

Chapter 88

Natural Features Overlay in the Corvallis Urban Fringe

88.005 Purpose. The provisions of this chapter, in conjunction with the land division provisions of Chapter 100, are intended to minimize natural hazards and protect significant natural resources identified in the Corvallis Natural Features Inventory pursuant to Statewide Planning Goals 5, 6, and 7. In doing so, these provisions will help protect human life and property, public infrastructure, water quality, natural water quantities, habitat for fish, other aquatic life, and terrestrial wildlife, and aesthetic and other values derived from intact natural features.

88.010 Definitions. As used in this chapter:

- (1) “Corvallis Urban Fringe Natural Features (CUFNF) Maps” means the three adopted maps entitled “Natural Hazards Map”, “Riparian Corridors and Wetlands Map”, and “Significant Vegetation Map” showing natural hazards and natural resources that are subject to the Natural Features provisions of BCC Chapters 64, 83, 88, and 100.
- (2) “Fire Fuel-Break Safety Zone” means:
 - (a) A safety zone that may be up to 30 feet in all directions from the structure. If the structure is located on a slope, the safety zone downslope of the structure may be increased by the following distances:

Slope greater than:	Add to safety zone downslope:
10%	50 feet
20%	75 feet
25%	100 feet
40%	150 feet

- (b) Within the safety zone defined in subsection (a) above, vegetation may be trimmed or removed to the minimum extent necessary to meet the following standards:
 - (A) Trees spaced with 15 feet between crowns;
 - (B) Tree limbs less than 8 feet above the ground removed;
 - (C) Dead branches and dead vegetation removed;
 - (D) Shrubs and ground cover maintained at less than 24 inches in height.
 - (E) Areas of vegetation removal shall be planted and maintained with grass or other erosion-preventing groundcover. Vegetation planted within riparian, and wetland areas shall be native plants listed on the City of Corvallis Native Plant List.
 - (3) “Geotechnical Report” means a report required in conjunction with development proposals in areas with slopes of 25% or greater, when called for by a Geotechnical Site Assessment (see below), in conjunction with development proposals in landslide hazard areas, or at the discretion of the Building Official. A Geotechnical Report shall include:
 - (a) Data regarding the nature, distribution and strength of existing soils and bedrock;
 - (b) An assessment of slope stability, water drainage patterns and identification of visible landslide activity in the immediate area;

- (c) Conclusions and recommendations for grading procedures and design criteria necessary to ensure the stability of all elements of the proposed use; and
- (d) Opinion on the proposed site's adequacy for the intended use.

When a Geotechnical Report is required by this Code, it shall comply with the requirements for such reports, as prescribed in the Benton County document, once developed, to be entitled "Geotechnical Report Requirements."

It is the responsibility of the geotechnical engineer to provide a report and design recommendations that are appropriate for existing site conditions and the proposed development. The Geotechnical Report shall be completed and stamped by a Licensed Civil Engineer, licensed in the Specialty of Geotechnical Engineering by the Oregon State Board of Engineering Examiners.

- (4) "Geotechnical Site Assessment" means an assessment required in conjunction with development proposals on areas with slopes of 15% or more and for development in landslide hazard areas. The Site Assessment is an overview of site conditions and a professional evaluation of the need for additional studies prior to development on a property. The Site Assessment shall be completed and stamped by either a Certified Engineering Geologist or by a Licensed Civil Engineer, licensed in the Specialty of Geotechnical Engineering by the Oregon State Board of Engineering Examiners.

At a minimum, the Site Assessment shall include the following elements:

- (a) A field investigation of the site and vicinity;
 - (b) A discussion of geologic hazards, if any;
 - (c) Suitability of the site for proposed development, from a geologic standpoint;
 - (d) If applicable, discussion of any unusual or extreme geologic processes at work on the site, for example: rapid erosion, landslide hazard, flood hazard, rockfall, subsidence, debris run-out, or other features;
 - (e) A list of any geologic hazards that may affect the proposed land use, including slope stability, debris flow, flooding, topography, erosion hazard, shallow groundwater, springs, expansive soils, subsidence, fault rupture, or any other geologic hazard discovered by the investigation;
 - (f) If applicable, an identification of any areas of the site recommended to be avoided by human-occupied structures;
 - (g) If necessary, identification of mitigation measures needed to address any anticipated geologic problems;
 - (h) A discussion regarding the need for follow-up studies that should be conducted, such as engineering geotechnical reports, additional subsurface exploration, or more extensive soil reports; and
 - (i) Feasibility of the site for the proposed development.
- (5) "Natural Features" means areas identified on the Corvallis Urban Fringe Natural Hazards Map, Riparian Corridors and Wetlands Map, and Significant Vegetation Map as containing Natural Hazards (steep slopes, landslide hazards, floodplain, floodway) and/or Natural Resources (riparian areas, wetland areas, or significant vegetation).
 - (6) "Natural Hazards" means areas identified on the Corvallis Urban Fringe Natural Hazards Map, as containing steep slopes, landslide hazards, floodplain, or floodway.
 - (7) "Natural Resources" means areas identified on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map or Significant Vegetation Map as containing riparian areas, wetland areas, or significant vegetation).
 - (8) "Top-of-Bank" means the "bankfull stage" of a stream which is 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. In the absence of physical evidence, the two-year recurrence interval flood elevation may be used to approximate the bankfull stage or delineate the top-of-bank.

[Ord. 2005-0209; 2005-0210; 2005-0211]

88.050 Mapped Locations, Refinements and Corrections.

- (1) The provisions of this chapter shall be applied to lands identified on the Corvallis Urban Fringe Natural Features Maps, as described in this section. Modifications to the adopted Natural Features maps may be made in the following two ways, pursuant to this section.
 - (a) “Map refinements” are adjustments made through professional analyses to refine the actual boundaries of certain natural resources and hazards. Refinements may be effected administratively, with no land use process required, through the applicant or property owner demonstrating the refinement standards below have been met. Refinements may or may not be shown on the Natural Features map, depending on scale and other factors, but at a minimum shall be attached to the Community Development Department records for the property.
 - (b) “Map corrections” rectify errors to the mapping of natural resources and hazards where it is found that the map depiction does not reflect the Natural Features Inventory, as described for each resource type below. These map corrections shall be made by the Planning Official and do not require Zone Changes or Comprehensive Plan Map Amendments. Map corrections shall be coordinated with the Corvallis Community Development Director. Periodically, for informational purposes, the Planning Official shall forward accumulated map corrections to the Benton County Board of Commissioners and Planning Commission and the Corvallis City Council and Planning Commission.
- (2) **Floodplain.** The determination of floodplain boundaries shall be as described in BCC 83.010(3). The regulations governing these areas are contained in BCC Chapter 83.
- (3) **Steep Slopes.**
 - (a) **Application.** Areas shown on the Corvallis Urban Fringe Natural Hazards Map as having slopes exceeding 15% shall be subject to the provisions of BCC 88.100. The steep slope provisions are applicable only to the specific portions of a site which contain the specified slopes, as shown on the Corvallis Urban Fringe Natural Hazards Map.
 - (b) **Map Refinement.** If a property owner demonstrates – by submittal of a topographic survey prepared by a registered Professional Land Surveyor or Licensed Civil Engineer using a contour interval of 2 feet or less, or by use of the City or County topographic map (with a 2-foot or smaller contour interval) – that the slope in a given area is different from that shown on the Natural Hazards Map, then the submitted slope information shall be used as the basis for determining the applicable provisions of BCC 88.100. Alternatively, through a site visit the Planning Official may determine that a particular site is clearly not on steep slopes, in which case the standards shall not apply.
- (4) **Landslide Hazard.**
 - (a) **Application.** Areas identified on the Corvallis Urban Fringe Natural Hazards Map as “High Landslide Risk”, “Existing Landslide”, or “Landslide Debris Runout Areas” shall be considered “Landslide Hazard Areas” and shall be subject to the provisions of this section.
 - (b) **Map Refinement.**
 - (A) Precise locations of Landslide Hazard area boundaries are determined on the basis of published information prepared by the Oregon Department of Geology and Mineral Industries (DOGAMI), or on the basis of site-specific Site Assessments and/or Geotechnical Reports as required by BCC 88.200.
 - (B) The mapping of Landslide Debris Runout Areas shall be refined as follows. On a site-specific basis as development is proposed, if a mapped area of Landslide Debris Runout

Area is not adjacent downslope to an area of mapped “High Landslide Risk”, “Existing Landslide”, or slope exceeding 35%, the boundary of the Landslide Debris Runout Area shall be adjusted, consistent with BCC 88.200(3).

(c) **Map Correction.** There are two methods by which corrections may be made to the Landslide Hazard designation on the Natural Hazards Map.

(A) Determination by the Oregon Department of Geology and Mining Industries (DOGAMI). If the Oregon Department of Geology and Mining Industries (DOGAMI) determines that a potential Landslide Hazard area has been incorrectly depicted on the Natural Hazards Map, and such determination is officially expressed by DOGAMI through a letter or publication, then a Map Correction to remove indication of the Landslide Hazard area shall be effected by the Planning Official.

(B) Determinations Reached by a Site Assessment and Geotechnical Report. If a property owner provides the Planning Official with the items listed in (i) below, a request to remove indication of a Landslide Hazard area from the Natural Hazards Map and other affected maps shall be considered as outlined in (ii) and (iii) below.

(i) For a Map Correction request to consider removal of a Landslide Hazard from the Natural Hazards Map and other related maps, the following information is required:

(1) A Geotechnical Report and Site Assessment which meet the criteria identified in BCC 88.010(3) and (4). In addition to the items identified in BCC 88.010(3), the Geotechnical Report shall specifically address the absence, characteristics, and/or precise location of the identified hazard(s) on the subject property which is/are depicted on the Corvallis Urban Fringe Natural Hazards Map. If other reports are called for by the Site Assessment, these reports shall also be submitted; and

(2) An indemnification and release agreement in accordance with the provisions of Section 88.200(4);

(ii) Map Correction requests shall be reviewed by the Planning Official, Building Official, and County Engineer, in coordination with the Corvallis Community Development Department.

(iii) To approve a Map Correction request, the Planning Official must find that:

(1) The information required by “i” above has been provided and is complete;

(2) The required technical reports and recommendations sufficiently demonstrate that there is no Landslide Hazard on or near the area identified on the Natural Hazards Map; and

(3) The required technical reports and recommendations sufficiently demonstrate that development on the subject area would not increase landslide risks on the development site, nor upon neighboring properties.

(5) Earthquake fault lines are shown on a separate Corvallis map for advisory purposes. Pursuant to adopted building code, the Building Official may require geotechnical study, engineered solutions, or other assurance that construction in the vicinity of mapped fault lines will be adequately protected from earthquake hazard.

(6) **Riparian Areas.**

(a) **Application.** The riparian area that shall be subject to the provisions of BCC 88.300 through 88.350 shall consist of the stream channel plus a riparian corridor that extends to a specified distance measured from the top-of-bank. The width of the riparian corridor at a given point along a stream has been determined by the land area drained to that point, as shown in Table 88-1. This width is indicated on the Corvallis Urban Fringe Riparian Corridors and Wetlands

Map by a color that corresponds to a numeric distance in feet. That distance shall be measured horizontally from the top-of-bank, perpendicular to the streambank. The entire area of any wetlands shown on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map that fall partly or entirely within the protected riparian area shall likewise be considered protected riparian area subject to the provisions of this chapter.

- (b) **Map Refinement.** For a given site, the top-of-bank (as defined in BCC 88.010) shall be determined by a licensed civil engineer, or by the Planning Official or the Planning Official’s designee, either in the field or using contour intervals of 2 feet or less surveyed by a licensed surveyor or civil engineer or obtained from the official topographic mapping maintained by the City of Corvallis or Benton County.
- (c) **Map Correction.**
 - (A) If a property owner demonstrates to the satisfaction of the Planning Official, through the use of topographic mapping, that the actual area drained to a point would result in a lesser riparian corridor width at that point (as determined through Table 88-1) than is shown on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map, then the riparian corridor width shall be revised accordingly. Topographic mapping used for this purpose shall have a contour interval of 2 feet or less, and shall either be produced from a survey by a licensed surveyor or civil engineer or be the official topographic mapping maintained by the City of Corvallis or Benton County.
 - (B) If the Planning Official or the Planning Official’s designee determines through a site visit that no discernable channel exists, the map shall be corrected to remove the riparian corridor designation. This provision shall not apply to stream channels that have been altered or obliterated by human action.

Table 88-1: Riparian Corridor Widths

Drainage Basin	Riparian Corridor Width
Less than 20 acres	50 feet from top-of-bank
20 to 160 acres	75 feet from top-of-bank
More than 160 acres	100 feet from top-of-bank
Willamette River, Marys River and associated channels (e.g. Booneville Slough)	120 feet from top-of-bank

(7) **Wetlands.**

- (a) **Application.** The following categories of wetlands have been identified. Areas described by subsection (A) are subject to BCC 88.320 through BCC 88.350, while areas described by subsection (B) are subject to only BCC 88.350.
 - (A) “Systems-Critical Wetlands.” Wetlands subject to the provisions of BCC 88.320 through 88.350 are the areas identified as “Systems-Critical Wetlands” on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map plus a 25-foot buffer. Benton County has determined these wetlands to be locally significant and has adopted protections through the Goal 5 ESEE process. The local wetlands inventory which identified and mapped these wetlands was deemed accurate to within 25 feet; thus a 25-foot buffer is applied. These wetlands are also included on the Corvallis Local Wetland Inventory (LWI) Map.

(B) “Other Wetlands.” Wetlands that are not subject to Benton County regulations, but which may be subject to state and/or federal regulations are shown on the Corvallis Local Wetland Inventory (LWI) Map. They are not shown on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map.

(b) **Map Refinement.** The property owner or applicant may refine the wetlands boundary by submitting an unexpired wetland delineation that has been accepted and approved by the Department of State Lands. A wetland boundary established by an approved delineation shall not be subject to the 25-foot-buffer requirement.

(c) **Map Correction.** If a property owner submits documentation demonstrating that information in the Corvallis Natural Features Inventory was incorrectly translated to the Riparian Corridors and Wetlands Map, the Planning Official shall effect the appropriate changes to the Map.

(8) **Significant Vegetation.**

(a) **Application.** Areas shown on the Corvallis Urban Fringe Significant Vegetation Map are subject to the provisions of BCC 88.400 through 88.430. The mapped areas are divided into three categories: Protected Prairie and Savanna; High Protection Significant Vegetation (HPSV); and Partial Protection Significant Vegetation (PPSV).

(b) **Map Refinement and Correction.** The mapped boundaries of Significant Vegetation areas are not subject to refinement or correction.

(9) Additional requirements and options regarding Natural Features are contained in Chapters 64 (Urban Residential) and 100 (Planned Unit Development in the Corvallis Urban Fringe).

(10) Where there is conflict among provisions of separate sections of this chapter or other chapters applying to the same area, the more restrictive provisions shall prevail.

[Ord. 2005-0209; 2005-0210; Ord 2005-0211]

STEEP SLOPES

88.100 Purpose. To reduce economic losses to property, to reduce hazard to human life, and to reduce soil erosion, stream sedimentation and other environmental damage, the following provisions limit development on the steepest slopes and allow appropriately designed development on lesser slopes. Retention of existing vegetation and planting new vegetation in disturbed areas is a key element in reducing erosion and landslide risk. Noxious or invasive vegetation should not be used for this purpose, because of its potential to spread to other areas and have undesired consequences.

(1) Lands subject to the provisions of this section are identified in BCC 88.050.

(2) Creation of a parcel or lot containing steep slopes, or development activities on such a parcel or lot, shall require the property owner to record in the County Deed Records a statement acknowledging the presence of steep slopes, which shall put all future owners of the property on notice of the steep slopes.

(3) In areas with slopes greater than or equal to 35%:

(a) Structures, excavation, roads, and driveways are prohibited, except for roads or driveways demonstrated to be necessary to provide access to an allowed use. Any authorized road or driveway shall be designed and implemented consistent with a site assessment and geotechnical report (as defined in BCC 88.010(3) and (4)), and shall require the applicant to sign an agreement, provided by the County, to indemnify and release the County from potential liability resulting from damage to life or property resulting from development on steep slopes. This indemnity and release shall be recorded in the deed records for the property, and shall run with the land.

(b) Removal of trees larger than four inches in diameter at four feet above grade is prohibited. This prohibition shall not apply to:

- (A) Removal of a hazard tree, defined as a live or dead tree that poses a current threat to human life or structures.
 - (B) The minimum vegetation removal necessary to establish and maintain a fire fuel-break safety zone, as defined in BCC 88.010(2), surrounding a legally existing structure.
 - (C) Commercial forestry activities authorized by the Oregon Department of Forestry.
 - (D) Vegetation removal necessary to implement pedestrian trails specified in a public park management plan adopted by the appropriate governing body.
 - (E) Vegetation removal in conjunction with road or driveway construction authorized under the exception provision in BCC 88.100(3)(a).
 - (F) Vegetation removal within the area authorized under the provisions for a Modification to Natural Features Standards (BCC 88.800).
- (c) In all areas where ground disturbance or vegetation removal is authorized, where such areas will not be covered by structures or pavement, the ground shall be planted and maintained in erosion-inhibiting vegetation not listed as noxious or invasive by the Oregon Department of Agriculture. To minimize hazards associated with steep slopes, Benton County encourages minimizing the removal of vegetation;
- (4) In areas of slopes greater than or equal to 25% and less than 35% where development is allowed by the BCC Natural Features provisions, structures, excavation, roads and driveways, and vegetation removal including commercial timber harvest are allowed, provided:
- (a) Development activities are designed and implemented consistent with a site assessment and geotechnical report and any other report deemed necessary by the site assessment report;
 - (b) All areas of ground disturbance or vegetation removal not involving structures or pavement are planted and maintained in erosion-inhibiting vegetation not listed as noxious or invasive by the Oregon Department of Agriculture. To minimize hazards associated with steep slopes, Benton County encourages minimizing the removal of vegetation; and
 - (c) Commercial forestry activities shall be conducted pursuant to forest practices rules implemented by Oregon Department of Forestry.
- (5) In areas with slopes greater than or equal to 15% and less than 25% where the BCC Natural Features provisions allow development, structures, excavation, roads and driveways, and vegetation removal including commercial timber harvest are allowed, provided:
- (a) Development activities are designed and implemented consistent with a geotechnical site assessment;
 - (b) All areas of ground disturbance or vegetation removal not involving structures or pavement are planted and maintained in erosion-inhibiting vegetation not listed as noxious or invasive by the Oregon Department of Agriculture. To minimize hazards associated with steep slopes, Benton County encourages minimizing the removal of vegetation; and
 - (c) Commercial forestry activities shall be conducted pursuant to forest practices rules implemented by Oregon Department of Forestry.
- (6) Prior to creation of any new parcel or lot, the applicant shall demonstrate the parcel or lot will be developable consistent with provisions of this chapter. If necessary to demonstrate this standard can be met, the Planning Official may require a geotechnical site assessment or geotechnical report prior to final approval of the subdivision or partition plat.

[Ord. 2005-0209]

LANDSLIDE HAZARD AREAS

88.200 Purpose. To reduce economic losses to property and to reduce hazard to human life, the following provisions limit development in landslide hazard areas and ensure that any development that is allowed is appropriately designed.

- (1) Lands subject to the provisions of this section are identified in BCC 88.050.
- (2) If excavation, placement of fill, or construction or placement of structures is proposed inside, or within 100 feet of, a “High Landslide Risk,” “Existing Landslide,” or “Open-Slope Debris Runout” area, those activities are allowed only on the basis of a site assessment and geotechnical report (as defined in BCC 88.010(3) and (4)) finding that there is negligible risk of landslide and the proposed activities will not increase the risk. If specific design or implementation measures are necessary to ensure negligible risk, the geotechnical report shall specify those measures, and the activity shall be carried out pursuant to those measures.
- (3) If excavation, placement of fill, or construction or placement of structures is proposed inside a “Confined Channel Debris Runout” area, development activities may only be allowed on the basis of the following type of review:
 - (a) If, at the same elevation or upslope of the proposed development, the “Confined Channel Debris Runout” area is intersected by or adjacent to an area of “High Landslide Risk,” “Existing Landslide,” “Open-Slope Debris Runout,” or slope exceeding 35%, a site assessment and geotechnical report are required.
 - (b) If, at the same elevation or upslope of the proposed development, the “Confined Channel Debris Runout” area is intersected by or adjacent to an area of 15% to 35% slope, a site assessment is required.
 - (c) If no steep slopes or landslide hazards are shown on the Corvallis Urban Fringe Natural Hazards Map occurring at the same elevation or upslope of the proposed development, a site assessment is recommended but not required.
- (4) Removal of trees larger than four inches in diameter at four feet above existing grade is prohibited in “Confined Channel Debris Runout” areas and in or within 100 feet of any other mapped landslide hazard area unless a geotechnical report finds that removal of trees will not increase the risk of landslide or other geologic hazard. Trees may also be removed for the following purposes:
 - (a) Removal of a hazard tree, which poses a current threat to life or property;
 - (b) The minimum vegetation removal necessary to establish and maintain a fire fuel-break safety zone surrounding a structure, as defined in BCC 88.010(2); or
 - (c) Commercial forestry activities conducted pursuant to forest practices rules implemented by Oregon Department of Forestry.
- (5) Prior to issuance of building permits for any structures authorized under subsection (2) or (3) of this section, the applicant shall sign an agreement, provided by the County, acknowledging the presence of mapped landslide hazard areas and indemnifying, holding harmless and releasing the County from potential liability resulting from damage to life or property resulting from landslides. This indemnity, hold harmless and release agreement shall be recorded in the Deed Records of Benton County and shall run with the land.
- (6) New parcels or lots containing landslide hazard areas shall be designed with sufficient buildable area to enable reasonable development of the property in compliance with subsections (2) and (3) of this section, either through siting restrictions or through the applicant for partition or subdivision submitting a geotechnical report demonstrating that the lot can be safely developed. Creation of a parcel or lot containing landslide hazard areas shall require the property owner to record in the County Deed Records a statement acknowledging the presence of mapped landslide hazard areas, which shall put all future owners of the property on notice of the landslide hazards.

[Ord. 2005-0209]

RIPARIAN AND WETLAND AREAS

88.300 Purpose. To preserve riparian and wetland functions contributing to water quality, natural water quantities, fish habitat, wildlife habitat, flood control and streambank stabilization, the following provisions limit disruption of native vegetation, soils and hydrology, and limit the intrusion of structures into the riparian and wetland area.

88.310 Application.

- (1) The provisions of BCC 88.300 through 88.350 shall apply to the lands identified in BCC 88.050.
- (2) Note: Generally the same limitations on vegetation removal and building, paving, and grading activities described in this section likewise apply to the entire floodplain; refer to BCC 83.505 for the floodplain regulations.

88.320 Vegetation Removal.

- (1) Removal or alteration of vegetation from Riparian Areas, and from Systems-Critical Wetlands and associated 25-foot buffers, is prohibited except for the following purposes:
 - (a) Removal of a hazard tree which poses a current threat to life or property. Tree removal shall comply with the following standards:
 - (A) The stump and root wad of any altered tree shall remain undisturbed in place; and
 - (B) Any tree removed is required to be replaced by like native species or alternate approved native species.
 - (b) Maintenance of lawns, planted vegetation, and landscaping, to the extent existing on October 6, 2005.
 - (c) Stream restoration and enhancement programs approved by the Oregon Department of Fish and Wildlife as improving riparian function, and wetland restoration and enhancement programs approved by Oregon Department of State Lands or the Oregon Department of Fish and Wildlife.
 - (d) Removal of non-native, invasive, and/or noxious vegetation, as identified in the Oregon Department of Agriculture's Oregon Weed Policy and Classification System (Appendix 1), including weeds designated as "A", "B", and/or "T". As necessary to control erosion, areas of vegetation removal shall be re-vegetated with native species listed on the City of Corvallis Native Plant List. If necessary to prevent erosion prior to new vegetation becoming established, short-term, non-structural erosion control measures shall be employed.
 - (e) Substitution of native plant species for non-native plants. Additionally, native plants may be planted without accompanying removal of non-native plants. All new plantings shall be species listed on the City of Corvallis Native Plant List as appropriate for the proposed location. Plantings being substituted for non-native plants shall be species identified on the Corvallis Native Plant List as being in the same ecological-function category as the replaced plants. Plantings shall be maintained to ensure they become established.
 - (f) Development of water-related or water-dependent uses that are allowed in the underlying zone, provided they are designed and constructed to minimize impact on existing riparian vegetation.
 - (g) The minimum vegetation removal necessary to establish and maintain a fire fuel-break safety zone surrounding a structure, as defined in BCC 88.010(2). Benton County encourages

property owners to consult with the Oregon Department of Fish and Wildlife on ways to minimize the impact of this vegetation removal and to mitigate the impacts that do occur.

- (h) Continuation of farm use, limited to areas that have been converted to farm use prior to October 6, 2005. The property owner shall have the burden of proof in demonstrating that an area was converted prior to this date.
- (i) Commercial forestry activities authorized by the Oregon Department of Forestry.
- (j) The minimum vegetation removal necessary to establish a pedestrian trail located at least 10 feet from the top of bank.
- (k) Vegetation removal in conjunction with a development activity allowed under BCC 88.330(2).
- (l) Vegetation removal within the area authorized under the provisions for a Modification to Natural Features Standards (BCC 88.800).

[Ord. 2005-0210]

88.330 Building, Paving, and Grading Activities

- (1) The following activities are prohibited within Riparian Areas and Systems-Critical Wetlands shown on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map, except as allowed in subsection (2):
 - (a) Placement of structures or impervious surfaces;
 - (b) Grading, excavation, and the placement of fill;
 - (c) Construction of wells and septic systems;
 - (d) Draining of wetlands.
- (2) The following exceptions to the prohibitions in subsection (1) above are allowed, provided they are designed and constructed to minimize adverse impacts to riparian and wetland areas:
 - (a) Replacement of existing structures with structures located on the original building footprint or up to a maximum deviation of 10% from the original footprint. Vertical additions to these structures are allowed if they do not disturb additional riparian or wetland surface area. Structures abandoned for a period of one year or longer are not eligible for replacement.
 - (b) The following types of infrastructure, provided they are oriented perpendicular to the riparian corridor or otherwise designed to cause negligible impact to proper riparian or wetland function, and provided any necessary stream crossings meet Oregon Department of Fish and Wildlife fish passage standards and accommodate the 50-year flood event flow:
 - (A) Construction of streets, roads, public utilities, and bicycle and pedestrian ways that are included in the City of Corvallis Transportation Plan, or in other adopted City infrastructure/utility plans. If a street or road is allowed by Benton County to be constructed within a Natural Feature mapped on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map, the road shall be constructed with 10-ft. wide travel lanes

and without (excluding) on-street parking and park strips for the portion of the street within the Natural Feature.

- (B) Construction of streets, roads, and pedestrian ways necessary in order to maintain an acceptable functional classification of roadways adjacent to the property, if no feasible alternative is available outside of identified resources. If a street or road is required by Benton County to be constructed within a Natural Feature mapped on the Corvallis Urban Fringe Riparian Corridors and Wetlands Map, the road shall be constructed with 10-ft. wide travel lanes and without (excluding) on-street parking and park strips for the portion of the street within the Natural Feature.
 - (C) Driveways necessary to provide access to an approved building site, provided the disturbed riparian surface area is minimized.
 - (D) Pedestrian trail, which is an unpaved path, four feet or less in width, designed for and used primarily by pedestrians.
- (c) Development of water-related and water-dependent uses where no other viable locations exist and that minimal riparian and wetland surface area is impacted;
 - (d) Grading and excavation related to farm use, limited to areas that have been converted to farm use prior to October 6, 2005. The property owner shall have the burden of proof in demonstrating that an area was converted prior to this date.
 - (e) Erosion control or flood control measures that have been approved by the Oregon Department of State Lands (DSL) and/or the U.S. Army Corps of Engineers, and that utilize bio-engineering methods. Streambank hardening (installation of hard-surfaced erosion- or flood-protection structures such as rip-rap) is prohibited except where necessary to address an imminent hazard to a structure built prior to October 6, 2005. Where allowed, hard-surface measures shall be designed by a Professional Engineer licensed by the State of Oregon, and shall at a minimum, require backfilling with soil and planting with native vegetation;
 - (f) Development authorized under the provisions for a Modification to Natural Features Standards (BCC 88.800).

[Ord. 2005-0210]

88.340 Land Divisions. Parcels or lots resulting from subdivisions, partitions and property line adjustments shall be designed such that existing and future uses and development activities allowed by the underlying zone can be carried out in conformance with the regulations contained in this chapter. Creation of lots or parcels that do not meet this requirement is prohibited, with the exception of lots or parcels created for public park or open space purposes.

88.350 Notification to State and Federal Agencies Required. In addition to the restrictions and requirements of this section, all proposed development activities within any wetland are also subject to Oregon Department of State Lands (DSL) standards and approval. In accordance with ORS 227.350, the applicant shall be responsible for notifying DSL whenever any portion of any wetland is proposed for development. No application for development will be accepted as complete until documentation of such notification is provided, and no development shall be permitted until the County has received verification of DSL approval for development on the subject site.

[Ord. 2005-0210]

SIGNIFICANT VEGETATION (Rare Habitats and Tree Groves)

88.400 Purpose. Oak savanna, upland prairie, stands of large-diameter Douglas fir, and tree groves containing Oregon white oak are all considered significant vegetation. The purpose of this section is to encourage property owners to maintain areas of significant vegetation, and to establish land use protections for the upland prairies and oak savannas identified in the Natural Features Inventory as having the highest ecological value. These areas provide valuable stormwater control and water quality utilities, provide habitat for rare plant and animal species, and add to the aesthetic appeal of the community. [Ord 2005-0211]

88.410 Application. The provisions of this section shall apply to the areas identified in 88.050(8). [Ord 2005-0211]

88.420 Notice Regarding Annexation: When land identified as significant vegetation is annexed to the City of Corvallis, the requirements of the Corvallis Land Development Code will apply. The Corvallis code provisions require protection of certain land areas and require a certain percentage of tree canopy be maintained during and after development. The required tree canopy will be required whether or not the trees are there and will be more easily attained if existing trees are left in place than if they are removed and must be replanted by the property owner or developer. Development will not be allowed in HPSV areas, except for a very few specified exceptions (such as attaining the City's minimum assured development area or providing streets required by the Corvallis Transportation Plan). [Ord 2005-0211]

88.430 Incentives. Voluntary protection by property owners of areas mapped as High Protection Significant Vegetation (HPSV) may qualify for additional land development rights pursuant to BCC 64.305(3) or 100.150(7). [Ord 2005-0211]

88.440 Protected Upland Prairie and Oak Savanna

- (1) On land identified as Protected Upland Prairie or Oak Savanna on the Corvallis Urban Fringe Significant Vegetation Map, ground disturbance, vegetation removal, and placement of structures are prohibited. Exceptions are allowed for the following uses and activities:
 - (a) Removal of Douglas fir or non-native trees;
 - (b) Removal of a hazard tree which poses a current threat to life or property. Tree removal shall comply with the following standards:
 - (A) The stump and root wad of any altered tree shall remain undisturbed in place;
 - (B) If an Oregon white oak is removed from an oak savanna, it shall be replaced by a tree of the same species.
 - (c) Maintenance of lawns, planted vegetation, and landscaping, to the extent existing on November 25, 2005.
 - (d) Activities pursuant to a wildlife habitat conservation and management plan approved by the Oregon Department of Fish and Wildlife;
 - (e) Vegetation management plan approved by the Planning Official in consultation with specialists deemed appropriate by the Planning Official. The applicant shall demonstrate that the plan will, in both the short term and long term:
 - (A) Maintain or enhance the characteristics which qualified the site for Natural Feature protection as described in the Natural Features Inventory; and

- (B) Implement the vegetation management activities recommended in the Natural Feature Inventory Report and Database for enhancement for each affected habitat area (subpolygon);

Failure to comply with the full implementing conditions of approval of the vegetation management plan may result in enforcement pursuant to BCC 88.900.

- (f) Removal of non-native, invasive, and/or noxious vegetation, as identified in the Oregon Department of Agriculture's Oregon Weed Policy and Classification System (Appendix 1), including weeds designated as "A", "B", and/or "T". As necessary to control erosion, areas of vegetation removal shall be re-vegetated with native species. If necessary to prevent erosion prior to new vegetation becoming established, short-term, non-structural erosion control measures shall be employed;
- (g) Substitution of native plant species for non-native plants. Additionally, native plants may be planted without accompanying removal of non-native plants. All new plantings shall be species listed on the City of Corvallis Native Plant List as appropriate for the proposed location. Plantings being substituted for non-native plants shall be species identified on the Corvallis Native Plant List as being in the same ecological-function category as the replaced plants. Plantings shall be maintained to ensure they become established.
- (h) The minimum vegetation removal or trimming necessary to establish and maintain a fire fuel-break safety zone surrounding a structure, as defined in BCC 88.010(2). Benton County encourages property owners to consult with the Oregon Department of Fish and Wildlife on ways to minimize the impact of this vegetation removal and to mitigate the impacts that do occur.
- (i) Continuation of agricultural activities, limited to areas that have been converted to farm use prior to November 25, 2005. The property owner shall have the burden of proof in demonstrating that an area was converted prior to this date.
- (j) Replacement of existing structures with structures located on the original building footprint or up to a maximum deviation of 10% from the footprint existing on November 25, 2005. Vertical additions to these structures are allowed if they do not disturb additional surface area. Structures abandoned for a period of one year or longer are not eligible for replacement.
- (k) The following types of infrastructure, provided they are designed to minimize the encroachment into and impact on the prairie and/or savanna:
 - (A) Construction of streets, roads, public utilities, and bicycle and pedestrian ways that are included in the City of Corvallis Transportation Plan, or in other adopted City infrastructure/utility plans, if no feasible alternative is available outside of identified features; If a street or road is allowed by Benton County to be constructed within a natural feature mapped on the Corvallis Significant Vegetation Map, the road shall be constructed with 10-ft. wide travel lanes and with no on-street parking and no park strips for the portion of the street within the natural feature.
 - (B) Construction of streets, roads, and pedestrian ways necessary in order to maintain an acceptable functional classification of roadways adjacent to the property, if no feasible alternative is available outside of identified features. If a street or road is required by

Benton County to be constructed within a natural feature mapped on the Corvallis Significant Vegetation Map, the road shall be constructed with 10-ft. wide travel lanes and without (excluding) on-street parking and park strips for the portion of the street within the natural feature.

- (C) Driveway necessary to provide access to an approved building site.
- (l) Implementation of passive recreational facilities such as pedestrian trails and picnic areas specified in a public park management plan adopted by the appropriate governing body.
- (m) Vegetation removal and/or development within the area authorized under the provisions for a Modification to Natural Features Standards (BCC 88.800).

[Ord 2005-0211]

88.450 Creation of Lots and Parcels

Parcels or lots resulting from subdivisions, partitions and property line adjustments shall be designed such that existing and future uses and development activities allowed by the underlying zone can be carried out in conformance with the regulations contained in this chapter. Creation of lots or parcels that do not meet this requirement are prohibited, with the exception of lots or parcels created for public park or open space purposes. [Ord 2005-0211]

MODIFICATION TO NATURAL FEATURES STANDARDS

88.800 Modification Options. On a lot or parcel containing Natural Features identified on the Corvallis Urban Fringe Natural Hazards Map and/or Riparian Corridors and Wetlands Map, the following two options are available to ensure that parcels or lots reasonably expected to be buildable can indeed be built upon:

- (1) **Non-Discretionary “Constraint-Free Area”.** By means of the following procedure, a property shall be assured a minimum area free from the regulatory development constraints of the Natural Features provisions and building setback requirements. This procedure shall be non-discretionary. Designation of a Constraint-Free Area on a property may be approved by the Planning Official upon receipt of a plot plan and other documentation sufficient to demonstrate compliance with this subsection. Such approval is not a land use decision and shall not be subject to appeal.
 - (a) All legally created, residentially zoned parcels that include Natural Features shall be entitled to a minimum area free from the development prohibitions of Natural Features regulations, thus allowing building construction, landscaping, driveway, and other development. The Minimum Constraint-Free Area (MCFA) assured under this section is defined as 10% of parcel or lot area plus the area of the approved initial and repair septic system drainfields or, if no site feasibility approvals have been issued by the Benton County Environmental Health Division or the Oregon Department of Environmental Quality, two times the area containing the existing drainfield lines buffered by 10 feet. The minimum MCFA shall be 5,000 square feet and the maximum 1 acre. (Note that some of the Development Code provisions for some Natural Features require the septic system drainfield to be located outside of Natural Features unless the only approvable area is with the Natural Feature area.)

- (b) If an area equal to or exceeding MCFA is currently free of Natural Feature and building setback regulatory constraints, no encroachments into Natural Features shall be authorized by this subsection and development activities that are otherwise allowed by this Code are allowed in all areas outside of Natural Features.
 - (c) If the only viable access to an adequate constraint-free area requires encroachment into Natural Features, such encroachment shall be allowed if it is less than or equal to the MCFA.
 - (d) If the combination of Natural Features development restrictions imposed by this chapter and building setbacks required by the underlying zone results in an area less than the MCFA determined in subsection (a) on a given lot or parcel, then:
 - (A) The building setbacks of the underlying zone shall be reduced to the extent necessary to provide the MCFA determined in subsection (a) but shall not be reduced to less than half of their original dimension.
 - (B) If the MCFA is not attained through subsection (A), then the constraint-free area may encroach into Natural Features on the site pursuant to subsections (3) through (9) below. Such encroachment shall be the minimum necessary to attain MCFA.
 - (C) All activities otherwise prohibited by BCC 83.505 and BCC 88.100 through 88.350 shall be contained within the Constraint-Free Area.
 - (e) Areas containing slopes of 15% to 35% shall not be considered restricted from development for purposes of subsection (d) above unless a geotechnical site assessment and/or geotechnical report determines the area is inappropriate for development.
- (2) **Discretionary Modification of Standards.** For cases where a property owner desires a larger or differently configured Constraint-Free Area than the MCFA of subsection (1) allows, the property owner may apply for a Discretionary Modification of Standards. This shall be a land use decision subject to the requirements of Chapter 51.
- (a) The Planning Official may modify or reduce any of the restrictions within the Natural Features regulations through the provisions of this section. The decision to grant the modification shall be based on the following findings:
 - (A) The property owner shall demonstrate that the Natural Features provisions have rendered a lawfully created lot or parcel undevelopable for the primary use allowed in the base zone. Primary use is defined as follows: in a residential zone, a primary use is a dwelling; in a commercial or industrial zone, a primary use is any use that is allowed outright, could be reasonably expected considering site characteristics, and will have a development footprint smaller than the lesser of 4 acres or 50% of the square footage of the subject property.
 - (B) The modification requested shall be the minimum deviation from the Natural Features regulations necessary to enable the lot or parcel to be reasonably developable for the primary use allowed in the base zone;
 - (C) The applicant shall demonstrate that other locations outside of mapped Natural Features are not practicable. The analysis of other locations shall include areas normally off-

limits due to setbacks or other non-Natural Features requirements of the Development Code.

- (D) In considering the modification request, the Planning Official shall consider modifications to other restrictions under the Development Code, including but not limited to yard setbacks, and shall, if the above criteria are met, approve the modification(s) that causes the least impact to mapped Natural Features while not altering the essential character of the neighborhood nor substantially or permanently impairing the appropriate use or development of adjacent property.
- (b) Any encroachment into Natural Features authorized through this subsection shall follow the prioritization established in subsection (3), and comply with subsections (4) through (9), below.
- (3) If, pursuant to the criteria of subsection (1) or (2) above, encroachment into a Natural Features area is allowed, such encroachment shall comply with the following:
- (a) The encroachment shall be accomplished in the following order and to the minimum extent necessary to achieve the MCFA or approved Discretionary Modification. All available areas within a given category shall be utilized before moving down the list to the next category.
 - (A) Encroachment for Access: The minimum encroachment necessary to provide access to a building site that does not impact Natural Features.
 - (B) Floodway Fringe;
 - (C) Systems-Critical Wetlands outside Riparian Corridors;
 - (D) Riparian corridors of the Marys and Willamette Rivers;
 - (E) Riparian wetlands of the Marys and Willamette Rivers
 - (F) Riparian corridors of local streams draining more than 160 acres;
 - (G) Riparian wetlands of local streams draining more than 160 acres;
 - (H) Riparian corridors of local streams draining 160 acres or less;
 - (I) Riparian wetlands of local streams draining 160 acres or less;
 - (b) **Off-Limits Areas.** The following areas shall not be authorized for development activities due to extreme hazard and/or very high potential for development to impact other properties or the environment:
 - (A) Within 20 feet of the top-of-bank in riparian corridors;
 - (B) 0.2-ft. Floodway.
 - (C) Slopes exceeding 35%;
 - (D) Landslide hazard areas, in the absence of a geotechnical report concluding that the risk of landslide is negligible.

- (4) Conditions of approval pursuant to BCC 53.220 may be imposed to mitigate adverse impacts that could result from granting the Modification.
- (5) Encroachment into Natural Resource areas shall be conditioned upon the applicant implementing and maintaining a restoration/mitigation plan, approved by the Planning Official upon consultation with the Oregon Department of Fish and Wildlife, to offset the impact of the use allowed within the Natural Resource area. The mitigation/restoration plan shall restore areas similar to those impacted by development activities at a ratio of 2:1 (restored area:impacted area). If the restoration cannot be accomplished on-site it shall occur within the same watershed as the site.
- (6) Encroachment into Natural Hazard areas shall be designed and constructed pursuant to the recommendations of required geotechnical reports and engineering design.
- (7) If a Modification is approved to allow an on-site sewage disposal system in a Natural Feature area, the system shall be a sand filter system that provides the least disruption and occupation of surface area and vegetation.
- (8) A Modification to Natural Features Standards shall not be granted for a lot or parcel created or modified after October 6, 2005.
- (9) Unless otherwise specified at the time of approval, a modification approved under subsection (3) shall be valid for one year.

[Ord. 2005-0209; 2005-0210]

ENFORCEMENT

88.900 Enforcement and Corrective Action.

- (1) **Purpose:** Benton County encourages property owners to maintain natural features and accordingly provides incentives through the bonus parcel allowances of Chapters 64 and 100. At the same time, failure by a property owner to comply with the mandatory provisions of the natural features program may necessitate enforcement and corrective action pursuant to this section. The primary focus of enforcement and corrective action is not punishment but rather to restore lost functioning and redress negative impacts resulting from the violation.
- (2) Violations of the provisions of this chapter shall be corrected by meeting the standards of the applicable section below. These correction provisions shall be observed whether or not any civil citation is issued pursuant to Benton County Code Chapter 31. Failure to comply with the required correction provisions shall be considered additional violation(s) of the Development Code.
 - (a) Removal of riparian/wetland vegetation or ground disturbance in riparian/wetland areas in violation of the Development Code shall be remedied by the property owner restoring the impacted area, plus an additional area equal to the area disturbed. The additional area is necessary because restoration is not always completely successful, and takes many years to reach replacement of the functions lost by disturbance. The restoration plan shall be approved by the Planning Official, who, through consultation with Oregon Department of Fish and Wildlife or other appropriate agency staff, shall determine whether the plan is adequate for restoring riparian and/or wetland functions to a level that would reasonably be expected at the site. Restoration shall be initiated within 90 days of the violation and within the period from October 1 to May 1 (the 90-day period may be extended to ensure that planting occurs at the

first reasonable opportunity in this period). Until restored vegetation has become established, the property owner shall ensure erosion control measures are in place during rainy periods.

- (b) Replanting required by subsection (a) shall meet the following standards:
 - (A) Replanting shall exclusively utilize native plants listed on the City of Corvallis Native Plant List as appropriate for the proposed location.
 - (B) Plantings shall, at a minimum, replace the ecological-function category of the removed plants.
 - (C) The restored areas shall be maintained until vegetation becomes fully established, but for a period of no less than five years, during which time invasive and non-native species shall be kept out, plantings shall be irrigated as necessary, and any plants that die shall be replaced.
- (c) Excavation or removal of vegetation within steep slope hazard areas or landslide hazard areas in violation of BCC 88.100 or 88.200 shall require the property owner to obtain a geotechnical site assessment and geotechnical report and effect any and all remedial action recommended in the geotechnical report for restoring or enhancing the immediate and long-term stability of the affected area. In the case of vegetation removal, the geotechnical report shall specify appropriate replanting standards, including species, density, location, and maintenance requirements. Planted species shall be native species listed on the Corvallis Native Plant List. If the geotechnical report specifically recommends against planting trees, such recommendation shall override the above standards.
- (3) The Planning Official, or the Planning Official's designee, shall have the authority to issue a "Stop-Work Order". Such order may be issued when a violation of the provisions of Chapter 88 is occurring or has occurred and there is reason to believe additional activity will exacerbate the violation. A Stop-Work Order shall be posted at the site of the violation and shall be followed with a letter of explanation to the property owner. Failure to halt activity upon the posting of a Stop-Work Order shall be a further violation of the Benton County Code and shall result in an additional fine of \$500 per day for each day that activity occurs after posting of the order.

[Ord. 2005-0209; 2005-0210]