Canopy, Low Structure Vegetation or Open Soils, or Woody Vegetation.
- D. Developed Flood Area: A flood area (a) upon which a building or other structure has been located, or (b) that is an uncovered, hard-surfaced area or an area covered with a perforated hard surface (such as “Grasscrete”) that is able to withstand vehicular traffic or other heavy-impact uses; provided, however, that graveled areas shall not be considered developed flood areas.
- E. Development: Any manmade change defined as structures, roads, utilities, mining, dredging, paving, filling, or grading in amounts greater than 10 cubic yards. In addition, “development” is any other activity that results in the removal of more than 10 percent or 20,000 square feet of the Habitat Conservation Area vegetation on a lot of record, whichever is less. The calculation of the amount of vegetative cover removed shall be done separately for each lot of record and shall include all vegetative cover removed after January 5, 2009, regardless of whether the removal is done as one project or a series of projects. When individual trees are removed, the area contained within the tree’s drip line shall be the basis for calculating the square footage of vegetation removed.
- F. Disturb: Manmade changes to the existing physical status of the land, which are made in connection with development.
- G. Disturbance Area: An area that contains all temporary and permanent development, exterior improvements, and staging and storage areas on the site. For new development the disturbance area must be contiguous. The disturbance area does not include agricultural and pasture lands or naturalized areas.
- H. Drip Line: The outermost edge of a tree’s canopy; when delineating the drip line on the ground, it will appear as an irregularly shaped circle defining the canopy’s perimeter.
- I. Ecological Functions: The primary biological and hydrologic characteristics of healthy fish and wildlife habitat. Riparian ecological functions include microclimate and shade, streamflow moderation and water storage, bank stabilization and sediment/pollution control,

sources of large woody debris and natural channel dynamics, and organic material sources. Upland wildlife ecological functions include size of habitat area, amount of habitat with interior conditions, connectivity of habitat to water resources, connectivity to other habitat areas, and presence of unique habitat types.

- J. Emergency: Any manmade or natural event or circumstance causing or threatening loss of life, injury to person or property, and includes, but is not limited to, fire, explosion, flood, severe weather, drought, earthquake, volcanic activity, spills or releases of oil or hazardous material, contamination, utility or transportation disruptions, and disease.
- K. Enhancement: The process of improving upon the natural functions and/or values of an area or water resource that has been degraded by human activity. Enhancement activities may or may not return the site to a pre-disturbance condition, but create/recreate beneficial processes and resources that occur naturally.
- L. Erosion: The movement of soil particles resulting from actions of water or wind.
- M. Fill: Any material such as, but not limited to, sand, soil, rock, or gravel that is placed in a wetland or flood area for the purposes of development.
- N. Flood Areas: Lands contained within the Floodplain Management District regulated by Section 703 and lands that were inundated in the February 1996 flood. (Note: Areas that were mapped as flood areas but were filled to a level above the base flood level prior to September 30, 2005, consistent with all applicable local, state, and federal laws shall no longer be considered habitat based on their status as flood areas.)
- O. Flood Management Areas: Flood areas and, in addition, lands that have documented evidence of flooding.
- P. Forest Canopy: 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 resource.
- Q. Habitat-Friendly Development: A method of developing property that has less detrimental impact on fish and wildlife habitat than do traditional development methods. Examples include clustering development to avoid habitat, using alternative materials and designs such as pier, post, or piling foundations designed to minimize tree root disturbance, managing storm water on-site to help filter rainwater and recharge groundwater sources, collecting rooftop water in rain barrels

for reuse in site landscaping and gardening, and reducing the amount of effective impervious surface created by development.

- R. Invasive Non-Native or Noxious Vegetation: Plant species that are listed in the Oregon Department of Agriculture's Noxious Weed Policy and Classification System.
- S. Low Structure Vegetation or Open Soils: 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).
- T. Mitigation: The reduction of adverse effects of proposed development by considering, in the following order
 1. Avoiding the impact by not taking a certain action or parts of an action;
 2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 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
 5. Compensating for the impact by replacing or providing comparable substitute Habitat Conservation Areas.
- U. Native Vegetation: Vegetation native to the Portland metropolitan area provided that it is not invasive non-native or noxious vegetation.
- V. Open Space: Land that is undeveloped and that is planned to remain so indefinitely. The term encompasses parks, forests, and farmland. It may also refer only to land zoned as being available to the public, including playgrounds, watershed preserves, and parks.
- W. Ordinary Mean High Water Line: The line on the bank or shore to which water ordinarily rises in season.
- X. Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall

project purpose and probable impact on ecological functions. The practicability of a development option shall include consideration of the type of HCA that will be affected by the proposed development. For example, High HCAs have been so designated because they are areas that have been identified as having lower urban development value and higher-valued habitat, so it should be more difficult to show that alternative development options that avoid the habitat are not practicable. On the other hand, Low HCAs have been so designated because they are areas that have been identified as having higher urban development value and lower-valued habitat, so it should be less difficult to show that alternative development options that avoid the habitat are not practicable.

- Y. Restoration: The process of returning a disturbed or altered area or water resource to a previously existing natural condition. Restoration activities reestablish the structure, function, or diversity to that which existed prior to impacts caused by human activity.
- Z. Riparian: Those areas associated with streams, lakes, and wetlands where vegetation communities are predominately influenced by their association with water.
- AA. Significant Detrimental Impact: An impact that affects the natural environment, considered individually or cumulatively with other impacts on the HCA, to the point where existing fish and wildlife habitat functional values are degraded.
- BB. Stormwater: The surface water runoff that results from all natural forms of precipitation.
- CC. Stormwater Pretreatment Facility: Any structure or drainage way that is designed, constructed, and maintained to collect and filter, retain, or detain surface water run-off during and after a storm event for the purpose of water quality improvement.
- DD. Stream: A body of running water moving over the earth's surface in a channel or bed, such as a creek, rivulet, or river. A stream flows at least part of the year, including perennial and intermittent streams. Streams are dynamic in nature and their structure is maintained through build-up and loss of sediment.
- EE. Structure: A building or other major improvement that is built, constructed, or installed, not including minor improvements—such as fences, utility poles, flagpoles, or irrigation system components—that are not customarily regulated through zoning codes.
- FF. Urban Development Value: The economic value of a property lot or parcel as determined by analyzing three separate variables: assessed

land value, value as a property that could generate jobs (“employment value”), and the Metro 2040 design type designation of property. The urban development value of all properties containing regionally significant fish and wildlife habitat is depicted on the Metro Habitat Urban Development Value Map.

- GG. Utility Facilities: Buildings, structures, or any constructed portion of a system that provides for the production, transmission, conveyance, delivery, or furnishing of services including, but not limited to, heat, light, water, power, natural gas, sanitary sewer, stormwater, telephone, and cable television. Utility facilities do not include stormwater pre-treatment facilities.
- HH. Water Resource: All rivers, streams (regardless of whether they carry year-round flow, i.e., including intermittent streams), springs which feed streams and wetlands and have year-round flow, flood management areas, wetlands, and all other bodies of open water.
- II. Watershed: A watershed is 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.
- JJ. Wetlands: Areas that are inundated or saturated by surface water 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.
- KK. Woody Vegetation: 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.

706.04 EXEMPT USES

The following uses and activities are exempt from the requirements of Section 706, except that if the use or activity requires a building or grading permit, a Construction Management Plan shall be required pursuant to Subsection 706.06(A). Notwithstanding the requirement for HCA Map Verification under Subsection 706.06(B), the HCA Map shall be deemed reliable for the purpose of administering Subsection 706.04 unless an approved HCA Map Verification exists for the subject property, in which case the approved HCA Map Verification shall be used to administer Subsection 706.04.

- A. Uses and activities that do not constitute development, except if the use or activity is prohibited by Subsection 706.05;
- B. Development that:
 - 1. Had it been proposed prior to January 5, 2007, would not have required a land use, building, erosion prevention and sediment control, or grading permit; and
 - 2. Is located on a parcel that is developed with a dwelling for which a building or manufactured home placement permit was issued prior to January 5, 2007, or a dwelling that was lawfully established prior to the requirement to obtain such a permit;
- C. Development, authorized by a valid design review or conditional use permit for which a complete application was submitted prior to January 5, 2009, provided that the development will not result in an increase in the HCA disturbance area approved under the design review or conditional use permit;
- D. Development on a partition parcel or a subdivision lot, provided that the parcel or lot is part of a partition or subdivision approved pursuant to Subsection 706.10(A)(4) or (B);
- E. Maintenance, alteration, expansion, repair, and replacement of existing structures, provided that the building footprint is not increased;
- F. Expansion or replacement of an existing structure, provided that:
 - 1. The expansion or replacement shall not intrude more than 500 square feet into the HCA in addition to the building footprint that lawfully existed on January 5, 2007. If more than one expansion or replacement of the same structure is undertaken—regardless of whether the work is done as one project or a series of projects—the total increase in the intrusion in the HCA shall not exceed this 500-square-foot limit;
 - 2. The new intrusion into the HCA shall be no closer to the protected water resource than the pre-existing structure; and
 - 3. Replacement is lawfully commenced within one year of destruction of the original structure. “Lawfully commenced” means the filing of an application for a land use, building, septic, grading, manufactured dwelling or residential trailer placement, plumbing, electrical, or other development permit required by the County or other appropriate permitting agency that is necessary to begin replacement of the structure.

- G. Development that will have a disturbance area that does not exceed 120 square feet. If more than one development is undertaken pursuant to this exemption—regardless of whether the work is done as one project or a series of projects—the total disturbance area shall not exceed this 120 square-foot limit;
- H. Temporary clearing of vegetative cover in an HCA, not to exceed 200 square feet per lot of record, for the purpose of site investigations and pits for preparing soil profiles, provided that cleared areas are replanted with native vegetation when the investigation is complete. After replanting, no open soil areas greater than 25 square feet in area shall remain. If a tree is removed, the area contained within the tree’s drip line shall be the basis for calculating the square footage of vegetative cover removed. If a tree is removed in an HCA and the tree is equal to or greater than 6 inches in diameter at breast height, it shall be replaced as set forth in Table 6;
- I. Maintenance of existing gardens, pastures, lawns, and landscaping, including the installation of new irrigation systems within existing gardens, pastures, lawns, and landscaping;
- J. Removal of invasive non-native or noxious vegetation and the planting or propagation of native vegetation, provided that:
 - 1. Handheld tools are used to remove invasive non-native or noxious vegetation; and
 - 2. After such removal, all open soil areas greater than 25 square feet are replanted with native vegetation;
- K. Farming practices, as defined in Oregon Revised Statutes (ORS) 30.930, and farm uses, as defined in ORS 215.203, in zoning districts where agricultural uses are a primary use, except that this exemption does not apply to buildings associated with farm practices or farm uses;
- L. Forest practices, as defined in ORS 30.930, on forestlands, as defined in ORS 30.930, outside the Portland Metropolitan Urban Growth Boundary;
- M. Maintenance, alteration, repair, and replacement of existing roads, railroads, and utilities, provided that there is no additional intrusion into the HCA;
- N. Maintenance and repair of existing manmade water control facilities, such as irrigation and drainage ditches, constructed ponds and lakes, wastewater facilities, and stormwater pre-treatment facilities;

- O. Projects with the sole purpose of restoring or enhancing wetlands, streams, or fish and wildlife habitat areas, provided that the project is part of an approved local, regional, state, or federal restoration or enhancement plan;
- P. Removal of dead or diseased trees or trees that pose an imminent hazard to persons or property, provided that a consulting arborist's report, or other credible evidence, is provided by the owner of the subject property and verifies the dead, diseased, or hazardous condition of the trees proposed for removal;
- Q. Low-impact outdoor recreation facilities for public use, such as multi-use paths, trails, picnic areas, interpretive and educational displays, and overlooks, provided that:
 - 1. The facility is located outside of a Water Quality Resource Area regulated pursuant to Section 709;
 - 2. The facility includes less than 500 square feet of new impervious surface; and
 - 3. Any proposed trails are constructed using non-hazardous, pervious materials, with a maximum width of four feet;
- R. Emergency procedures or activities undertaken which are necessary to remove or abate hazards and nuisances, or for the protection of public health, safety, and welfare, provided that:
 - 1. Such remedial or preventative action must take place within a timeframe too short to allow for compliance with the requirements of Section 706; and
 - 2. After the emergency, the owner shall mitigate adverse impacts to the HCA resulting from the emergency action; and
- S. Facilities that infiltrate stormwater onsite, including the associated piping, provided that forest canopy and areas within the drip lines of trees are not disturbed and that only native vegetation is planted in these facilities. Such facilities may include, but are not limited to, vegetated swales, rain gardens, vegetated filter strips, and vegetated infiltration basins.

706.05 PROHIBITED USES

The following uses and activities are prohibited within a Habitat Conservation Area:

- A. The planting of invasive non-native or noxious vegetation; and

- B. Outside storage of materials and equipment, unless such storage began before January 5, 2009, or is approved pursuant to review under Subsection 706.06(C).

706.06 DEVELOPMENT REVIEW REQUIREMENTS

The following review requirements are applicable to development in the Habitat Conservation Area District (HCAD) unless such development is exempt pursuant to Subsection 706.04.

- A. A Construction Management Plan (CMP), consistent with Subsection 706.08, shall be required for development in the HCAD, regardless of whether development will occur within an HCA. However, if an area is in the HCAD solely because it is less than 100 feet outside the boundary of an HCA located on a different parcel, Subsection 706.06(A) shall not apply unless HCA Map Verification required pursuant to Subsection 706.06(B) determines that an HCA exists on the same parcel as the area for which development is proposed. An application for a CMP shall be reviewed pursuant to one of the following processes:
 - 1. The application shall be reviewed pursuant to Subsection 104.01(C); or
 - 2. The application shall be filed concurrently with an application for review under Subsection 706.06(B) or 706.06(C), in which case the applications will be consolidated and reviewed pursuant to the process required by Subsection 706.06(B)(4) or 706.06(C)(3), respectively;
- B. In order to confirm the location of an HCA, HCA Map Verification, consistent with Subsection 706.09, shall be required or allowed as follows:
 - 1. HCA Map Verification shall be required for:
 - a. Development that is proposed to be either in an HCA or less than 100 feet outside of the boundary of an HCA, as shown on the HCA Map; or
 - b. A parcel that:
 - i. Either contains an HCA, or any part of which is less than 100 feet outside the boundary of an HCA, as shown on the HCA Map; and
 - ii. Is the subject of a land use application for a partition, subdivision, or any other land use application the approval

of which would authorize new development on the subject parcel.

2. An application for HCA Map Verification may be submitted even if one is not required pursuant to Subsection 706.06(B)(1).
 3. If a parcel is subject to Subsection 706.06(B)(1)(b), an application for HCA Map Verification shall be filed concurrently with the other land use application referenced in Subsection 706.06(B)(1)(b)(ii) unless a previously approved HCA Map Verification for the subject property remains valid.
 4. An application for HCA Map Verification shall be reviewed pursuant to Subsection 1305.02 unless the application is filed concurrently with another land use application that requires review by the Hearings Officer, in which case the applications will be consolidated and reviewed pursuant to the Hearings Officer review provisions of Section 1300.
 5. Notice required by Subsection 1302.01(B) or 1305.02(F) shall be provided to Metro and any watershed council recognized by the Oregon Watershed Enhancement Board and whose boundaries include the subject property.
- C. An HCA Development Permit, consistent with Subsection 706.10, shall be required for:
1. Development in an HCA or for a parcel that:
 - a. Contains an HCA; and
 - b. Is the subject of a land use application for a partition or subdivision.
 2. If a parcel is subject to Subsections 706.06(C)(1)(a) and (b), an application for an HCA Development Permit shall be filed concurrently with the application for a partition or subdivision.
 3. An application for an HCA Development Permit shall be reviewed pursuant to Subsection 1305.02 unless the application is filed concurrently with another land use application that requires review by the Hearings Officer, in which case the applications will be consolidated and reviewed pursuant to the Hearings Officer review provisions of Section 1300.
- D. HCA Map Verification and HCA Development Permits shall be valid for five years from the date of the final written decision, except:

1. If development lawfully commences within the five-year time period, HCA Map Verification and HCA Development Permits shall remain valid until the development is complete or has been abandoned. Development will be considered to be abandoned if building or grading permits authorizing the development have lapsed or work not requiring a building or grading permit has been discontinued for more than one year; and
2. HCA Map Verification that was valid on the date when the final plat for a subdivision or partition was recorded with the County Clerk shall remain valid for subsequent development on the lots or parcels created by the subdivision or partition.

706.07 SUBMITTAL REQUIREMENTS

Applications filed pursuant to Section 706 shall comply with the following submittal requirements.

- A. An application for a Construction Management Plan shall include:
 1. A completed land use application on a form provided by the County Planning Division;
 2. A site plan of the subject property, drawn to scale and identifying the following:
 - a. Location and type of existing and proposed development, including but not limited to, building footprints, roads, driveways, parking areas, utilities, onsite sewage disposal systems, wells, landscaping, and filling or grading in an amount greater than 10 cubic yards. Label each element as existing or proposed;
 - b. Location and width of existing adjacent roads and road rights-of-way;
 - c. Location of the Habitat Conservation Area (HCA) as shown on the HCA Map or as identified pursuant to an approved HCA Map Verification;
 - d. Drip lines outside the HCA of trees that are inside the HCA;
 - e. Distance between the HCA boundary and proposed development outside the HCA;
 - f. The site ingress and egress proposed to be used by construction vehicles;
 - g. Proposed equipment and material staging and stockpile areas; and

- greater than 10 cubic yards. Label the elements that were developed after August 1, 2002;
- ii. Location and width of existing adjacent roads and road rights-of-way;
 - iii. Location of the HCA as shown on the HCA Map, including off-site HCA where review is required due to proposed development within 100 feet outside the HCA boundary and including the location of High, Moderate, and Low HCA; and
 - iv. Location of the HCA as proposed by the applicant, including the location of High, Moderate, and Low HCA;
- b. A summer 2005 aerial photograph of the subject property (or, if available, an aerial photograph taken closer to, but not after, January 5, 2009), 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 at least one map inch equal to 100 feet for larger lots (available from the Metro Data Resource Center, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742);
 - c. Any approved development permits (e.g. building, grading, land use) and site plans related to the development of the property that took place between August 1, 2002, and January 5, 2009; and
 - d. A narrative that correlates with the submitted site plan and development permits and identifies the type and scope of the new development that has occurred and the previously identified habitat that no longer exists because it is now part of a developed area; and
5. For an application filed pursuant to Subsection 706.09(A)(4):
- a. A site plan of the subject property, drawn to scale and identifying the following:
 - v. Location and type of existing development, including but not limited to, building footprints, roads, driveways, parking areas, utilities, onsite sewage disposal systems, wells, landscaping, and filling or grading in an amount greater than 10 cubic yards;
 - vi. Location and width of existing adjacent roads and road rights-of-way;
 - vii. Location of the HCA as shown on the HCA Map, including off-site HCA where review is required due to proposed development within 100 feet outside the HCA boundary

and including the location of High, Moderate, and Low HCA;

- viii. Location of the HCA as proposed by the applicant, including the location of High, Moderate, and Low HCA;
 - ix. Location of any rivers, streams, wetlands, and flood areas;
 - x. Location of agricultural areas (e.g. pastures, orchards);
 - xi. Location of naturalized areas (e.g. meadows, woods); and
- b. A report prepared and signed by either a qualified natural resource professional - such as a wildlife biologist, botanist, or hydrologist - or an environmental engineer registered in Oregon. The report shall include:
- i. 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;
 - ii. Additional aerial photographs if the applicant believes they provide better information regarding the subject property, including documentation of the date and process used to take the photographs and an expert's interpretation of the additional information they provide;
 - iii. A topographic map of the subject property, drawn to scale and shown by contour lines of two-foot intervals for slopes less than 15 percent and 10-foot intervals for slopes 15 percent or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed; and
 - iv. A narrative analysis and any additional documentation necessary to address each step of the verification process set forth in Subsection 706.09(E).
- C. An application for an HCA Development Permit under Subsection 706.10(A) shall include:
- 1. A completed land use application on a form provided by the County Planning Division;
 - 2. A site plan of the subject property, drawn to scale and identifying the following:
 - a. Location and type of existing and proposed development, including but not limited to, building footprints, roads, driveways, parking areas, utilities, onsite sewage disposal systems, wells, landscaping, and filling or grading in an

- amount greater than 10 cubic yards. Label each element as existing or proposed;
- b. Location and width of existing adjacent roads and road rights-of-way;
 - c. Location of the HCA as identified pursuant to a valid HCA Map Verification, and including the location of High, Moderate, and Low HCA;
 - d. Location of any rivers, streams, wetlands, and flood areas;
 - e. Location of agricultural areas (e.g. pastures, orchards);
 - f. Location of naturalized areas (e.g. meadows, woods);
 - g. Drip lines outside the HCA of trees that are inside the HCA;
 - h. For a property containing less than one acre of HCA, the location of all trees within the HCA that are greater than six inches diameter at breast height (DBH), identified by DBH and species. For properties containing one acre or more of HCA, the applicant may approximate the number of trees within the HCA that are greater than six inches DBH and the DBH range, and provide a listing of the dominant species;
 - i. The location of all trees with a DBH of six inches or greater that are proposed to be removed, identified by DBH and species;
 - j. The site ingress and egress proposed to be used by construction vehicles;
 - k. Proposed equipment and material staging and stockpile areas; and
 - l. Location of any Water Quality Resource Area regulated by Section 709;
3. A mitigation plan that demonstrates compliance with Subsections 706.10(A)(6), (7), and, if applicable, (8);
 4. If offsite mitigation is proposed pursuant to Subsection 706.10(A)(7)(b), the mitigation plan required by Subsection 706.07(C)(3) shall address both the subject property and the alternate mitigation site and shall document the following:
 - a. The number of trees and shrubs that can be planted onsite;
 - b. The onsite location where those trees and shrubs can be planted;
 - c. An explanation of why it is not practicable for the remainder of the mitigation to occur onsite; and

- d. Identification of the proposed location for off-site mitigation and documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site, and, if the mitigation is not within an HCA, documentation that the mitigation site will be protected from development after the monitoring period expires by a restrictive covenant, conservation easement, or public dedication;
 5. If the applicant proposes to vary the number and size of required trees and shrubs pursuant to Subsection 706.10(A)(8), a report, prepared and signed by a qualified professional, such as a botanist or a certified landscape architect, that:
 - a. Explains 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 706.10(A)(6)(a) through (c); and
 - b. Discusses site preparation, including soil additives, 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. An application for an HCA Development Permit under Subsection 706.10(B) shall include:
 1. The items listed in Subsections 706.07(C)(1) and (2);
 2. A topographic map of the subject property, drawn to scale and shown by contour lines of two-foot intervals for slopes less than 15 percent and 10-foot intervals for slopes 15 percent or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed;
 3. If grading will occur within the HCA, a grading plan showing the proposed alteration of the ground at one-foot vertical contours in areas of slopes less than five percent, two-foot vertical contours in areas of slopes from five percent to 15 percent, and five-foot vertical contours in areas of slopes greater than 15 percent;
 4. An Impact Evaluation and Alternatives Analysis, prepared and signed by either a qualified natural resource professional—such as a wildlife biologist, botanist, or hydrologist—or an environmental engineer registered in Oregon. The report shall include:

- a. A description of the qualifications and experience of all persons that contributed to the analysis, and, for each person that contributed, a description of the elements of the analysis to which the person contributed;
 - b. Identification of the ecological functions of the HCA on the subject property. The ecological functions to be evaluated are those identified in Subsections 706.10(B)(2)(b)(i) through (iii);
 - c. Evaluation of alternative locations, design modifications, or alternative methods of development to determine which options reduce significant detrimental impacts on the HCA and the ecological functions provided by the HCA. At a minimum, the approaches identified in Subsections 706.10(B)(1)(a) through (g) shall be considered; and
 - d. Determination of the alternative that best meets the applicable approval criteria, and identification of unavoidable significant detrimental impacts; and
5. A mitigation plan that demonstrates compliance with Subsections 706.10(A)(6), (7), and, if applicable, (8) or an alternative mitigation plan. An alternative mitigation plan shall be prepared and signed by a qualified professional, such as a botanist or a certified landscape architect. The report shall include:
- a. A description of the qualifications and experience of all persons that contributed to the plan, and, for each person that contributed, a description of the elements of the plan to which the person contributed;
 - b. An explanation of how the proposed mitigation will adequately compensate for the impacts to ecological functions described in the Impact Evaluation and Alternatives Analysis. The mitigation that would be required under Subsections 706.10(A)(6) and (7)(a) may be used as the baseline mitigation required to compensate for disturbance to an HCA that provides an average level of ecological functions. The explanation shall include:
 - i. If the mitigation that would be required under Subsections 706.10(A)(6) and (7)(a) is used as the baseline mitigation required to compensate for disturbance to an HCA, a calculation of the number of trees and shrubs that would be required under Subsection 706.10(A)(6)(a);
 - ii. A site plan showing where the specific mitigation activities will occur and the numbers and sizes of trees and shrubs that are proposed to be planted; and

- iii. A discussion of site preparation, including soil additives, 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;
- c. Documentation of coordination with appropriate local, regional, special district, state, and federal regulatory agencies;
- d. A list of all parties responsible for implementing and monitoring the mitigation plan and, if mitigation will occur offsite, the names of the owners of property where mitigation plantings will occur;
- e. A mitigation site monitoring and reporting plan;
- f. If the proposed mitigation will not be conducted onsite, a map and accompanying narrative that details the following:
 - i. The number of trees and shrubs that can be planted onsite;
 - ii. The onsite location where those trees and shrubs can be planted;
 - iii. An explanation of why it is not practicable for the remainder of the mitigation to occur onsite; and
 - iv. The proposed location for off-site mitigation and documentation that the applicant can carry out and ensure the success of the mitigation, including documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site, and, if the mitigation is not within an HCA, documentation that the mitigation site will be protected from development after the monitoring period expires by a restrictive covenant, conservation easement, or public dedication;
- g. If the mitigation area is offsite and not within the same subwatershed (6th Field Hydrologic Unit Code) as the disturbed HCA, an explanation of why it is not practicable to conduct the mitigation within the same subwatershed and of why and how, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed; and
- h. An implementation schedule, including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting and a contingency plan. If in-stream work in fish-bearing streams is proposed as part of the mitigation plan, documentation that such work will be done in accordance with

the Oregon Department of Fish and Wildlife in-stream work timing schedule shall be submitted.

- E. Except for utility facilities reviewed pursuant to Subsection 706.10(A)(1) and notwithstanding any other provisions of Subsection 706.07, for utility facilities developed by public utilities on property that is not owned by the utility, the utility shall not be required to map or provide any information about the property except for the area within 300 feet of the proposed disturbance area.

706.08 CONSTRUCTION MANAGEMENT PLANS

A Construction Management Plan (CMP) shall comply with the following criteria.

- A. Erosion prevention and sediment control (EPSC) measures shall be required and shall comply with the standards of the EPSC regulatory authority.
- B. Orange construction fencing (i.e. safety fencing, snow fencing, or a comparable product) shall be installed on or outside the boundary of the HCA, except where the drip line of a protected tree extends outside the HCA, in which case the drip line shall be included inside the fencing. This requirement may be modified or waived if:
 - 1. Disturbance of the HCA is authorized pursuant to Subsection 706.04 or 706.10, in which case the fencing shall be installed in such a manner as to protect the area of the HCA not authorized for disturbance; or
 - 2. The HCA is already lawfully developed, in which case the fencing shall be installed in such a manner as to protect any water resource that is the basis for the HCA designation and any area of the HCA where naturalized vegetative cover exists.
- C. Trees in the HCA shall not be used as anchors for stabilizing construction equipment.
- D. Native soils disturbed during development shall be conserved on the subject property.
- E. Development shall not commence until the EPSC measures and fencing required pursuant to Subsections 706.08(A) and (B) are in place.
- F. Compliance with the CMP shall be maintained until the development is complete.

706.09 HCA MAP VERIFICATION

HCA Map Verification shall be subject to the following criteria.

- A. An applicant for HCA Map Verification shall use one or more of the following methods to verify the Habitat Conservation Area (HCA) boundary and, if applicable, the boundary between High, Moderate, and Low HCA.
 - 1. The applicant may concur with the accuracy of the HCA Map of the subject property;
 - 2. The applicant may demonstrate that a computer mapping error was made in the creation of the HCA map (e.g., the mapped vegetative cover layer—which was derived from aerial photographs taken in the summer of 2002 and was used to establish the Vegetative Cover Map and the HCA Map—in Metro’s geographic information system database does not align precisely with the tax lot layer, thereby resulting in an HCA Map of the subject property that is also misaligned with tax lot lines);
 - 3. The applicant may demonstrate that the subject property was developed lawfully between August 1, 2002 (when the taking of the aerial photographs used to determine the regional habitat inventory commenced) and January 5, 2009 and, therefore, that the HCA boundary or category (High, Moderate, or Low) is inaccurate; or
 - 4. If the identified HCA is riparian habitat rather than publicly-owned upland habitat, the applicant may demonstrate that the HCA Map is inaccurate for a reason other than those described in Subsections 706.09(A)(2) and (3).
- B. The Planning Director or, if the application is reviewed pursuant to the Hearings Officer review provisions of Section 1300, the Hearings Officer, shall determine the location of any HCA on the subject property by considering information submitted by the applicant, information collected during any site visit that may be made to the subject property, information generated by prior HCA Map Verification that has occurred on adjacent properties, and any other relevant information that has been provided.
- C. For applications filed pursuant to Subsection 706.09(A)(1) or (2), the HCA Map shall be deemed to be accurate unless, as described in Subsection 706.09(A)(2), there was a computer mapping error (e.g., an alignment error) made in the creation of the HCA map.

- D. For applications filed pursuant to Subsection 706.09(A)(3), developed areas not providing vegetative cover shall be removed from the HCA, provided that they were developed lawfully between August 1, 2002, and January 5, 2009, and are more than 50 feet from the water resource. Developed areas not providing vegetative cover that were developed lawfully between August 1, 2002, and January 5, 2009, and are 50 feet or less from the water resource, shall remain classified as HCA, but the HCA category shall be changed if necessary to remain consistent with Tables 1 and 2.
- E. For applications filed pursuant to Subsection 706.09(A)(4), the HCA boundary shall be established as follows:
1. Locate the water resource that was inventoried by Metro and is the basis for the HCA designation, including: Bankfull stage of streams, rivers, and bodies of open water on or within 200 feet of the subject property; flood areas on or within 100 feet of the subject property; and wetlands on or within 150 feet of the subject property based on the 1994 Clackamas County Wetland Inventory maps adopted by reference in Chapter 3 of the Comprehensive Plan and the Metro 2002 Wetland Inventory Map (available from the Metro Data Resource Center, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742). Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the U.S. Army Corps of Engineers.
 2. Identify the vegetative cover status of all areas on the subject property that are within 200 feet of the bankfull stage of streams, rivers, and bodies of open water; are wetlands or are within 150 feet of wetlands; and are flood areas or are within 100 feet of flood areas.
 - a. Vegetative cover status shall be as identified on the Metro Vegetative Cover Map (available from the Metro Data Resource Center, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742); or
 - b. Vegetative cover status may be adjusted if the property was developed lawfully between August 1, 2002, and January 5, 2009, or an error was made at the time the vegetative cover status was determined by Metro. 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 provided in Subsection 706.03.

3. Determine whether the degree that the land slopes upward from all streams, rivers, and bodies of open water on or within 200 feet of the subject property is greater than or less than 25 percent. A minimum of three slope measurements along the water resource shall be made on the subject property. The measurements shall be made at no more than 100-foot increments, which means that more than three measurements may be required, depending on the length of the water resource on the subject property. Slope shall be measured in 25-foot increments away from the water resource until a point 200 feet from the starting point of measurement is reached. Where the protected water resource is confined by a ravine or gully, the top of ravine is the break in the greater-than-25-percent slope; and
4. Using Table 1 and the data identified pursuant to Subsections 706.09(E)(1) through (3), identify all Class I and II riparian areas on the subject property. The riparian class may vary within a single property.

Table 1: Method for Locating Boundaries of Class I and II Riparian Areas

Distance from Water Resource	Vegetative Cover Status ¹			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody vegetation	Forest canopy
Streams				
0-50'	Class II	Class I ²	Class I	Class I
50'-100'		Class II ³	Class I	Class I
100'-150'		Class II ³ if slope>25%	Class II ³ if slope>25%	Class II ³
150'-200'		Class II ³ if slope>25%	Class II ³ if slope>25%	Class II ³ if slope>25%
Wetlands (Wetland itself is a Class I Riparian Area)				
0-100'		Class II ³	Class I	Class I
100'-150'				Class II ³
Flood Areas				
Within 300' of river or surface stream		Class I	Class I	Class I
More than 300' from river or surface stream	See footnote 4.	Class II ³	Class II ³	Class I
0-100' from edge of flood area			Class II ^{3,5}	Class II ³

- ¹ The vegetative cover type assigned to any particular area is based on two factors: the type of vegetation and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belongs. For example, in order to qualify as “forest canopy,” the forested area has to be part of a larger patch of forest of at least one acre in size.
 - ² These areas shall be Class II riparian areas if the stream is a high gradient stream. High gradient streams are identified on the Metro Vegetative Cover Map. If the applicant believes the gradient of a stream was incorrectly identified, then the applicant 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.
 - ³ Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (available from the Metro Data Resource Center, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742), shall be Class I riparian areas, unless additional information is provided 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.
 - ⁴ If development prior to January 5, 2009, within a contiguous, undeveloped flood area (to include contiguous flood areas on adjacent properties) that was not mapped as having any vegetative cover has reduced the size of that contiguous flood area to less than one half of an acre in size, then the remaining flood area shall also be considered a developed flood area and shall not be identified as habitat.
 - ⁵ Only if within 300 feet of a river or surface stream.
5. Use the Metro Habitat Urban Development Value Map (available from the Metro Data Resource Center, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742) to identify the urban development value of the subject property.
 - a. An upward adjustment of the subject property’s urban development value designation shall be made if the Metro 2040 Design Type designation for the subject property 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, 600 N.E. Grand Ave., Portland, OR 97232; 503-797-1742). The urban

development value categories of the 2040 Design Types are identified in the footnotes to Table 2.

- b. If the subject property is owned by a regionally significant educational or medical facility, as designated by Title 13 of the Metro Urban Growth Management Functional Plan, it is designated as of high urban development value.
 - c. If the subject property is located outside the Portland Metropolitan Urban Growth Boundary and therefore does not have a Metro 2040 Design Type designation, it is designated as of high urban development value.
6. Use Table 2 to cross-reference habitat class with urban development value in order to categorize identified HCA as High, Moderate, or Low HCA.

Table 2: Method for Identifying Habitat Conservation Areas (HCA)

Fish & wildlife habitat classification	High urban development value¹	Medium urban development value²	Low urban development value³	Publicly Owned Parks and Open Spaces
Class I Riparian	Moderate HCA	High HCA	High HCA	High HCA ⁴
Class II Riparian	Low HCA	Low HCA	Moderate HCA	Moderate HCA ⁴
Class A Upland Wildlife	No HCA	No HCA	No HCA	High HCA ⁴
Class B Upland Wildlife	No HCA	No HCA	No HCA	High 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 making an adjustment pursuant to Subsection 706.09(E)(5)(a).

¹ Primary 2040 design type: Central City, Regional Centers, 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 and Corridors

⁴ HCAs in publicly owned parks and open spaces designated as natural areas shall be considered High HCA+. HCAs in other publicly owned parks and open spaces shall be designated as shown in Table 2.

706.10 HABITAT CONSERVATION AREA DEVELOPMENT PERMITS

A Habitat Conservation Area (HCA) Development Permit shall be approved if the applicant provides evidence substantiating compliance with either

Subsection 706.10(A) or (B). However, if the proposed development is in a Water Quality Resource Area (WQRA) regulated pursuant to Section 709, it shall comply with either Subsection 706.10(B) or 709.10, except that if the subject parcel contains an HCA and a WQRA and is the subject of a land use application for a partition or subdivision, the partition or subdivision shall comply with the requirements of Subsections 706.10 and 709.11, and if the provisions conflict, the most restrictive standard shall apply.

- A. Development in an HCA shall be permitted subject to the following criteria:
 - 1. Except as provided in Subsections 706.10(A)(2) through (5), a maximum disturbance area (MDA) shall apply to the subject property.
 - a. For property inside the Portland Metropolitan Urban Growth Boundary (UGB), the MDA shall be calculated pursuant to Table 3 for property with a Comprehensive Plan designation of Urban Low Density Residential and Table 4 for property with any other Comprehensive Plan designation.

Table 3: Maximum Disturbance Area for Urban Low Density Residential Property

HCA Type ¹	Maximum Disturbance Area
High	50 percent of the area of the subject property, up to a maximum of 5,000 square feet
Moderate/Low ²	65 percent of the area of the subject property, up to a maximum of 6,000 square feet

- ¹ If more than one HCA Type is present on the subject property, the MDA shall be based on the predominant type. For the purpose of this provision, High HCA shall be the predominant type if at least 50 percent of the area of the HCA on the subject property is High HCA.
- ² For the purpose of Table 3, Moderate and Low HCA shall be combined as one HCA Type.

Table 4: Maximum Disturbance Area for Other Property Inside the UGB

HCA Type	Maximum Disturbance Area ¹
High	10 percent of High HCA on the subject property
Moderate	15 percent of Moderate HCA on the subject property
Low	50 percent of Low HCA on the subject property

- ¹ The MDA refers only to the maximum percentage of each type of HCA that may be disturbed. Table 4 imposes no limit on disturbance area outside an HCA.

- b. For property outside the Portland Metropolitan Urban Growth Boundary, the MDA shall be calculated pursuant to Table 5, except that the MDA shall be calculated pursuant to Table 4 for:
 - i. Commercial development;
 - ii. Industrial development;
 - iii. Buildings associated with farming practices, as defined in Oregon Revised Statutes (ORS) 30.930, and farm uses, as defined in ORS 215.203, in zoning districts where agricultural uses are a primary use; and
 - iv. Buildings associated with forest practices, as defined in ORS 30.930, on forestlands, as defined in ORS 30.930.

Table 5: Maximum Disturbance Area Outside the UGB

HCA Type ¹	Maximum Disturbance Area
High	5 percent of the area of the subject property or 5,000 square feet, whichever is greater
Moderate/Low ²	5 percent of the area of the subject property or 6,000 square feet, whichever is greater

¹ If more than one HCA Type is present on the subject property, the MDA shall be based on the predominant type. For the purpose of this provision, High HCA shall be the predominant type if at least 50 percent of the area of the HCA on the subject property is High HCA.

² For the purpose of Table 3, Moderate and Low HCA shall be combined as one HCA Type.

- c. For property subject to Table 3 or 5, the MDA shall be located outside the HCA except:
 - i. If the MDA exceeds the non-HCA area, the excess MDA may be located in Low HCA; and
 - ii. If the MDA exceeds the area of non- and Low HCA combined, the excess MDA may be located in Moderate HCA; and
 - iii. If the MDA exceeds the area of non-, Low, and Moderate HCA combined, the excess MDA may be located in High HCA.
- d. In determining compliance with the MDA standard, both existing and proposed disturbance area shall be included in the calculation.

2. The following disturbance area limitations shall apply to certain utility facilities. Utility facilities other than those addressed in Subsections 706.10(A)(2)(a) through (c) shall be subject to Subsection 706.10(A)(1).
 - a. The disturbance area for private connections of utility lines, pipes, or cables to other utility facilities shall be no greater than 10 feet wide.
 - b. The disturbance area for the upgrade of existing utility lines, pipes, or cables shall be no greater than 15 feet wide.
 - c. The disturbance area for new underground utility lines, pipes, or cables shall be no greater than 25 feet wide and shall disturb no more than 200 linear feet of Water Quality Resource Area regulated pursuant to Section 709, within any 1,000 linear foot stretch of Water Quality Resource Area regulated pursuant to Section 709, provided that this disturbance area, with the exception of necessary access points to the utility facility, shall be restored by the planting of native vegetation.³²

3. A partition of a parcel that contains an HCA shall comply with one of the following options:
 - a. There shall be no more than a 30 percentage point difference in the percentage of each parcel's area that is in an HCA. For example, a partition that produces two parcels, one that is 55 percent HCA and the other that is 35 percent HCA, is permissible; whereas a partition that produces two parcels, one that is 75 percent HCA and the other that is 30 percent HCA, is not permissible. In this case, development in the HCA shall be subject to further review under Section 706;
 - b. The partition shall comply with Subsection 706.10(A)(4); or
 - c. The applicant shall demonstrate, through an analysis of different possible partition plans based on the characteristics and zoning of the subject property, that it is not practicable to comply with Subsection 706.10(A)(3)(a) or (b) and that the applicant's alternate plan will result in the smallest practicable percentage point difference in the percentage of each parcel's area that is in an HCA.

4. A subdivision of property that contains an HCA shall require that a minimum of 90 percent of the subject property's High HCA and a minimum of 80 percent of its Moderate HCA shall be platted as a tract rather than as part of any lot. Any HCA that remains outside such a tract may be developed, subject to compliance with the mitigation standards of Subsection 706.10(A) or (B). Unless any HCA that remains outside an HCA tract is protected from

development by a restrictive covenant or a conservation easement, it shall be assumed that such areas eventually will be developed, and mitigation shall be required. Mitigation shall be completed, or a performance bond in an amount sufficient to cover the cost of mitigation shall be posted with the County, prior to approval of the final plat.

- a. If over 50% of the HCA on the subject property is High HCA, the entire calculation is for High (i.e., 90% of the HCA shall be placed within a separate tract).
 - b. If over 50% of the HCA on a property is Moderate HCA, the entire calculation is for Moderate (i.e., 80% of the HCA shall be placed within a separate tract).
 - c. An HCA tract shall be protected from development by restrictive covenant, conservation easement, or public dedication. However, the tract may be subject to an easement conveying storm and surface water management rights to the surface water management authority. The tract shall be designated as one of the following prior to final plat approval:
 - i. A private natural area owned by a homeowners association or a private non-profit with the mission of land conservation; or
 - ii. A public natural area where the tract has been dedicated to a public entity.
5. The MDA for publicly owned parks and open spaces designated as natural areas shall be five percent of the HCA on the subject property. Subsection 706.10(A)(5) imposes no limit on disturbance area outside an HCA for such natural areas.
6. If development in an HCA is approved pursuant to Subsection 706.10(A), compliance with the following mitigation standards shall be required, except that the mitigation standards for development in a wetland (as distinct from an HCA that is adjacent to a wetland) shall be only those required by federal and state law.
- a. Required Plants and Plant Densities. All trees, shrubs and ground cover shall be native vegetation. An applicant shall comply with Subsection 706.10(A)(6)(a)(i) or (ii), whichever results in more tree plantings, except that where the disturbance area is one acre or more, the applicant shall comply with Subsection 706.10(A)(6)(a)(ii).
 - i. The mitigation requirement shall be 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 5. 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; or

Table 6: Tree Replacement

Size of Tree to be Removed (inches in diameter at breast height)	Number of Trees and Shrubs to be Planted
6 to 12	2 trees and 3 shrubs
over 12 to 18	3 trees and 6 shrubs
over 18 to 24	5 trees and 12 shrubs
over 24 to 30	7 trees and 18 shrubs
over 30	10 trees and 30 shrubs

- ii. The mitigation requirement shall be calculated based on the size of the disturbance area within the HCA. Native trees and shrubs shall be planted at a rate of five trees and 25 shrubs per every 500 square feet of disturbance area (calculated by dividing the number of square feet of disturbance area by 500, and then multiplying that result times five trees and 25 shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be 330 square feet of disturbance area, then 330 divided by 500 equals 0.66, and 0.66 times five equals 3.3, so three trees shall be planted, and 0.66 times 25 equals 16.5, so 17 shrubs shall 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.
- b. Plant Size. Replacement trees shall be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees (the one-half inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone which may be one-gallon size. Shrubs shall be in at least a one-gallon container or the equivalent in ball and burlap and shall be at least 12 inches in height.
- c. Plant Spacing. Trees shall be planted between eight and 12 feet on center, and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between eight and 10 feet on center. When planting near existing trees, the drip

line of the existing tree shall be the starting point for plant spacing measurements.

- d. Plant Diversity. Shrubs shall consist of at least two different species. If 10 trees or more are planted, then no more than 50 percent of the trees may be of the same genus.
 - e. Invasive Vegetation. Invasive non-native or noxious vegetation shall be removed within the mitigation area prior to planting, and shall be removed or controlled for five years following the date that the mitigation planting is completed.
 - f. Mulching. Mulch shall be applied around new plantings at a minimum of three inches in depth and 18 inches in diameter.
 - g. Tree and Shrub Survival. Trees and shrubs that die shall be replaced in kind to the extent necessary to ensure that a minimum of 80 percent of the trees initially required and 80 percent of the shrubs initially required shall remain alive on the fifth anniversary of the date that the mitigation planting is completed.
 - h. Monitoring and Reporting. Monitoring of the mitigation site shall be the ongoing responsibility of the property owner. For a period of five years following the date that the mitigation planting is completed, the property owner shall submit an annual report to the Planning Director documenting the survival of the trees and shrubs on the mitigation site. In lieu of complying with the monitoring and reporting requirement, the property owner may post with the County a performance bond, or other surety acceptable to the County, in an amount sufficient to cover costs of plant material and labor associated with site preparation, planting, and maintenance. An applicant who elects to post a surety shall be subject to Subsections 1104.03 through 1104.05.
7. The mitigation area required by Subsection 706.10(A)(6) shall be located as follows:
- a. All vegetation shall be planted on the subject property, either within the HCA or in an area contiguous to the HCA, provided, however, that if the vegetation is planted in an area contiguous to the HCA, such area shall be protected from development by a restrictive covenant, conservation easement, or public dedication.
 - b. Off-site mitigation within the same subwatershed (6th Field Hydrologic Unit Code) as the HCA within which development is proposed, may be approved for part or all of the required

mitigation, if the applicant provides evidence substantiating that:

- i. It is not practicable to complete the mitigation on-site; and
 - ii. The applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site, and, if the mitigation is not within an HCA, that the mitigation site will be protected from development after the monitoring period expires by a restrictive covenant, conservation easement, or public dedication.
8. An applicant may request to proportionally vary the number and size of trees and shrubs required pursuant to Subsections 706.10(A)(6)(a) and (b)—for example, to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs—and a corresponding modification of the plant spacing requirements of Subsection 706.10(A)(6)(c). The request shall be approved if the applicant provides evidence substantiating that 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 Subsections 705.10(A)(6)(a) through (c).

B. Development in an HCA that does not comply with Subsection 706.10(A) shall be permitted subject to the following criteria:

1. Development in the HCA shall be avoided to the extent practicable. If there is more than one category (High, Moderate, or Low) of HCA on the subject property, then the applicant shall first avoid the intrusion of development into the higher-valued HCA, to the extent practicable. To comply with these requirements, the following approaches shall be used, to the extent practicable:
 - a. Multi-story construction;
 - b. Minimizing building and development footprint;
 - c. Maximizing the use of native landscaping materials and meeting applicable landscaping requirements by preservation of the HCA as permitted by Section 1009;
 - d. Minimal excavation foundation systems (e.g., pier, post, or piling foundation);
 - e. Transfer of density from the HCA to another part of the subject property as permitted by Section 1012;

- f. Placing facilities that are required to infiltrate stormwater onsite, including associated piping, within the HCA, provided that such facilities comply with Subsection 706.04(R); and
 - g. Complying with the setback standards of Subsection 706.11 rather than those of the underlying zoning district.
2. If there is no practicable alternative that will avoid disturbance of the HCA, then significant detrimental impacts to the HCA shall be minimized as follows:
- a. The proposed development shall minimize loss of habitat as compared to other practicable alternatives, including significantly different practicable alternatives that would result in less development within the HCA.
 - b. The proposed development shall minimize significant detrimental impacts to ecological functions of the HCA on the subject property as compared to other practicable alternatives, including significantly different practicable alternatives that would result in less development within the HCA. The ecological functions that shall be considered are:
 - i. Connectivity of the habitat to water;
 - ii. Connectivity of the habitat to other habitat areas; and
 - iii. The functions identified in Table 7.

Table 7: Ecological functional values of riparian corridors

Ecological function	Landscape features providing functional values
Microclimate and shade	Forest canopy or woody vegetation within 100 feet of a stream; a wetland ¹ ; or a flood area ²
Streamflow moderation and water storage	A wetland or other water body ³ with a hydrologic connection to a stream; or a flood area ²
Bank stabilization, sediment and pollution control	All sites within 50 feet of a surface stream; Forest canopy, woody vegetation, or low structure vegetation/open soils within 100 feet of a stream or a wetland; or forest canopy, woody vegetation, or low structure vegetation/open soils within a flood area; and Forest canopy, woody vegetation, or low structure vegetation/open soils within 100-200 feet of a stream if the slope is greater than 25 percent
Large wood and channel dynamics	Forest canopy within 150 feet of a stream or wetland, or within a flood area; and The channel migration zone is defined by the flood area, but where there is no mapped flood area, a default of 50 feet is established to allow for the channel migration zone.
Organic material sources	Forest canopy or woody vegetation within 100 feet of a stream or wetland, or within a flood area

¹ Refers to “hydrologically-connected wetlands,” which are located partially or wholly within ¼ mile of a surface stream or flood area.

² Developed flood areas are not identified as HCAs because they do not provide primary ecological functional value.

³ “Other water body” could include lakes, ponds, reservoirs, or manmade water resource that is not a water quality facility or farm pond.

- c. If there is more than one category of HCA on the subject property, then development within a higher-valued HCA shall be considered more detrimental than development within a lower-valued HCA.
- d. To the extent practicable, development in the HCA shall be designed, located, and constructed to:
 - i. Minimize grading, removal of native vegetation, and disturbance and removal of native soils by using the approaches required by Subsection 706.08, reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post, or piling foundation);
 - ii. Minimize adverse hydrological impacts on water resources, such as by using the techniques described in Part (a) of Table 8, unless their use is prohibited by an applicable and required state or federal permit issued to a unit of local

government having jurisdiction in the area, such as a permit required under the federal Clean Water Act, 33 U.S.C. §§1251 et seq., or the federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and including conditions or plans required by such permit;

- iii. Minimize impacts on wildlife corridors and fish passage, such as by using the techniques described in Part (b) of Table 8; and
- iv. Consider using the techniques described in Part (c) of Table 8.

Table 8: Habitat-Friendly Development Practices¹

Part (a): Design and Construction Practices to Minimize Hydrologic Impacts
<p>1. Amend disturbed soils to original or higher level of porosity to regain infiltration and stormwater storage capacity.</p> <p>2. Use pervious paving materials for residential driveways, parking lots, walkways, and within centers of cul-de-sacs.</p> <p>3. Incorporate stormwater management in road right-of-ways.</p> <p>4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.</p> <p>5. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.</p> <p>6. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.</p> <p>7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.</p> <p>8. Use multi-functional open drainage systems in lieu of more conventional curb-and-gutter systems.</p> <p>9. Use bioretention cells as rain gardens in landscaped parking lot islands to reduce runoff volume and filter pollutants.</p> <p>10. Apply a treatment train approach to provide multiple opportunities for storm water treatment and reduce the possibility of system failure.</p> <p>11. Reduce sidewalk width and grade them such that they drain to the front yard of a residential lot or retention area.</p> <p>12. Reduce impervious impacts of residential driveways by narrowing widths and moving access to the rear of the site.</p> <p>13. Use shared driveways.</p> <p>14. Reduce width of residential streets, depending on traffic and parking needs.</p> <p>15. Reduce street length, primarily in residential areas, by encouraging clustering and using curvilinear designs.</p> <p>16. Reduce cul-de-sac radii and use pervious vegetated islands in center to minimize impervious effects, and allow them to be utilized for truck maneuvering/loading to reduce need for wide loading areas on site.</p> <p>17. Eliminate redundant non-ADA sidewalks within a site (i.e., sidewalk to all entryways and/or to truck loading areas may be unnecessary for industrial developments).</p>

Part (a): Design and Construction Practices to Minimize Hydrologic Impacts
<p>18. Minimize car spaces and stall dimensions, reduce parking ratios, and use shared parking facilities and structured parking.</p> <p>19. Minimize the number of stream crossings and place crossing perpendicular to stream channel if possible.</p> <p>20. Allow narrow street right-of-ways through stream corridors whenever possible to reduce adverse impacts of transportation corridors.</p>
Part (b): Design and Construction Practices to Minimize Impacts on Wildlife Corridors and Fish Passage
<p>1. Carefully integrate fencing into the landscape to guide animals toward animal crossings under, over, or around transportation corridors.</p> <p>2. Use bridge crossings rather than culverts wherever possible.</p> <p>3. If culverts are utilized, install slab, arch or box type culverts, preferably using bottomless designs that more closely mimic stream bottom habitat.</p> <p>4. Design stream crossings for fish passage with shelves and other design features to facilitate terrestrial wildlife passage.</p> <p>5. Extend vegetative cover through the wildlife crossing in the migratory route, along with sheltering areas.</p>
Part (c): Miscellaneous Other Habitat-Friendly Design and Construction Practices
<p>1. Use native vegetation throughout the development (not just in HCA).</p> <p>2. Locate landscaping (required by other sections of this Ordinance) adjacent to HCA.</p> <p>3. Reduce light spill-off into HCAs from development.</p> <p>4. Preserve and maintain existing trees and tree canopy coverage, and plant trees, where appropriate, to maximize future tree canopy coverage.</p>

¹ These development practices represent the state of scientific knowledge at the time of the adoption of Section 706. If more effective habitat-friendly practices become available, they may be used.

3. If development in an HCA is approved pursuant to Subsection 706.10(B), compliance with the following mitigation standards shall be required, except that the mitigation standards for development in a wetland (as distinct from an HCA that is adjacent to a wetland) shall be only those required by federal and state law.
 - a. Compliance with Subsections 706.10(A)(6), (7), and, if applicable, (8) shall be required; or
 - b. An alternative mitigation plan (e.g., a proposal to create an alternative plant community type such as an oak savannah or a low-structure plant community, or where an applicant

demonstrates that a portion of identified HCA on the subject property provides only impaired ecological functions) may be approved, subject to the following criteria:

- i. The mitigation plan shall demonstrate that it compensates for significant detrimental impacts to the ecological functions provided by the HCA on the subject property, after taking into consideration efforts to minimize such significant detrimental impacts through the use of the techniques described in Table 8 and through any additional or innovative techniques.
 - ii. Mitigation shall occur on the subject property, except that offsite mitigation may be approved pursuant to Subsection 706.10(A)(7)(b). In addition, off-site mitigation outside the subwatershed (6th Field Hydrologic Unit Code) in which the disturbed HCA is located—but inside the Metropolitan Service District boundary or the Portland Metropolitan Urban Growth Boundary—may be approved if it is not practicable to complete the mitigation within the same subwatershed and if, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.
 - iii. All mitigation plantings shall be native vegetation.
 - iv. All in-stream work in fish-bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife in-stream work-timing schedule.
 - v. A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting.
4. Municipal potable water, stormwater (drainage), 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, shall not have to comply with Subsection 706.10(B)(1), provided that:
- a. Where practicable, the development shall not encroach closer to a water resource than existing operations and development, or for new projects where there are no existing operations or development, the development shall not encroach closer to a water resource than practicable; and

- b. Best management practices shall be employed that accomplish the following:
 - i. Account for watershed assessment information in project design;
 - ii. Minimize the trench area and tree removal within the HCA;
 - iii. Utilize and maintain erosion prevention and sediment control measures until other site stabilization measures are established, post-construction;
 - iv. Replant immediately after backfilling or as soon as effective;
 - v. Preserve wetland soils and retain soil profiles;
 - vi. Minimize compactions and the duration of the work within the HCA;
 - vii. Complete in-water construction during appropriate seasons, or as approved within requisite state or federal permits;
 - viii. Monitor water quality during the construction phases, if applicable; and
 - ix. Implement a full inspection and monitoring program during and after project completion, if applicable.

706.11 SETBACKS

For parcels that contain a Habitat Conservation Area and are inside the Portland Metropolitan Urban Growth Boundary, the minimum front, rear, and side yard setbacks shall be zero, except:

- A. Garages and carports shall comply with the minimum front yard setback of the underlying zoning district; and
- B. A greater setback may be required to comply with applicable fire or life safety requirements.

709 WATER QUALITY RESOURCE AREA DISTRICT (WQRAD) (1/5/09)

709.01 PURPOSE

Section 709 is adopted to implement the policies of the Comprehensive Plan for Water Quality Resource Areas.

709.02 AREA OF APPLICATION

- A. Section 709 applies in the Water Quality Resource Area District (WQRAD). The WQRAD applies to all parcels containing a Water Quality Resource Area (WQRA), provided that such parcels are inside the Metropolitan Service District Boundary or the Portland Metropolitan Urban Growth Boundary and outside the boundaries of both Clackamas County Service District No. 1 and Surface Water Management Agency of Clackamas County. WQRAs are protected water resources and adjacent vegetated corridors as established by Section 709. Protected water resources are classified as primary or secondary.
- B. A wetland shall be a primary protected water resource if the wetland meets any one of the following criteria and is not a constructed wetland:
 - 1. The wetland is fed by surface flows, sheet flows, or precipitation, has evidence of flooding during the growing season, has 60 percent or greater vegetative cover, and is over one-half acre in size;
 - 2. The wetland qualifies as having “intact water quality function” under the 1996 Oregon Freshwater Wetland Assessment Methodology;
 - 3. The wetland is in the Flood Management District, has evidence of flooding during the growing season, is five acres or more in size, and has a restricted outlet or no outlet;
 - 4. The wetland qualifies as having “intact hydrologic control function” under the 1996 Oregon Freshwater Wetland Assessment Methodology; or
 - 5. The wetland or a portion of it is within a horizontal distance of less than one-fourth mile from a water body that meets the Oregon Department of Environmental Quality’s definition of a “water quality limited water body.”
- C. Rivers, perennial streams, intermittent streams draining more than 100 acres, natural lakes, and springs that feed streams and wetlands and have year-round flow are primary protected water resources.
- D. Intermittent streams draining 100 acres or less are secondary protected water resources.

- E. The width of the vegetated corridor included within a WQRA is specified in Table 1. However, if an improved, public road right-of-way runs parallel to and—based on Table 1—would be included within a WQRA, the WQRA shall not extend beyond the improved, public road right-of-way.

Table 1: Width of WQRA Vegetated Corridor

Protected Water Resource Type	Slope Adjacent to Protected Water Resource¹	Starting Point for Measurements from Water Resource	Width of Vegetated Corridor²
Primary Protected Water Resource	<25 percent	•Edge of bankfull stage •Delineated edge of protected wetland	50 feet
Primary Protected Water Resource	≥25 percent for 150 feet or more	•Edge of bankfull stage •Delineated edge of protected wetland	200 feet ³
Primary Protected Water Resource	≥25 percent for less than 150 feet	•Edge of bankfull stage •Delineated edge of protected wetland	Distance from starting point of measurement to break in 25 percent slope plus 50 feet ^{3,4}
Secondary Protected Water Resource	<25 percent	•Edge of bankfull stage	15 feet
Secondary Protected Water Resource	≥25 percent	•Edge of bankfull stage	50 feet ³

¹ At least three slope measurements along the water resource, at no more than 100-foot increments, shall be made for each property for which development is proposed. Depending on the slope measurements, the width of the vegetated corridor may vary. Slope shall be measured in 25-foot increments away from the water resource until slope is less than 25 percent or a point 150 feet from the starting point of measurement is reached, whichever occurs first. The 25-foot increments shall be measured horizontally. Where the protected water resource is confined by a ravine or gully, the top of ravine is the break in the greater-than-25-percent slope.

² The width of the vegetated corridor shall be measured horizontally.

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

⁴ 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.

- F. The text of Section 709 shall determine the boundaries of a WQRA.

1. Certain protected water resources are identified on maps adopted by reference in Chapter 3 of the Comprehensive Plan (hereinafter referred to as the WQRA Map). The WQRA Map shall be a reference for identifying areas likely to be regulated by Section 709, but the WQRA Map is not intended to provide field-verified locations of the protected resources or delineate the edge of the vegetated corridors.
2. In addition, there may be WQRAs not shown on the WQRA Map. If credible evidence (e.g. aerial photographs, topographic maps, expert studies) indicates that the subject property may contain a WQRA that is not identified on the WQRA map, the provisions of Section 709 shall apply.

709.03 DEFINITIONS

Unless specifically defined in Subsection 709.03, words or phrases used in Section 709 shall be interpreted to give them the same meaning as they have in common usage and to give Section 709 its most reasonable application.

- A. **Bankfull Stage:** The stage or elevation at which water overflows the natural banks of streams or other waters of the state and begins to inundate the upland. The bankfull stage may be approximated using either the two-year recurrence interval flood elevation or one foot measured vertically above the ordinary mean high water line.
- B. **Created Wetlands:** Wetlands developed in an area previously identified as a non-wetland to replace, or mitigate, wetland destruction or displacement. A created wetland shall be regulated and managed the same as an existing wetland.
- C. **Constructed Wetlands:** Wetlands developed as a water quality or quantity facility, subject to change and maintenance as such. These areas must be clearly defined and separated from naturally occurring or created wetlands.
- D. **Debris:** Discarded manmade 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 Section 709, or ornamental and recreational structures. Debris does not include existing natural plant materials or natural plant materials that are left after flooding, downed or standing dead trees, or trees that have fallen into protected water resources.
- E. **Development:** Any manmade change defined as structures, roads, utilities, mining, dredging, paving, vegetation removal, filling, or grading in amounts greater than 10 cubic yards. In addition, “development” is any other activity that results in the removal of more than 10 percent of the Water Quality

Resource Area vegetation on a lot of record. The calculation of the amount of vegetative cover removed shall be done separately for each lot of record and shall include all vegetative cover removed after January 5, 2009, regardless of whether the removal is done as one project or a series of projects. When individual trees are removed, the area contained within the tree's drip line shall be the basis for calculating the square footage of vegetation removed.

- F. Disturb: Manmade changes to the existing physical status of the land, which are made in connection with development.
- G. Drip Line: The outermost edge of a tree's canopy; when delineating the drip line on the ground, it will appear as an irregularly shaped circle defining the canopy's perimeter.
- H. Emergency: Any manmade or natural event or circumstance causing or threatening loss of life, injury to person or property, and includes, but is not limited to, fire, explosion, flood, severe weather, drought, earthquake, volcanic activity, spills or releases of oil or hazardous material, contamination, utility or transportation disruptions, and disease.
- I. Enhancement: The process of improving upon the natural functions and/or values of an area or resource that has been degraded by human activity. Enhancement activities may or may not return the site to a pre-disturbance condition, but create/recreate beneficial processes and resources that occur naturally.
- J. Erosion: The movement of soil particles resulting from actions of water or wind.
- K. Fill: Any material such as, but not limited to, sand, soil, rock, or gravel that is placed in a wetland or flood area for the purposes of development.
- L. Invasive Non-Native or Noxious Vegetation: Plant species that are listed in the Oregon Department of Agriculture's Noxious Weed Policy and Classification System.
- M. Mitigation: The reduction of adverse effects of a proposed project by considering, in the following order:
 - 1. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - 2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - 3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

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
 5. Compensating for the impact by replacing or providing comparable substitute Water Quality Resource Areas.
- N. Native Vegetation: Vegetation native to the Portland metropolitan area provided that it is not invasive non-native or noxious vegetation.
- O. Ordinary Mean High Water Line: The line on the bank or shore to which water ordinarily rises in season.
- P. Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose.
- Q. Restoration: The process of returning a disturbed or altered area or water resource to a previously existing natural condition. Restoration activities re-establish the structure, function, or diversity to that which existed prior to impacts caused by human activity.
- R. Riparian: Those areas associated with streams, lakes, and wetlands where vegetation communities are predominately influenced by their association with water.
- S. Stormwater: The surface water runoff that results from all natural forms of precipitation.
- T. Stormwater Pretreatment Facility: Any structure or drainage way that is designed, constructed, and maintained to collect and filter, retain, or detain surface water runoff during and after a storm event for the purpose of water quality improvement.
- U. Stream: A body of running water moving over the earth's surface in a channel or bed, such as a creek, rivulet, or river. A stream flows at least part of the year, including perennial and intermittent streams. Streams are dynamic in nature and their structure is maintained through build-up and loss of sediment.
- V. Stream, Intermittent: A stream that flows only part of the year, or seasonally, during years of normal precipitation.
- W. Stream, Perennial: A stream that flows year-round during years of normal precipitation.
- X. Structure: A building or other major improvement that is built, constructed, or installed, not including minor improvements—such as fences, utility poles,

flagpoles, or irrigation system components—that are not customarily regulated through zoning codes.

- Y. Utility Facilities: Buildings, structures, or any constructed portion of a system that provides for the production, transmission, conveyance, delivery, or furnishing of services including, but not limited to, heat, light, water, power, natural gas, sanitary sewer, stormwater, telephone, and cable television. Utility facilities do not include stormwater pretreatment facilities.
- Z. Vegetated Corridor: The area between bankfull stage of a protected water resource and the delineated edge of the Water Quality Resource Area as defined in Table 1.
- AA. Wetlands: Areas that are inundated or saturated by surface water 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.

709.04 EXEMPT USES

The following uses and activities are exempt from the requirements of Section 709, except that if the use or activity requires a building or grading permit, a Construction Management Plan shall be required pursuant to Subsection 709.06(A):

- A. Uses and activities that do not constitute development, except if the use or activity is prohibited by Subsection 709.05;
- B. Farming practices, as defined in Oregon Revised Statutes (ORS) 30.930, and farm uses, as defined in ORS 215.203, in zoning districts where agricultural uses are a primary use, except that this exemption does not apply to buildings associated with farm practices or farm uses;
- C. Forest practices, as defined in ORS 30.930, on forestlands, as defined in ORS 30.930, outside the Portland Metropolitan Urban Growth Boundary;
- D. Installation of erosion prevention and sediment control (EPSC) measures pursuant to an EPSC plan approved by the EPSC regulatory authority.
- E. Projects with the sole purpose of restoring or enhancing wetlands, streams, or fish and wildlife habitat areas, provided that the project is part of an approved local, regional, state, or federal restoration or enhancement plan;
- F. Placement of structures that do not require a grading or building permit;

- G. Maintenance of existing structures, roadways, driveways, utility facilities, accessory uses, and other development;
- H. Removal of invasive non-native or noxious vegetation and the planting or propagation of native vegetation, provided that:
 - 1. Handheld tools are used to remove invasive non-native or noxious vegetation; and
 - 2. After such removal, all open soil areas greater than 25 square feet are replanted with native vegetation;
- I. Removal of dead or diseased trees or trees that pose an imminent hazard to persons or property, provided that a consulting arborist's report, or other credible evidence, is provided by the owner of the subject property and verifies the dead, diseased, or hazardous condition of the trees proposed for removal;
- J. Removal of vegetation, except trees of 1.5 inches or greater caliper, provided such removal shall not result in more than 10 percent of the area of the vegetated corridor being devoid of vegetation;
- K. Repair, replacement, or improvement of utility facilities where the disturbed portion of the Water Quality Resource Area (WQRA) is restored and vegetation is replaced with native vegetation;
- L. Additions, alterations, rehabilitation, or replacement of existing structures, roadways, driveways, accessory uses, and other development that do not increase existing structural footprints in the WQRA where the disturbed portion of the WQRA is restored and vegetation is replaced with native vegetation;
- M. Measures to remove or abate nuisances, or any other violation of statute, administrative rule, or ordinance, where such measures are required by government order and the disturbed portion of the WQRA is restored and vegetation is replaced with native vegetation; and
- N. Work necessary to protect, repair, maintain, or replace existing structures, utility facilities, roadways, driveways, accessory uses, and exterior improvements in response to emergencies, provided that after the emergency has passed, adverse impacts are mitigated in accordance with Table 2.

709.05 PROHIBITED USES

The following uses and activities are prohibited within a Water Quality Resource Area:

- A. The planting of invasive non-native or noxious vegetation; and

- B. Uncontained areas of hazardous materials as defined by the Oregon Department of Environmental Quality.

709.06 DEVELOPMENT REVIEW REQUIREMENTS

The following review requirements are applicable to development in the Water Quality Resource Area District (WQRAD) unless such development is exempt pursuant to Subsection 709.04.

- A. A Construction Management Plan (CMP), consistent with Subsection 709.08, shall be required for development in the WQRAD, regardless of whether development will occur within a Water Quality Resource Area (WQRA). An application for a CMP shall be reviewed pursuant to one of the following processes:
 - 1. The application shall be reviewed pursuant to Subsection 104.01(C); or
 - 2. The application shall be filed concurrently with an application for review under Subsection 709.06(B), in which case the applications will be consolidated and reviewed pursuant to the process required by Subsection 709.06(B).
- B. In order to confirm the location of a WQRA, WQRA Boundary Verification, consistent with Subsection 709.09, shall be required or allowed as follows:
 - 1. WQRA Boundary Verification shall be required for:
 - a. Development that is proposed to be in the WQRAD; or
 - b. A parcel that:
 - i. Is in the WQRAD; and
 - ii. Is the subject of a land use application for a partition, subdivision, or any other land use application the approval of which would authorize new development on the subject parcel.
 - 2. Notwithstanding Subsection 709.06(B)(1)(a), if credible evidence (e.g. aerial photographs, topographic maps, expert studies) indicates that the proposed development is clearly outside a WQRA, the requirement for WQRA Boundary Verification may be waived.
 - 3. An application for WQRA Boundary Verification may be submitted even if one is not required pursuant to Subsection 709.06(B)(1).
 - 4. If a parcel is subject to Subsection 709.06(B)(1)(b), an application for WQRA Boundary Verification shall be filed concurrently with the other land use application referenced in Subsection 709.06(B)(1)(b)(ii) unless a previously approved WQRA Boundary Verification for the subject property remains valid.

5. An application for WQRA Boundary Verification shall be reviewed pursuant to Subsection 1305.02 unless the application is filed concurrently with another land use application that requires review by the Hearings Officer, in which case the applications will be consolidated and reviewed pursuant to the Hearings Officer review provisions of Section 1300.
- C. A WQRA Development Permit, consistent with Subsection 709.10, shall be required for development in a WQRA. However, if the proposed development is in a Habitat Conservation Area (HCA) regulated pursuant to Section 706, it shall comply with either Subsection 706.10(B) or 709.10. An application for a WQRA Development Permit shall be reviewed pursuant to Subsection 1305.02 unless the application is filed concurrently with another land use application that requires review by the Hearings Officer, in which case the applications will be consolidated and reviewed pursuant to the Hearings Officer review provisions of Section 1300.
- D. Property that contains a WQRA and is the subject of a land use application for a partition or subdivision shall comply with Subsection 709.11, except that if the subject parcel contains a WQRA and an HCA, the partition or subdivision shall comply with the requirements of Subsections 706.10 and 709.11, and if the provisions conflict, the most restrictive standard shall apply.
- E. WQRA Boundary Verification and WQRA Development Permits shall be valid for five years from the date of the final written decision, except:
 1. If development lawfully commences within the five-year time period, WQRA Boundary Verification and WQRA Development Permits shall remain valid until the development is complete or has been abandoned. Development will be considered to be abandoned if building or grading permits authorizing the development have lapsed or work not requiring a building or grading permit has been discontinued for more than one year; and
 2. WQRA Boundary Verification that was valid on the date when the final plat for a subdivision or partition was recorded with the County Clerk shall remain valid for subsequent development on the lots or parcels created by the subdivision or partition.

709.07 SUBMITTAL REQUIREMENTS

Applications filed pursuant to Section 709 shall comply with the following submittal requirements.

- A. An application for a Construction Management Plan shall include:
 1. A completed land use application on a form provided by the County Planning Division;

2. A site plan of the subject property, drawn to scale and identifying the following:
 - a. Location and type of existing and proposed development, including but not limited to, building footprints, roads, driveways, parking areas, utilities, onsite sewage disposal systems, wells, landscaping, and filling or grading in an amount greater than 10 cubic yards. Label each element as existing or proposed;
 - b. Location and width of existing adjacent roads and road rights-of-way;
 - c. Location of the Water Quality Resource Area (WQRA) as identified pursuant to Subsection 709.09;
 - d. Drip lines outside the WQRA of trees that are inside the WQRA;
 - e. Distance between the WQRA boundary and proposed development outside the WQRA;
 - f. The site ingress and egress proposed to be used by construction vehicles;
 - g. Proposed equipment and material staging and stockpile areas; and
 - h. Proposed orange construction fencing required pursuant to Subsection 709.08(B);
 3. An Erosion Prevention and Sediment Control (EPSC) plan. This plan may be included on the site plan if acceptable to the EPSC regulatory authority; and
 4. If a modification or waiver of the construction fencing requirement of Subsection 709.08(B) is proposed, a narrative demonstrating compliance with Subsection 709.08(B)(1) or (2).
- B. An application for WQRA Boundary Verification shall include a site plan that complies with the following requirements:
1. The site plan shall be drawn at a scale of no less than one inch equaling 20 feet.
 2. The site plan shall show the location of the proposed development and the lot lines of the property on which development is proposed.
 3. The site plan shall show the location of the protected water resource. If the protected water resource is a wetland, the delineation shall be made by a qualified wetlands specialist pursuant to the Division of State Lands' recommended wetlands delineation process. For all other protected water resources, the location shall be established by a registered professional engineer or surveyor licensed by the State of Oregon.

4. The site plan shall show the location of the WQRA, including slope and drainage information sufficient to classify the protected water resource under Table 1.
- C. An application for a WQRA Development Permit shall include the following information in a report stamped by a registered professional engineer or surveyor licensed by the State of Oregon:
1. A topographic map of the site at contour intervals of five feet or less showing a delineation of the WQRA;
 2. The location of all existing natural features including, but not limited to, all trees of a caliper greater than six inches diameter at a height of four feet, natural or historic drainages on the site, springs, seeps, outcroppings of rocks and boulders within the WQRA;
 3. Location of wetlands that qualify as primary protected water resources. Where such wetlands are identified, a delineation shall be made by a qualified wetlands specialist pursuant to the Division of State Lands' recommended wetlands delineation process;
 4. An inventory and location of existing debris, nuisance vegetation, and any noxious or hazardous materials;
 5. An assessment of the existing condition of the WQRA in accordance with Table 2;
 6. An inventory of vegetation, including percentage ground and canopy coverage;
 7. An Impact Evaluation and Alternatives Analysis that addresses the requirements of Subsections 709.09(A) and (B); and
 8. A mitigation plan containing 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 resource areas will be avoided, minimized, and/or mitigated in accordance with, but not necessarily limited to, Table 2;
 - c. A list of all responsible parties including, but not necessarily limited to, the owner, applicant, contractor or other persons responsible for work on the subject property;
 - d. A map showing where the specific mitigation activities will occur; and
 - e. An implementation schedule, including a timeline for construction, mitigation, mitigation maintenance, monitoring, and reporting and 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; and

- D. Data from sources other than a field-verified delineation of the protected water resource may be used to satisfy the submittal requirements only if the protected water resource is not located on the subject property and access to the water resource is denied for the purposes of supplying the required delineation. In order to use alternate data, an applicant shall submit the following:
 - 1. A copy of a letter addressed to the owner of the property on which the protected water resource exists requesting access to the property for the purpose of completing a delineation of the protected water resource; and
 - 2. A copy of a return receipt from the US Postal Service verifying that the letter was mailed certified and was received or refused.

709.08 CONSTRUCTION MANAGEMENT PLANS

A Construction Management Plan (CMP) shall comply with the following criteria.

- A. Erosion prevention and sediment control (EPSC) measures shall be required and shall comply with the standards of the EPSC regulatory authority.
- B. Orange construction fencing (i.e. safety fencing, snow fencing, or a comparable product) shall be installed on or outside the boundary of the Water Quality Resource Area (WQRA), except where the drip line of a protected tree extends outside the WQRA, in which case the drip line shall be included inside the fencing. This requirement may be modified or waived if:
 - 1. Disturbance of the WQRA is authorized pursuant to Subsection 709.04 or 709.09, in which case the fencing shall be installed in such a manner as to protect the area of the WQRA not authorized for disturbance; or
 - 2. The WQRA is already lawfully developed, in which case the fencing shall be installed in such a manner as to protect any water resource that is the basis for the WQRA designation and any area of the WQRA where naturalized vegetative cover exists.
- C. Trees in the WQRA shall not be used as anchors for stabilizing construction equipment.
- D. Native soils disturbed during development shall be conserved on the subject property.
- E. Development shall not commence until the EPSC measures and fencing required pursuant to Subsections 709.08(A) and (B) are in place.

- F. Compliance with the CMP shall be maintained until the development is complete.

709.09 WATER QUALITY RESOURCE AREA BOUNDARY VERIFICATION

The standards of Subsection 709.02 shall be applied to an application for Water Quality Resource Area Boundary Verification and shall determine the boundary of any WQRA on the subject property.

709.10 WATER QUALITY RESOURCE AREA DEVELOPMENT PERMITS

A Water Quality Resource Area (WQRA) Development Permit shall be approved if the applicant provides evidence substantiating compliance with the following criteria. However, if the proposed development is in a Habitat Conservation Area (HCA) regulated pursuant to Section 706, it shall comply with either Subsection 706.10(B) or 709.10, except that if the subject parcel contains an HCA and a WQRA and is the subject of a land use application for a partition or subdivision, the partition or subdivision shall comply with the requirements of Subsections 706.10 and 709.10, and if the provisions conflict, the most restrictive standard shall apply.

- A. No practicable alternative locations exist for the requested development that will not disturb the WQRA;
- B. No reasonably practicable alternative design or method of development exists that would have a lesser impact on the WQRA than the one proposed. If no such reasonably practicable alternative design or method of development exists, the development shall be conditioned to:
 - 1. Limit its disturbance and impact on the WQRA to the minimum extent necessary to achieve the proposed development; and
 - 2. Ensure that impacts to the functions and values of the water quality resource area will be mitigated or impacted areas restored to the extent practicable.
- C. The WQRA shall be restored and maintained as required by Table 2.
- D. To the greatest extent practicable, existing native vegetation shall be retained and protected;
- E. Walkways and bike paths shall be subject to the following standards:
 - 1. Where it is not practicable to maintain a setback of greater than 30 feet from a protected water resource, a maximum of 10 percent of the total area of a gravel, earthen, tree bark product or equivalent walkway or bike path may be within 30 feet of the protected water resource.

2. For any paved walkway or bike path, the width of the water quality resource area on the subject property shall be increased by a distance equal to the width of the paved path. Where it is not practicable to maintain a setback of greater than 30 feet from a protected water resource, a maximum of 10 percent of the total area of the walkway or bike path may be within 30 feet of the protected water resource.
 3. A walkway or bike path approved under Subsection 709.09(E)(1) or (2) shall not exceed 10 feet in width, shall not be constructed closer than 10 feet from the boundary of the protected water resource, and shall be constructed so as to minimize disturbance to existing vegetation.
- F. Stormwater pretreatment facilities shall be subject to the following standards:
1. A stormwater pretreatment facility may encroach a maximum of 25 feet into the outside boundary of the WQRA of a primary protected water resource.
 2. A stormwater pretreatment facility may encroach a maximum of five feet into the outside boundary of the WQRA of a secondary protected water resource.
 3. The area of encroachment shall be replaced by adding an equal area to the WQRA on the subject property.
 4. All stormwater shall be collected on-site and passed through a treatment facility, such as a detention/composting facility or filter as approved by the surface water management regulatory authority, prior to being discharged into the WQRA.

Table 2: Water Quality Resource Area Mitigation Requirements

Existing Condition of Water Quality Resource Area	Mitigation Requirements
<p><u>Good Existing Corridor:</u></p> <p>Combination of trees, shrubs and groundcover are 80 percent present, and there is more than 50 percent tree canopy coverage in the vegetated corridor.</p>	<p><u>If area is disturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Restore and mitigate according to approved plan using native vegetation. 2. Remove debris. 3. Prior to construction, a qualified professional shall prepare and submit a plan for mitigating water quality impacts related to the development, including: sediments, temperature nutrients, sediment control, temperature control, or any other condition that may have caused the protected water resource to be listed on DEQ's 303(d) list. 4. Re-vegetation must occur during the next planting season following site disturbance. Seeding may be required prior to establishing plants for site stabilization. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. <p><u>If area is undisturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Remove debris.

Table 2: Water Quality Resource Area Mitigation Requirements

<p><u>Marginal Existing Corridor:</u></p> <p>Combination of trees, shrubs and groundcover are 80 percent present, and there is 25 to 50 percent tree canopy coverage in the vegetated corridor.</p>	<p><u>If area is disturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Restore and mitigate according to approved mitigation plan using native vegetation that would reasonably represent the vegetative composition that would naturally occur on the site. 2. Remove debris. 3. Re-vegetate during the next planting season following site disturbance. Seeding may be required prior to establishing plants for site stabilization. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site. <p><u>If area is undisturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Remove debris.
<p><u>Degraded Existing Corridor:</u></p> <p>Less vegetation and canopy coverage than marginal vegetated corridors, and/or greater than 10-percent surface coverage of any non-native vegetation.</p>	<p><u>If area is disturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Restore and mitigate according to approved mitigation plan using native vegetation that would reasonably represent the vegetative composition that would naturally occur on the site. 2. Remove debris. 3. Re-vegetate during the next planting season following site disturbance. Seeding may be required prior to establishing plants for site stabilization. Annual replacement of plants that do not survive is required until vegetation representative of natural conditions is established on the site.. <p><u>If area is undisturbed during construction:</u></p> <ol style="list-style-type: none"> 1. Vegetate bare areas with native vegetation. 2. Remove non-native vegetation and re-vegetate with native vegetation. 3. Remove debris.

709.11 PARTITIONS AND SUBDIVISIONS

- A. A partition or subdivision of property that contains a WQRA shall require that the WQRA shall be platted as a tract rather than as part of any lot. The tract shall be protected from development by restrictive covenant, conservation easement, or public dedication. However, the tract may be subject to an easement conveying storm and surface water management rights to the surface water management authority. The tract shall be designated as one of the following prior to final plat approval:
1. A private natural area owned by a homeowners association or a private non-profit with the mission of land conservation; or
 2. A public natural area where the tract has been dedicated to a public entity.