Chapter 24.25 FISH AND WILDLIFE HABITAT CONSERVATION AREAS

24.25.005 Purposes.

The purposes of this section are to:

A. Protect habitat and healthy functioning ecosystems to support viable populations of priority and locally important fish, wildlife, and plants in Thurston County.

B. Preserve the functions and values of locally important habitat.

C. Protect the functions and values of priority habitats such as, but not limited to, prairies, Oregon white oak, and riparian areas along streams and marine waters.

D. Protect the function and values of marine habitats, including shellfish beds harvested for commercial use or personal consumption.

E. Provide for connectivity among fish and wildlife habitats.

F. Ensure compliance and coordination with applicable federal and state protections.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 16216, § 3(Att. B, § VI), 11-22-2022)

24.25.010 Applicability.

All property within unincorporated Thurston County containing fish and wildlife habitat conservation areas as defined and provided for in Chapter 24.03 TCC and/or associated buffers and additional areas identified by this chapter are subject to this title. Fish and wildlife habitat conservation areas are typically identified either by known point locations of specific species or by habitat areas or both. The presence of a fish and wildlife habitat conservation area and/or buffer on a parcel triggers the requirements of this chapter, regardless of whether or not the habitat conservation area has been mapped.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.013 Fish and wildlife habitat conservation areas designated.

Fish and wildlife habitat conservation areas shall include the following:

A. Aquatic and riparian habitat areas.

1. These areas include ponds, rivers, streams, and lakes, and the adjacent landward areas which provide riparian function. These include areas listed as aquatic or riparian priority habitats by the Washington Department of Fish and Wildlife Priority Habitats and Species List, 2026 or as amended. These areas include riparian management zones, as discussed later in this chapter.

a. Shorelines and waterbodies subject to the Shoreline Master Program shall be governed by the requirements of that program.

B. Terrestrial priority habitats.

1. Habitat types mapped and listed as priority habitats by the WDFW Priority Habitats and Species List, 2026 or as amended. Know, terrestrial habitats in Thurston County include:

a. Aspen stands:

i Pure or mixed stands of aspen greater than 1 acre.

b. Biodiversity areas and corridors

i Areas depicted on the Washington Habitat Connectivity Action Plan Map as connected landscapes of statewide significance, connected landscapes of regional significance, or as having a connectivity value of 11 or greater.

c. Herbaceous balds:

i Patches of grass and forb vegetation located on shallow soils over bedrock that commonly is fringed by forest or woodland. Typically consists of low-growing vegetation adapted for survival on shallow soils amid seasonally dry conditions, and is often on steep slopes.

d. Old-growth/mature forest:

i Areas meeting the WDFW Priority habitat descriptions for old-growth west of Cascade crest or mature forests.

e. Oregon White Oak woodlands:

i Priority Oregon White Oak Woodlands. Stands of Oregon white oak or oak/conifer associations where the stand is at least one acre in size and the canopy coverage of the oak component of the stand is greater than or equal to 25 percent.

ii Significant Oaks and Stands. Single oaks or stands of oaks smaller than one acre in size when any of the following criteria are met:

(a) Individual trees having a diameter at breast height of 20 inches or more; or

(b) Oregon white oak stands in which the oak trees have an average diameter at breast height of 15 inches or more regardless of stand size.

f. West side prairie:

i West side prairie areas shall be designated based on maps indicating prairie soils, historic prairie areas, and the presence of rare prairie plan species.

g. Caves:

i A naturally occurring cavity, recess, void, or system of interconnected passages (including associated dendritic tubes, cracks, and fissures) which occurs under the earth in soils, rock, ice, or other geological formations, and is large enough to contain a human. Mine shafts (a human-made excavation in the earth usually used to extract minerals) may mimic caves, and abandoned mine shafts with actual or suspected occurrences of priority species should be treated in a manner similar to caves.

h. Cliffs:

i Greater than 7.6 meters (25 feet) high and occurring below 1,524 meters (5,000 feet) in elevation.

i. Snags and logs

i Dead or dying trees with a DBH over 20 inches and a height over 6.5 feet.

ii Downed logs greater than 12 inches at the largest point and greater than 20 feet long.

j. Talus

i Accumulations of unconsolidated, angular rock fragments that are derived from cliffs or steep hillsides and that form at the natural "angle of repose," meaning the steepest angle at which the rocks can remain stable without sliding (generally about 30–40° or a 58 84%slope). The rock fragments are typically between 6 inches and 6.5 feet across along their intermediate-axis dimension. For field classification, at least 50% of the measured rock fragments (counted individually) must fall within this size range for the deposit to be classified as talus.

C. Priority species areas. These areas shall include any areas known to be inhabited or used by species listed as priority species by the WDFW Priority Habitats and Species List, 2026 or as amended, or areas depicted on WDFW Priority Habitats and Species maps.

D. Species and habitats of local importance. Any species area or habitat type which has been nominated as a species of local importance in this chapter.

24.25.015 Riparian habitat areas.

Riparian habitat areas shall be established along all streams pursuant to this section. TCC 24.25.020 specifies the standard freshwater riparian habitat area widths. These standard widths may be reduced pursuant to TCC 24.25.025, increased pursuant to TCC 24.25.030, or reconfigured pursuant to TCC 24.25.035. Riparian habitat areas shall be retained in their existing condition except as explicitly authorized by this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.020 Standard freshwater riparian habitat area width.

Riparian management zones shall be established along the outer boundary of all waterbodies covered by this chapter, as specified in this section. Consistent with Table 24.25-3 and TCC 24.25.220, uses and activities within riparian management zones shall be conducted to prevent damage to the riparian and stream habitat. Riparian management zones include the following:

A. The riparian management zone shall extend a distance equivalent to the site potential tree height at 200 years (SPTH200) from the edge of the ordinary high water mark, or from the edge of the channel migration zone where one exists.

~~A. Table 24.25-1 identifies the standard riparian habitat area widths.~~

~~A. Measurement. Riparian habitat area widths are measured on a horizontal plane, outward from the ordinary high water mark (OHWM) on each side of the stream (see Figure 24.25-1).~~

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B. In landscapes with very few trees, the riparian management zone shall extend from the edge of the ordinary high water mark, or the outer edge of the channel migration zone if one exists, to the edge of the area occupied by riparian vegetation, as identified by a qualified professional.

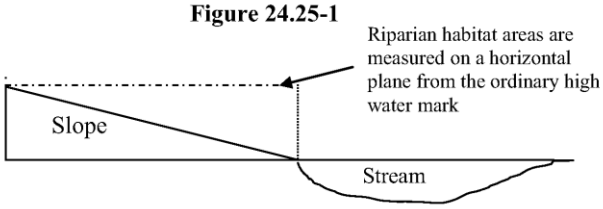
C. The minimum total width of the riparian management zone shall be 100 feet regardless of the landscape type.

D. Applicants may submit a report identifying the site potential tree height

E. In historic prairie range areas where tree species other than Oregon White Oak have become the dominant tree species, the site potential tree height for Oregon White Oak may be used when the following conditions are met:

1. A habitat report from a qualified professional has identified that the site is appropriate for Oregon White Oak restoration, and identified whether the site should be restored to Oregon White Oak prairie, savannah, or woodland conditions; and
2. A qualified professional has identified the site potential tree height at 200 years for Oregon White Oak on the site; and
3. A restoration plan prepared by a qualified professional is submitted and approved which identifies plants and trees to be removed and replanted; and
4. The restoration plan includes a 5-year monitoring plan.

Figure 24.25-1



~~**Table 24.25-1. Standard Freshwater Riparian Habitat Area Widths**~~

~~STREAM TYPE~~	~~STANDARD RIPARIAN HABITAT AREA WIDTH~~
~~Type S streams~~	~~250'~~
~~Type F streams greater than 20 feet in width (for all stream types, width is defined as bankfull width)~~	~~250'~~
~~Type F streams from 5—20 feet wide~~	~~200'~~
~~Type F streams less than 5 feet wide~~	~~150'~~
~~Type Np and Ns streams draining to Type S or F streams or directly to Puget Sound~~	~~150'~~
~~Type Np and Ns streams with high mass wasting potential~~	~~225'~~
~~Other streams not listed above, including streams without a surface connection to other waters~~	~~100'~~

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.025 Reduced riparian habitat area width.

Except when inconsistent with TCC Section 24.25.030 below, the approval authority, in consultation with the ~~Washington Department of Fish and Wildlife (~~WDFW~~)~~ and others with expertise, may reduce the riparian habitat area width specified in Table 24.25-1. Riparian habitat areas may not be reduced for fish bearing streams or marine waters without the approval of a reasonable use exception except as otherwise allowed in this section and Chapter 24.50 TCC. The applicant shall provide the approval authority with sufficient information to enable a determination as to whether the subject area qualifies for a habitat area or buffer reduction under this section. The approval authority may require technical review by a qualified professional, at the applicant's expense, to evaluate and verify the information submitted by the applicant.

~~A. Type Np and Ns streams and other streams not listed above. The width of standard riparian habitat areas along Type Np and Ns streams more than one quarter mile upstream from confluence with a Type F or S stream, Puget Sound, a Category I III wetland (see chapter 24.30 TCC), or a lake or pond protected by this chapter may be reduced up to a total of twenty-five percent for Np streams and fifty percent for Ns streams and other streams not listed above, if:~~

~~1. The land use abutting the riparian habitat area will not generate pollutants or sediment that would reach the stream, elevate water temperature, or increase peak stream flows; and~~

~~2. Best management practices (BMPs) or other mitigation measures will be employed as warranted to protect all of the riparian habitat functions and prevent pollutants and sediment from reaching the stream.~~

~~3. The approval authority determines that the proposed reduction in buffer width, coupled with any the proposed mitigation plan, would result in protection of the stream and stream functions or improved buffer functions than the standard buffer without such enhancement. The approval authority shall make this determination based on the applicant's proposed mitigation plan and a comparative analysis of all stream and buffer functions under existing and enhanced conditions (e.g., filtration of sediments, excess nutrients, and pollutants; flood storage; erosion control; moderation of stormwater impacts; and shading for water temperature moderation) prepared by the applicant, or applicant's consultant if appropriate.~~

~~Factors to be considered include, but are not limited to, the surface roughness of the buffer (e.g., the presence of fallen trees and other material that slow the flow of water and increase the buffer's ability to retain sediment and infiltrate stormwater); the composition and density of vegetation; the stream's position in the landscape; slope; and soils. The approval authority may consult with ecology, WDFW or others with expertise as necessary to evaluate the applicant's proposal.~~

A~~B~~. Isolated riparian areas/buffers.

1. If topographic breaks (e.g., bluffs) or a road (not including logging roads), railroad or other lineal facility or barrier separates and functionally isolates a portion of the riparian habitat area or buffer, the approval authority, in consultation with the WDFW, may reduce the riparian habitat area or buffer width to the minimum extent necessary to exclude the isolated area if:

    a. The barrier occurs naturally or the facility or barrier was legally established prior to July 24, 2012; and

    b. The area proposed to be segregated from the riparian habitat area or buffer does not perform any biological, water quality, or hydrological functions related to the remainder of riparian habitat area, buffer, or adjacent waterbody.

B~~C~~. Culvert and pipe removal. Applicants proposing to daylight or open up a stream by removing a pipe or culvert from a stream shall submit a critical area report (see Chapter 24.35 TCC) demonstrating that no net loss of habitat or reduction in water quality would occur as a result of such action, and what buffers are present to protect the stream functions. Water quality protection methods may include, but are not limited to, a combination of a berm and vegetation beside the stream, a stormwater treatment system; or dense, continuous vegetative ground cover at least one hundred feet in width. In order to protect water quality of the stream, a proposed buffer with a slope of five percent or more or has a channelized drainage path that would allow untreated stormwater to enter the stream, the approval authority may require that a device (e.g., a perforated pipe) be installed at the outer edge of the buffer or that the slope be graded to induce sheet flow of stormwater.

C~~D~~. When evaluating the proposal, the approval authority shall consider the sensitivity of the stream onsite and downstream, the potential of adjoining uses to contaminate the stream; the ability of the existing and proposed vegetation to filter sediment and pollutants; slope; drainage patterns; the likelihood that

proposed water treatment method(s) will be effective in maintaining water quality; and other relevant factors.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 14961, § 5(Att. E), 12-17-2013)

24.25.030 Increased riparian habitat area width.

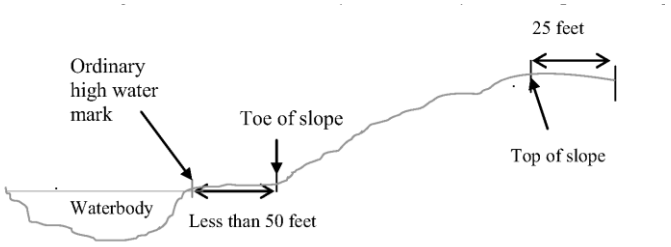
The approval authority shall require an increase in riparian habitat area, marine riparian habitat area, or buffer width beyond the distance specified in Table 24.25-1, TCC 24.25.050, or TCC 24.25.060(B) under the following circumstances:

A. Landslide Hazard Areas. When the riparian habitat area or buffer contains a landslide hazard area (see Chapter 24.15 TCC), the riparian habitat area or buffer width shall be the standard width or it shall coincide with the landslide hazard area buffer at the top of the slope, whichever is greater. This width cannot be reduced pursuant to TCC 24.25.025 or 24.25.035.

B. Steep Slopes Not Designated as Landslide Hazard Areas. When the ordinary high water mark of a stream, Puget Sound, pond or lake subject to this chapter lies within fifty feet of the toe of a slope of thirty percent or greater that is at least fifteen feet in height (which is not designated as a land slide hazard area), the riparian habitat area or buffer shall be sized to be the larger of the widths specified in this subsection. This width cannot be reduced pursuant to TCC 24.25.025 or 24.25.035:

1. The standard riparian habitat area or buffer width; or

2. Whichever is less of two hundred feet upslope from the toe of the slope, measured across the ground surface, or twenty-five feet beyond the top of the slope.



C. Inadequate vegetative cover to maintain water quality.

1. If the standard riparian habitat area specified in Table 24.25-1 or marine riparian habitat area, or pond buffer does not contain at least eighty-five percent live tree canopy and/or understory coverage consisting of dense, continuous vegetation at least one hundred feet in width (or, if applicable, the distance specified in subsections (A) or (B) above), the approval authority, in consultation with a qualified professional, may increase the standard riparian habitat area/buffer width up to twenty-five percent as needed to protect the stream from sedimentation and pollutants.

2. In lieu of increasing the riparian habitat area width, the approval authority may allow implementation of a planting plan. This planting plan shall provide for planting of all bare and sparsely vegetated areas of the habitat area/buffer on the subject site such that there will be continuous vegetation at least one hundred feet in width between the water body's ordinary high water mark and the outer edge of the

habitat area/buffer. The plan shall provide for planting of native vegetation, including grasses, trees, and shrubs that are compatible with existing vegetation in the habitat area/buffer at densities that will effectively filter/absorb pollutants, excess nutrients, and filter sediment.

a. The applicant shall submit a surety consistent with Chapter 24.70 TCC and provide for monitoring and maintenance at appropriate intervals to ensure survival or replacement of the planted vegetation.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.035 Reconfiguration of riparian habitat areas.

The approval authority may authorize or require reconfiguration of riparian habitat areas as follows:

A. Preservation of High Quality Habitat. If the riparian habitat area ~~along a Type S or F stream~~ contains variations in sensitivity or habitat quality or if the area adjacent to the riparian habitat area contains high quality habitat sustaining species listed under the federal Endangered Species Act (64 FR 14307), state priority wildlife species, or species of local importance (see TCC 24.25.065(C)), the approval authority may reconfigure the riparian habitat area boundaries to preserve the higher quality/sensitive habitat or to provide a connection to the adjacent habitat.

B. Minimum Dimensions. The reconfigured riparian habitat area shall be no less than one hundred feet wide at any point and shall contain the same square footage as the standard riparian habitat area, as modified pursuant to TCC 24.25.025 and 24.25.030. The reconfigured riparian habitat area shall not exceed one hundred percent of square footage of the standard riparian habitat area, as modified pursuant to TCC 24.25.025 and 24.25.030, without the landowner's consent. The reconfiguration of the riparian habitat area shall be based on the recommendation of a qualified biologist or other qualified professional with consideration of the effects of the proposed reconfiguration on all riparian functions.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

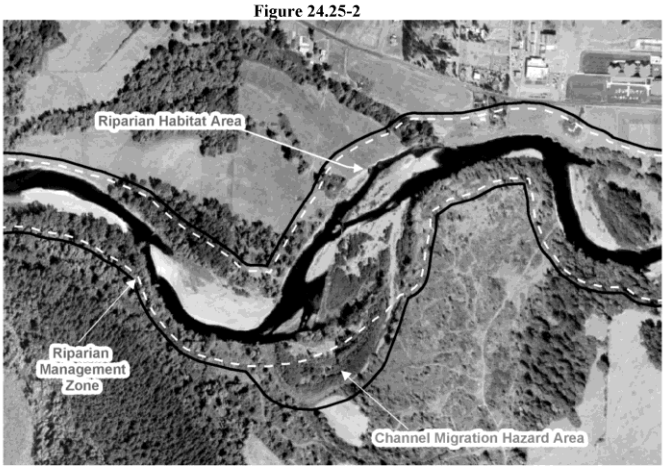
~~24.25.040 Riparian management zones.~~

~~Riparian management zones shall be established along the outer boundary of riparian habitat areas of Type S and F stream as specified in this section. Consistent with Table 24.25-3 and TCC 24.25.220, uses and activities within riparian management zones shall be conducted to prevent damage to the riparian and stream habitat. Riparian management zones include the following:~~

~~A. Fifty-foot Management Zone. The area extending landward from the outer boundary of the riparian habitat area for a distance of fifty feet, measured on the horizontal plane; and~~

~~B. Channel Migration Zones. Where a potential channel migration hazard exists within the riparian habitat area, (see TCC 24.20.045 and 24.20.055), the riparian management zone shall extend one hundred feet, measured on a horizontal plane, beyond the one-hundred-year channel migration hazard area. (See Figure 24.25-2).~~

Figure 24.25-2



The riparian management zone extends between the dashed white line (the outer boundary of the riparian habitat area) and the black line as depicted above.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.045 Important marine habitats.

This section applies to marine shorelines of statewide significance and marine shorelines of the state (see Chapter 90.58 RCW and related rules) consistent with WAC 220-110-020, as amended. It also applies to marine areas supporting kelp and eelgrass beds; herring spawning areas; intertidal areas supporting surf smelt and sand lance spawning, salmonids, and shellfish beds sustaining commercial or recreational harvest, including shellfish protection districts established pursuant to Chapter 90.72 RCW.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.050 Marine riparian habitat.

A. Standard Marine Riparian Habitat Area Width. Marine riparian habitat areas of two hundred fifty feet in width shall be established along all marine shorelines subject to this chapter, except for "rural" shorelines (as designated by the Shoreline Master Program for the Thurston Region (1990). These "rural" shorelines shall be regulated by the master program. The riparian habitat areas shall be measured, on a horizontal plane, landward from the OHWM or, if the OHWM cannot be identified, the top of the bank. The marine riparian habitat areas shall be retained in their existing condition, except as explicitly authorized by this chapter.

B. Habitat Area Reduction. The approval authority may reduce the standard marine riparian habitat area to the minimum extent necessary to accommodate water-dependent uses allowed under the Shoreline Master Program for the Thurston Region, consistent with TCC 24.25.110.

In addition to any required shoreline permit, the applicant shall submit a critical area report (see Chapter 24.35 TCC) demonstrating that impacts to all marine riparian habitat area functions and marine riparian habitats protected by this chapter will be avoided or, where that is not possible, minimized and mitigated. The approval

authority will review this report in consultation with the WDFW and, as warranted, others with expertise prior to approving or denying the proposed habitat area reduction.

Isolated sections of riparian habitat areas may be excluded, consistent with TCC 24.25.025(B).

C. Increased Marine Buffer. The width of the marine buffer shall be increased where there are steep slopes, the presence of important species or habitats, landslide hazard areas, or inadequate vegetation to protect water quality as provided for in TCC 24.25.030.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.055 Marine riparian management zone.

A marine riparian management zone shall be established which extends fifty feet, on a horizontal plane, landward from the landward edge of standard marine riparian habitat area, as configured prior to any reduction pursuant to TCC 24.25.050(B). The area where any riparian habitat area reduction occurred shall be included in the management zone. Development in the marine riparian management zone will be restricted as necessary to minimize adverse impacts to important marine habitats, consistent with Table 24.25-3 and related standards.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.060 Ponds and lakes.

Note: Most ponds will contain lake fringe wetlands or be considered high groundwater hazard areas regulated under Chapters 24.20 and 24.30 TCC.

A. Applicability. This section applies to ponds between one thousand square feet and twenty acres in surface area and their submerged aquatic beds that provide fish or wildlife habitat. Lakes shall be regulated by the Shoreline Master Program for the Thurston Region (1990).

B. Pond buffers shall be ~~one hundred feet~~equivalent to one site potential tree height at 200 years ($SPTH^{200}$). Buffer widths shall be measured on a horizontal plane, outward from the OHWM or, if the OHWM cannot be identified, from the top of the bank. These buffers shall be maintained in an existing native vegetated or natural condition, except as explicitly authorized by this chapter.

C. Buffer Reduction. The approval authority may allow the buffer width to be reduced to a minimum of seventy-five feet if the applicant demonstrates that the adjacent land use will not generate pollutants, sediment, or excess nutrients (e.g., nitrogen and phosphorus); elevate water temperature; or significantly alter the pH of the water body and that BMPs will be employed to prevent impairment of water quality in the lake or pond.

D. Increased Buffer. The width of the buffer shall be increased where there are steep slopes, landslide hazard areas, or inadequate vegetation to protect water quality as provided for in TCC 24.25.030.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.065 Important habitats and species.

Important animal and plant species, their habitats of primary association, and other important habitats protected under this chapter are:

A. Federally Listed Species and Associated Habitats. Animal and plant species listed under the federal Endangered Species Act (64 FR 14307) as endangered, threatened, or candidates for listing and their habitats of primary association. (Consult the U.S. Fish and Wildlife Service and National Marine

Fisheries Service for current listings.) The application and review process required to address potential impacts to species and associated habitat covered by the Thurston HCP shall be governed by Chapter 17.40 TCC.

B. State Listed Species and Associated Habitats.

1. Priority species and their habitats of primary association. Priority species identified on the WDFW Priority Habitats and Species (PHS) List and their habitats of primary association. (Consult the state department of fish and wildlife for the current PHS list).

2. Priority habitats. Priority habitats identified on the WDFW Priority Habitats and Species (PHS) List. (Consult the state department of fish and wildlife for the current PHS list).

3. Prairies meeting the following criteria are priority habitats:

a. Prairie habitat, as defined in Chapter 24.03 and Table 24.25-4 TCC;

b. Areas less than one acre in size with characteristics meeting the definition of prairie habitat which are functionally connected to another prairie habitat located within one-half mile of the subject area.

4. Oregon white oak (Quercus garryana) woodlands, stands, and individual trees meeting the following criteria are subject to this section:

a. Oak woodlands, as defined in Chapter 24.03 TCC.

b. Oak Savanna, as defined in Chapter 24.03 TCC.

c. Individual oak trees and stands of oak or oak conifer associations less than one acre in size that are located within one-half mile of a stand meeting the criteria in this subparagraph.

5. State listed plant species, such as those occurring on the Department of Natural Resources' List of Known Occurrences of Rare Plants.

C. Habitats and Species of Local Importance.

1. Habitats of Local Importance. Habitats of local importance in Thurston County are listed in Table 24.25-4 in Appendix 24.25-1.

2. Species of Local Importance. Wildlife species of local importance are listed in Table 24.25-5 in Appendix 24.25-1.

3. In addition to requirements of Chapter 24.91 TCC, adding or removing habitats and species of local importance is subject to the following:

a. Submission requirements. This chapter must be amended to add or remove a habitat or species of local importance. Any request to add or remove a habitat or species shall be submitted, in writing, to the resource stewardship department and must include the following information:

i. The nominator's name, address, and contact information;

ii. The common and scientific names of the nominated species or habitat;

iii. Reasons, supported by best available science, why the habitat or species should be added or removed for the list of locally important habitats or species.

iv. Maps or inventories of known occurrences of the nominated habitat or species within the county, dates of observation of the species and contact information for observers;

v. Habitat management recommendations, based upon best available science, including potential uses and restrictions of the habitat; seasonally sensitive areas and other measures necessary for the protection of dependent species; and

vi. Other supporting documentation that the approval authority determines is necessary to make a decision regarding the request.

b. The approval authority shall evaluate the request and supporting data, with consideration of this subsection, in consultation with a professional biologist knowledgeable regarding the subject species or habitat. Staff will forward their recommendation about the requested addition or removal to the board of county commissioners as part of the proposed docket of code amendments. The county evaluation of the request will, at a minimum, consider:

i. The scientific validity of the information submitted;

ii. The sufficiency of the habitat to sustain the species over time; and

iii. The versatility of the habitat to sustain species other than the one being nominated for designation.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 16216, § 3(Att. B, § VII), 11-22-2022)

24.25.070 Tree protection.

In order to protect the root systems of protected trees, trees within important habitat areas with drip lines that extend beyond the landward edge of the marine riparian habitat area, riparian habitat area, habitat areas for species of concern, or other habitats protected under this chapter shall be protected as follows.

A. A tree protection area extending a minimum of five feet beyond the dripline of conifer trees twelve inches or greater in diameter (at four and one-half feet above the ground), stands of trees, and Oregon white oak, shall be established and protected from disturbance during site development. The approval authority may require that the protection area be extended for oak trees if necessary to ensure the trees' survival, based upon a recommendation of an arborist or urban forester.

B. Tree protection areas shall be identified on all applicable site development and construction drawings submitted to the county.

C. Temporary fencing at least thirty inches tall shall be erected in areas of activity along the perimeter of the tree protection areas prior to the initiation of any clearing or grading. The fencing shall be posted with signage clearly identifying the tree protection area. If the perimeter of the tree protection area is more than 0.25 miles in length, the perimeter of the protection area may be staked and flagged rather than fenced. The fencing or stakes shall remain in place throughout site development.

D. Clearing, grading, filling or other development activities are prohibited within the tree protection area.

E. Vehicle travel, parking and storage of construction materials and fuel is prohibited in tree protection areas.

F. The county may approve the use of alternate tree protection techniques that provide an equal or greater level of protection.

G. The County may approve the disturbance or removal of trees otherwise protected by this chapter if the activity is part of an approved restoration project.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.075 Important habitats and species—Identification and buffers.

A. Applications for uses and activities on sites containing a habitat or species subject to this section shall include a critical area report (see Chapter 24.35 TCC) prepared by a qualified professional that evaluates the potential impacts of the proposed use or activity on the habitat and/or species, as applicable. The process for determining whether critical area reports are required, and the extent of information required is outlined in Chapter 24.05.027 TCC. Critical area reports that pertain to important habitats and species may also be referred to as habitat management plans.

B. The approval authority shall establish buffers for the habitat or species on a case-by-case basis for any habitats or species which are covered by this chapter, but which do not have prescriptive buffers or use standards provided herein, in consultation with the WDFW or others with expertise, based on the critical area report and the WDFW management recommendations for Washington's priority habitats and species, if available. The buffers shall reflect the sensitivity of the specific habitat(s) and/or species to be protected.

C. No clearing, grading, or other activity shall occur prior to approval by the review authority.

~~D. Prairie Habitat. The approval authority, in consultation with the WDFW and DNR Natural Heritage Program, shall establish buffers for prairie habitat that extend outward from the outer boundary of the habitat the greater of fifty feet, measured on the horizontal plane, or the minimum distance recommended in the critical area report, whichever is greater. When setting the buffer width, the approval authority shall consider the recommendation and supporting rationale in the applicant's critical area report and the following:~~

~~1. The habitat functions and their sensitivity to disturbance, the risk that the adjacent proposed land use poses for those functions (e.g., from noise, light, stormwater runoff, introduction of invasive or non-native plant species, pesticides, herbicides, and domestic animals) and, if applicable,~~

~~2. The minimum buffer width necessary to protect adjacent properties from fire management practices on prairies. If fire is included within the critical area report as a management element for prairie habitat, the applicant shall:~~

~~a. Submit a fire management plan to the Thurston County Fire Marshal and the appropriate fire district for technical review and approval; and~~

~~b. Notify the Thurston County Fire Marshal and the appropriate fire district prior to setting fires as part of the fire management plan.~~

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.076 West side prairie habitat and species areas standards.

West side prairie habitat areas are indicated by the presence of prairie soils, historic prairie range, and prairie-dependent species areas, as shown on Thurston County GeoData maps. This chapter defers to the Thirston County Habitat Conservation Plan for the protection of the Mazama Pocket Gopher, the Taylor's Checkerspot Butterfly, the Oregon Vesper Sparrow, and the Oregon Spotted Frog. See tables 24.25-4 through 24.35-7 for prairie-associated species and diagnostic plants.

Development in west side prairie habitat areas shall meet the following standards, as applicable:

A. Residential subdivision clustering. If 25 percent or more of a parcel (or total area of multiple parcels) to be subdivided is designated as west side prairie under this chapter, the subdivision shall be clustered, and shall be subject to the standards of TCC Chapter 20.30A. Resource use parcels shall be oriented to contain the designated west side prairie area to the maximum extent feasible. Resource use parcels containing designated

westside prairie areas shall be designated as protected natural areas, and may only be used for open space and passive recreation.

1. If the proposed subdivision does not meet the applicability criteria in TCC 20.30A.20, it is exempt from this subdivision clustering requirement.

B. Lawn and other monoculture standards. Grass lawns, and similar landscape features consisting of a monoculture groundcover intended for human use, shall be limited in west side prairie areas according to the following standards:

1. Parcels less than 5 acres in size: Lawn areas shall not exceed 25 percent of the remaining land area outside of impervious areas.

2. Parcels 5-20 acres in size: Lawn areas shall not exceed 10 percent of the remaining land area outside of impervious surfaces.

3. Parcels greater than 20 acres in size: Lawn areas shall not exceed 5 percent of the remaining land area outside of impervious surfaces.

C. Seed bank conservation standards. If soil is excavated from a designated west side prairie area, the topsoil (approx. 10-centimeter depth) removed for excavation shall be retained and redistributed on the site, outside of lawn or landscaping areas when possible, to the maximum extent feasible.

24.25.078 Oregon white oak trees and woodlands.

Oak woodlands, stands, and individual trees meeting the criteria set forth in TCC 24.25.013 shall be protected as follows:

A. Priority Oregon White Oak Woodlands.

1. Priority Oregon white oak woodlands shall be protected through inclusion within a conservation tract or alternative protective mechanism. The tract shall extend a minimum of 5 feet beyond the outermost dripline of the trees within the woodland.

2. A minimum of 80 percent of the Oregon white oak trees on site having a diameter at breast height of six inches or larger shall be preserved within the conservation tract.

3. The conservation tract shall be maintained in an undisturbed state except for periodic watering, grass mowing of not more than four times per year, and hand removal of noxious or invasive plants, including conifer seedlings and saplings.

4. No clearing, grading, filling, or construction of any kind shall occur within the conservation tract.

5. Use of pesticides, herbicides, rodenticides, fungicides, or fertilizers in the conservation tract shall be prohibited.

6. All oak snags and broken, diseased and dying oak trees and live oak trees with cavities, heartwood rot, and insect infestations shall be retained within the conservation tract.

7. Downed or felled oak trees within the conservation tract shall be retained; provided, that such trees may be selectively cut to further enhance habitat value.

8. Top-cut (leave main trunk standing) selective oak trees in dense, even-aged oak stands to encourage oak regeneration and create oak snags. Select top-cut, prune, or limb these individual oaks between December and May.

9. Conifers that encroach on oaks within a conservation tract may be removed.

10. Plant Oregon white oak acorns and oak seedlings to encourage regeneration as necessary in conservation tracts.

11. No unauthorized vehicles, construction materials, fuel, or other materials shall be allowed in the tree protection area.

B. Significant Oaks and Stands.

1. Significant Oaks. Seventy percent of all Oregon white oaks having a diameter at breast height of 20 inches or greater shall be preserved.

2. Significant Oak Stands. A minimum of 50 percent of the Oregon white oak trees within the stand shall be preserved.

3. Downed or felled oak trees and snags within significant oak stands shall be retained when located within a tract of land separate from individually owned lots.

4. The largest of the significant trees on the site shall be preserved within a conservation tract.

5. The remaining trees may be located within individually owned lots or a separate tract(s) at the discretion of the developer.

C. Protection of Trees During Construction. Trees conserved pursuant to this subsection shall be protected before and during site development and construction through adherence to the following requirements:

1. A tree protection area shall be designed to protect each tree or tree stand during site development and construction. Tree protection areas may vary widely in shape~~,~~ but must extend a minimum of 5 feet beyond the existing tree canopy area along the outer edge of the dripline of the tree(s), unless otherwise approved by the director or designee.

2. Tree protection areas shall be added and clearly labeled on all applicable site development and construction drawings, submitted to the Department.

3. Temporary construction fencing at least 30 inches tall shall be erected around the perimeter of the tree protection areas prior to the initiation of any clearing or grading. The fencing shall be posted with signage clearly identifying the tree protection area. The fencing shall remain in place through site development and construction.

4. No clearing, grading, filling, or other development activities shall occur within the tree protection area, except where approved in advance by the director or designee and shown on the approved plans for the proposal.

5. No vehicles, construction materials, fuel, or other materials shall be placed in tree protection areas. Movement of any vehicles within tree protection areas shall be prohibited.

6. No nails, rope, cable, signs, or fencing shall be attached to any tree proposed for retention.

~~1.~~7. The director or designee may approve the use of alternate tree protection techniques if an equal or greater level of protection will be provided.

24.25.080 Standards~~, and approvable~~ uses, and activities within important habitats.

The land uses and activities listed in Table 24.25-3 are ~~allowed~~ regulated in important habitats (i.e., streams; riparian habitat areas; lakes, ponds and associated buffers; priority habitats, habitats and species of local importance; priority species conservation areas, and important marine habitats) and associated buffers and management zones subject to the standards in TCC 24.25.090—24.25.420, the applicable zoning district and the

Shoreline Master Program for the Thurston Region. Water dependent uses allowed by the Shoreline Master Program are permitted subject to the requirements of that program and this chapter. All other land uses and activities not allowed by Table 24.25-3 are prohibited within the important habitats regulated by this chapter.

The general standards listed in TCC 24.25.090 apply to all uses in Table 24.25-3. Standards provided in TCC 24.25.100—24.25.420 apply to specific uses in areas where important habitats and species exist, and are in addition to other requirements of this title. Table 24.25-3 contains the primary section references for each activity covered by this chapter.

Table 24.25-3. ~~Approvable Uses and Restrictions~~Uses and Activities Within Fish and Wildlife Habitat Conservation Areas and Associate Buffers

Uses and Activities	West Side Prairie ~~Riparian~~ Habitat Areas	Riparian ~~and Marine~~ Management Zones	Streams	Ponds and ~~Buffers~~ Associated Riparian Management Zones	Marine Habitat Areas ~~and~~, Buffers, and Management Zones	Other ~~I~~important Species and Habitats
Agricultural activity, new	~~A~~ A	A	A	A	A	A
Agricultural equipment and facility	~~P~~ P	P	~~P (BUFFER ONLY)~~X	X~~P~~	X~~P~~	P
Asphalt plants (TCC 24.25.240)	~~X~~ P	X~~P~~	X	X	X	X
Boat launch site (hand launch) - New construction (TCC 24.25.110)	~~P~~ A	~~N/A~~P	P	P	P	X
Boat ramp, or marine railway and associated vehicle access (TCC 24.25.110)	~~P~~ A	~~N/A~~P	P	P	P	X
Bridges and culverts - Maintenance and repair by a governmental agency (TCC 24.25.120)	~~A~~ A	A	A	A	A	A
Bridges and culverts - Maintenance and repair by a nongovernmental entity (TCC 24.25.120)	~~P~~ A	P	P	P	P	P
Bridges and culverts - Replacement and expansion (TCC 24.25.130)	~~P~~ A	P	P	P	P	P
Bridges and culverts - New construction	~~P~~ A	P	P	P	P	P
Clearing and grading in conjunction with an approved development project (TCC 24.25.140)	~~P~~ A	A	X	P	P	P

Critical facilities	~~P~~ P	P	X	P	P	P
Drainage ditch maintenance (TCC 24.25.150)	~~A~~ A	A	P	A	A	A
Drilling and testing for required report or engineering study - hand powered tools; scientific sampling, research and other low impact site investigation (TCC 24.25.160)	~~A~~ A	A	A	A	A	A
Drilling and testing for required report or engineering study - Mechanized equipment (TCC 24.25.160)	~~A~~ A	A	P	A	A	A
Emergency temporary authorization	SEE CHAPTER 24.90 TCC					
Enhancement/restoration - Streams (TCC 24.25.180)	~~P~~ P	~~N/A~~P	P	~~N/A~~P	~~N/A~~ P	P
Enhancement - Riparian habitat (TCC 24.25.180)	~~P~~ P	~~N/A~~P	~~N/A~~P	~~N/A~~P	P	P
Enhancement - Priority upland habitat (TCC 24.25.180)	~~P~~ P	P	~~N/A~~P	P	P	P
Existing lots vested prior to July 24, 2012 - Development	SEE CHAPTER 24.50 TCC					
Fences	SEE CHAPTER 24.60 TCC					
Fish hatchery construction and maintenance (TCC 24.25.190)	~~P~~ A	P	P	P	P	P
Floats, floating dock, mooring buoy, navigational aid - Installation (TCC 24.25.110)	~~X~~ P	~~N/A~~P	P	P	P	X
Flood protection facilities - New construction (TCC 24.25.200)	~~P~~ P	~~N/A~~P	P	~~N/A~~P	P	P
Flow control facilities/dams - New construction (TCC 24.25.200)	~~P~~ P	~~N/A~~P	P	~~N/A~~P	~~N/A~~P	P
Forestry - Class IV forest practices and COHP	~~X~~ P	X~~P~~	X	X	X	X

Gardening for personal consumption (TCC 24.25.230)	~~A~~ A	A	X	A	A	A
Golf course, new (TCC 24.25.275)	~~X~~ X	X~~P~~	X	X	X	X
Infiltration of reclaimed water (application to the land's surface above agronomic rates~~)*~~ ~~* Critical area regulations will be proposed when more information is available to Thurston County from the Regional Groundwater Recharge Scientific Study, and using other studies and information for reclaimed water following the requirements of the Growth Management Act (Chapter 36.70A RCW). (TCC 24.25.265)~~	~~X~~ P	X	X	X	X	X
Instream structures (e.g., stream flow control facilities/dams) - Maintenance or repair (TCC 24.25.210)	~~N/A~~ N/A	N/A	A	N/A	A	N/A
Instream structures or instream work not otherwise addressed - New construction (TCC 24.25.200)	~~P~~ N/A	N/A	P	N/A	P	P
Intensive uses (TCC 24.25.220)	~~P~~ P	X~~P~~	X~~P~~	P	P	P
Lawns, landscaping, golf courses, and cemeteries - Maintenance (TCC 24.25.230)	~~A~~ A	A	X	A	A	A
Mineral extraction (TCC 24.25.240)	~~X~~ P	X~~P~~	X	X	X	X
Mitigation required by the county	~~A~~	A	A	A	A	A
Nonconforming structure/use - Maintenance, repair,	SEE CHAPTER 24.50 TCC					

alteration, expansion, replacement						
On-site sewage disposal system or drainfield, well/pump - Repair (TCC 24.25.260)	~~P~~ A	A	X	P	P	P
On-site sewage disposal system or drainfield - New/replacement (TCC 24.25.250; 260)	~~P~~ A	P~~A~~	X	P	P	P
Open space (e.g., critical area tract)	~~A~~ A	A	A	A	A	A
Piers - Construction (TCC 24.25.110)	~~X~~ P	~~N/A~~P	X	P	P	X
Public park facilities, trails and developed recreation areas - Maintenance (TCC 24.25.230; 270)	~~A~~ A	A	A	A	A	A
Public facilities	~~X~~ A	X~~P~~	X	X	X	X
Public project of significant importance	~~P~~ A	X~~P~~	X	X	P	P
Recreation, active (TCC 24.25.275)	~~X~~ P	P	X	P	P	X
Recreation, passive and low impact activities (e.g., bird watching, nonmotorized boating, bicycling, canoeing, fishing, hiking, hunting, jogging, photography, swimming, and similar activities) (TCC 24.25.270)	~~A~~ A	~~A~~ A	A	A	A	A
(Uses in) Riparian management zones	~~N/A~~ N/A	P	N/A	N/A	N/A	N/A
Roads - Replacement and minor expansion (TCC 24.25.290)	A~~P~~	A	P	P	P	P
Roads/streets, railroads, and associated bridges and culverts - New and expanded (TCC 24.25.280)	A~~P~~	P	P	P	P	P
Roads - Repair and maintenance	A~~A~~	A	A	A	A	A
Shoreline protective structures/armoring (e.g.,	P~~P~~	P	P	P	P	P

bulkhead, gabion, riprap, or wall) (TCC 24.25.300)						
Signs (e.g., interpretation, critical area tract, and survey markers)	See Chapter 24.60 TCC					
Single-family residential, new (TCC 24.25.295)	P~~P~~	P	X	P	P	P
Ski lake - Creation	X~~X~~	P (Also see Chapter 24.20 TCC)	X	X	X	X
Slope stabilization or retaining wall (not a bulkhead) (TCC 24.25.300)	A~~P~~	P	~~N/A~~X	P	P	P
Stabilization techniques (nonstructural)/bioengineering (TCC 24.25.300)	A~~P~~	P	P	P	P	P
Stair tower, stairway or mechanical lift (TCC 24.25.310)	A~~P~~	P	X	P (BUFFER ONLY)	P	X
Stormwater conveyance system or detention/treatment facility - Maintenance or repair (TCC 24.25.325)	A~~A~~	A	P	A	A	A
Stormwater retention/treatment facility - Construction (TCC 24.25.320)	A~~P~~	A	X	P	X	X
Stormwater facilities - Surface water conveyance system - Construction (TCC 24.25.325)	A~~P~~	P	P	P	P	P
Stormwater Facilities - Temporary sediment control ponds - Construction (TCC 24.25.320)	A~~P~~	A	X	X	X	X
Stream flow and elevation gages - Installation	N/A~~N/A~~	N/A	A	A	N/A	N/A
Stream relocation (TCC 24.25.330)	P~~P~~	P	P	P	P	P
Subdivisions	See Chapter 24.55 TCC					
Trails/paths, elevated walkways, and associated facilities (interpretative site	A~~P~~	P	P	P	P	P

and viewing platform) - New construction (TCC 24.25.270)						
Utilities - Maintenance, repair or replacement (TCC 24.25.340)	AA	A	A	A	A	A
Utility lines, utility corridors, and other facilities outside of existing improved roads and utility corridors - New construction (TCC 24.25.340)	AP	A	P	P	P	P
Utility lines and facilities in improved roads and utility corridors - New installation (TCC 24.25.340)	AA	A	P	P	P	P
Utilities - Installation of individual service lines (TCC 24.25.340)	AP	P	P	P	P	P
Vegetation removal - Enhancement projects (TCC 24.25.400)	PP	PA	PX	P	P	P
Vegetation removal - Noxious weeds (TCC 24.25.380)	AA	A	A	A	A	A
Vegetation removal - Invasive vegetation (TCC 24.25.380)	PP	PA	P	P	P	P
Vegetation removal - Removal/thinning of hazard trees (TCC 24.25.390)	PP	PA	P	P	P	P
Vegetation removal - Aquatic weeds	AN/A	N/AP	P	A P	P	N/AP
Wells - New (TCC 24.25.420)	AP	A P	X	P	P	P
Wildlife blind or nesting structure	AA	A	X	A	A	A
Other lawfully established existing uses not addressed in this table	PP	P	P	P	P	P

LEGEND:

A = Allowed without a Critical Area Review Permit, subject to requirements of this title

P = Permitted, subject to Critical Area Review Permit and requirements of this title

X = Prohibited

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 16260, § 2(Att. B, § VI), 3-21-2023)

24.25.090 General standards.

The following requirements apply, as applicable, to all uses and activities listed in Table 24.25-3.

A. Regulatory Differences. Differences in regulations because of the overlap of two or more critical areas or, the Shoreline Master Program or the Thurston HCP for the Thurston Region are governed by Chapter 24.01 TCC. All uses and activities subject to this section shall meet the requirements that provide the most protection to the critical areas involved. Uses and activities located in the jurisdiction of the Shoreline Master Program for the Thurston Region and the Permit Area of the Thurston HCP are prohibited if they are inconsistent with either the Shoreline Master Program or the Thurston HCP.

B. Critical Area Reports. Applicants for uses listed in Table 24.25-3 that require county review and approval, with the exception of emergency responses provided for in Chapter 24.90 TCC, shall submit a critical area report consistent with Chapter 24.35 TCC.

C. Timing. Uses and activities authorized pursuant to this chapter shall be undertaken, constructed or installed during the time frame specified by the WDFW to minimize habitat impacts. This requirement does not apply to riparian and marine shoreline management zones that do not involve a priority or locally important habitat.

D. No Net Loss of Habitat Functions. Uses and activities carried out pursuant to this section shall result in equivalent or greater habitat functions, as determined by the approval authority consistent with best available science. All actions and uses shall be designed and constructed to avoid or, where that is not possible, minimize all adverse impacts to the important habitat area and associated buffers. Applicants must first demonstrate an inability to avoid or reduce impacts before impacts will be allowed. No activity or use shall be allowed that results in a net loss of important habitat area functions; destroys, damages, or disrupts habitat supporting priority species; adversely affects water quality; creates unstable earth conditions; or erosion.

E. Mitigation. Adverse impacts to important habitats and associated buffers shall be fully mitigated (see Chapter 24.35 TCC) using mitigation sequencing criteria established in Chapter 24.01 TCC.

F. Intertidal/Saltwater Submerged Lands. All uses and activities occurring in marine intertidal and submerged lands shall avoid impacts to eelgrass and kelp beds; commercial and recreational shellfish harvesting areas; and herring, surf smelt and sand lance spawning areas. If eelgrass or kelp is known or suspected to be present on the site proposed for development or where it would likely be affected by the proposed development, as determined by the approval authority in consultation with WDFW, the applicant shall submit an aquatic vegetation survey that identifies the location of the eelgrass and/or kelp. Applicants for uses that the approval authority determines could adversely impact kelp or eelgrass beds shall submit a critical area report identifying any unavoidable impacts to these beds and proposed mitigation measures for review and approval by Thurston County.

G. Surety. Applicants for proposals involving, as a condition of permit approval, mitigation of impacts, restoration or enhancement shall submit to the county a surety consistent with Chapter 24.70 TCC.

H. Temporary Field Marking. The perimeter of the habitat area and associated buffer and those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field and inspected by the approval authority prior to the commencement of permitted activities. This

temporary marking shall be maintained throughout the duration of the development activity. Also see TCC 24.25.070 and 24.25.140.

I. Fencing and Signage. The approval authority may require that the perimeter of the important habitat area be fenced and that identification signage be installed as warranted to protect sensitive species and degradation of habitat, consistent with Chapter 24.60 TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 16216, § 3(Att. B, § VIII), 11-22-2022)

24.25.100 Reserved.

Editor's note(s)—Ord. No. 14785, § 1, adopted Aug. 28, 2012, repealed § 24.25.100 which pertained to agricultural activities and derived from Ord. No. 14773, § 3(Att. B), adopted July 24, 2012.

24.25.105 Biosolids application.

Biosolids application and uses shall be regulated by the Washington State Department of Ecology and meet all applicable federal and state standards, including Chapter 173-308 WAC; and be consistent with a memorandum of agreement (MOA), or similar document, between Thurston County and the Washington Department of Ecology in regard to biosolids and critical areas.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.110 Boat launching ramps, piers, docks and floats.

Boat launching ramps, piers, docks and floats may only be permitted consistent with the Shoreline Master Program for the Thurston Region, as amended, applicable federal, state, and local laws, the requirements of this section, and other applicable provisions of this title. For the purposes of this section, "float" shall include, but is not limited to: floating docks, mooring buoys, navigational aids and swimming floats.

A. Boat Ramp Spacing Along Type S and F Streams. Public and private boat launching ramps along Type S or F streams shall not be located closer than five miles (measured along the river) from another boat launching ramp along the stream that is accessible to the public. Boat launching ramps shall not be allowed in locations where the total number of existing boat ramps, road and surface utility corridor crossings, plus the proposed boat-launching ramp, would exceed two such encroachments per 0.6 mile (measured along the stream) in the affected stream segment. The approval authority may waive the spacing requirement if it is determined that the proposed location provides the least habitat impact of the available alternatives and that proposed mitigation measures will allow the project to occur without a net loss of riparian habitat area and stream functions.

B. Boat Ramps Along Marine Shorelines. Boat launching ramps may only be permitted along marine shorelines upon demonstration of the following:

1. Mitigation measures ensure that there is no net loss of the functions of intertidal habitat as a result of the proposed ramp, including no increased beach erosion or alteration of salmonid migration corridors;
2. The proposed ramp will not adversely impact important habitat areas;
3. The proposed ramp is not elevated and will be constructed to be flush with the elevation of the existing beach; and
4. The ramp's footprint is the minimum necessary to accommodate the proposed use.

C. Piers, Docks, and Floats. Piers, docks, mooring buoys, navigational aids and swimming floats are allowed subject to the following:

1. Overwater Structures. Overwater and floating structures and associated moorings in marine waters shall be located a minimum of ten feet from any eelgrass (Zostera spp.) and designed to avoid shading eelgrass.

2. Avoid Impacts to Spawning Beds and Eelgrass Beds. Docks, floats and rafts shall not ground on surf smelt, Pacific sand lance or herring spawning beds, or eelgrass (Zostera spp.). Flotation for the structure shall be fully contained to prevent the breakup or loss of the material.

3. Toxic Substances. Only inert material or non-toxic treated wood approved by the county for use in water bodies shall be used in the construction of piers, ramps and floats and other structures proposed to be placed in, over, or within one hundred feet of water.

4. Fill and Armoring. Fill and armoring shall not be used in the in the construction of piers, ramps, and floats.

5. Vegetation. Loss and disturbance of existing vegetation shall be minimized, consistent with TCC 24.25.350—24.25.400.

D. Impacts. The applicant shall demonstrate that the boat ramp, pier, dock, float and associated parking area and access, coupled with any proposed mitigation, will result in no net loss to salmonid spawning, rearing and migration areas or documented priority wildlife habitats.

E. Related Facilities. Parking areas, restrooms and other facilities related to boat launches, piers, floats, and docks shall be located outside of riparian habitat areas, pond buffers, and marine riparian habitat areas. The facility shall be designed to minimize direct, untreated stormwater runoff from the site into the water body.

F. Maintenance. Maintenance or replacement of piers, docks, mooring buoys, navigational aids, and swimming floats is permitted provided that hazardous materials are not used, except as provided for through a county approved integrated pest management plan or upon demonstration that the material does not pose a risk to water quality; and it does not involve an increase in the number of pilings or the overall width or length of the dock or pier.

G. Replacement. Boat launching ramps, piers, floats, and docks may be replaced provided they are not increased in length or width and the construction materials comply with the requirements for new ramps, piers, floats, and docks, as applicable. If the facility is located in marine waters, the proposed deck surface area shall be reduced to the maximum extent practical from the existing deck surface in waters between three feet and thirteen feet deep at ordinary high water.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.120 Bridge and culvert maintenance or repair.

A. Maintenance and repair of bridges and culverts is permitted provided:

1. All maintenance and repair is consistent with the Regional Road Maintenance ESA Program Guidelines, 2002, as amended, and the provisions of this section;

2. The county may allow use of other maintenance BMPs if they will protect water quality and avoid detrimental impacts on fish and priority wildlife species;

3. Maintenance of culverts in streams used by salmonids or that convey water to a stream used by salmonids shall be limited to removal of sediment and debris from the culvert and its inlet, invert, and

outlet and stabilization of the disturbed bank and channel immediately adjacent to the culvert and shall not involve the excavation of a new sediment trap adjacent to the inlet;

4. Such maintenance shall not involve the use of herbicides, sealants, liquid oily substances or other hazardous materials;

5. The bridge or culvert is not located within Shoreline Master Program jurisdiction;

6. It meets the conditions of any required Hydraulic Project Approval from the Washington Department of Fish and Wildlife, which shall be posted in a conspicuous location on site.

B. Clearing of culverts does not require a county permit, but may require review by state or federal agencies. Clearing of culverts shall be limited to removal of sediment and debris from the culvert and its inlet, invert, and outlet.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.130 Bridge and culvert replacement.

Replacement of a bridge or culvert is allowed if necessary to conform to current standards and if:

A. It was lawfully established;

B. There is not another alternative available that has less adverse impact on the important habitat or other critical areas;

C. The bridge or culvert is designed to avoid or, where that is not possible, minimize impacts to the important habitat and it is in compliance, to the greatest extent possible, with TCC 24.25.280;

D. In the case of culverts in a Type F or S stream, the culvert is made passable for fish in accordance with the WDFW Fish Passage Design at Road Culverts, 2003, as amended, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000, as amended;

E. If the culvert involves a ditch, the ditch is not increased in width at the culvert site unless it is narrower at that point than the rest of the ditch and would otherwise impede the flow of water. In that case, it may be widened to the minimum extent the approval authority deems necessary; and

F. Flood hazards are avoided and the proposal is consistent with Chapter 24.20 TCC and other applicable regulations.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.140 Clearing and grading.

Also see Chapter 14.34 TCC regarding grading requirements and Chapter 15.05 TCC regarding stormwater and erosion control.

A. Important Habitats. Clearing and grading within fish and wildlife habitat conservation areas and associated buffers is only allowed to the minimum extent necessary for a use approved and permitted pursuant to this chapter, as determined by the approval authority.

Clearing and grading shall not occur within an area where a locally important or priority species has a primary association (e.g. nest sites and foraging and roosting areas), based on WDFW Management Recommendations and related information.

B. Clearing in Freshwater Riparian and Marine Riparian Management Zones. Clearing on lots in freshwater riparian management zones shall not exceed thirty-five percent of the portion of the lot or tract within the

freshwater or marine riparian management zone. Priority shall be given to preserving forested areas contiguous to the marine riparian habitat area and riparian habitat areas. Clearing in riparian management zones shall occur at the minimum necessary level, and demonstrate proper mitigation sequencing.

C. Fencing the Clearing Limits. The clearing limits within the important habitat area shall be marked with temporary fencing. Signage shall be placed on the fence indicating that the area beyond is protected as a critical area. The fencing/signage is subject to inspection by the approval authority prior to the commencement of permitted activities. The temporary fencing/signage shall be maintained throughout construction and shall not be removed until permanent signs, if required pursuant to Chapter 24.60 TCC, are in place.

D. Timing. Clearing and grading in important wildlife habitats shall only occur between May 1 and October 1, except as provided for in TCC 24.25.090(C). The county may temporarily suspend grading during this period if excessive rainfall might cause erosion and sedimentation that could affect a stream or marine waters, or dependent fish or wildlife. The county may allow clearing and grading outside of this period if all drainage will flow away from streams, lakes, ponds, and marine waters.

E. Preservation of the Infiltration Capacity of the Site. The soil duff layer in the buffer shall remain undisturbed to the maximum extent practicable. The moisture-holding and infiltration capacity of the topsoil disturbed by permitted development shall be maintained in areas not approved for impervious surfaces by minimizing soil compaction or by stripping, stockpiling, and reapplying topsoil at predevelopment levels.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.150 Drainage ditches—Maintenance.

Lawfully established drainage ditches that flow to a Type F or S stream, Puget Sound, or a pond shall be maintained consistent with BMPs as follows:

A. Maintenance of lawfully established drainage ditches (e.g., agricultural drainage ditches) created prior to February 1, 1994 or ditches under the management of drainage districts shall be consistent with NRCS standards, or as otherwise specified in a farm management plan approved by the WSU Cooperative Extension Office, USDA, the NRCS, or the Thurston County Conservation District and accepted by the county. Spraying of herbicide for ditch maintenance is prohibited. Ditch maintenance shall not involve enlarging the ditch lengthwise, in depth, or in width.

B. If a ditch has not been in active use and maintained for the last five consecutive years (e.g., as evidenced by aerial photographs or the maturity of vegetation in the ditch), it shall be considered abandoned.

C. Road side ditches. See TCC 24.25.325.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.160 Drilling.

A. Drilling with Human Powered, Non-motorized, Hand-held Equipment. Gauge installation and non-motorized site exploration, excavation for data collection or research and accomplished by human powered, hand-held equipment in accordance with state-approved sampling protocols is allowed. The associated spoils shall be contained and the disturbed area shall be restored upon completion of the activity.

B. Motorized Drilling and Boring. Motorized augering under the direction of a professional engineer licensed in the State of Washington, well drilling allowed pursuant to TCC 24.25.420, and boring consistent with TCC

24.25.340 are allowed provided the approval authority determines, in consultation with a qualified biologist and engineer, that the drilling or boring is appropriate, subject to the following:

1. The applicant shall identify and minimize potential impacts. This shall include demonstration that the drilling or boring will not dewater the water body;
2. The access for delivering equipment to the drilling or boring site shall be aligned and constructed in a way that minimizes potential impacts to the important habitat area;
3. The associated spoils shall be contained, the disturbed area shall be restored upon completion of the activity;
4. Related equipment and materials shall be stored outside of the important habitat area except as necessary for daily operations; and
5. Drilling shall not occur within an area where a priority or locally important species has a primary association (e.g. nest sites, foraging and roosting areas), based on WDFW Management Recommendations for Priority Species, unless the approval authority determines, in consultation with the WDFW, that the scale and timing of the proposed activity would not be harmful to the wildlife.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.170 Existing, lawfully established uses.

Existing, lawfully established uses not specifically addressed in this chapter may continue. However, existing uses in the important wildlife habitat areas and associated buffers should employ BMPs to minimize adverse impacts on the important habitat area(s).

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.180 Habitat area enhancement/restoration.

The approval authority may, in consultation with WDFW and other experts (such as tribal biologists or DNR botanists), approve restoration of important habitat areas and associated buffers subject to an approved critical area report and restoration plan (see Chapter 24.35 TCC) and applicable provisions of this chapter. Stream enhancement/restoration shall only be performed under a plan for the design, implementation, maintenance and monitoring of the project approved by a qualified fisheries biologist and, if needed, by a civil engineer with experience in stream hydrology. The project shall be carried out under the direct supervision of a qualified fisheries biologist, hydrologist, or engineer with demonstrated experience, as appropriate. (Also see Chapter 24.20 TCC, Frequently Flooded Areas.)

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.190 Hatcheries.

State and federal fish hatcheries are permitted if the applicant demonstrates to the approval authority's satisfaction that there is not an alternative location with less adverse impact on the critical area and associated buffer than the proposed location and that the operation will not reduce water quality or increase water temperature to the detriment of native or planted game fish occupying the affected water body. The hatchery shall be consistent with the Shoreline Master Program for the Thurston Region (1990) and employ BMPs to avoid adverse impacts to the important habitat area and associated buffer.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.200 Instream structures—New and expanded.

A. New and Expanded Instream Structures. New and expanded instream structures may be allowed as necessary to evaluate, restore or improve habitat. Installation of instream structures shall be done in the least impacting way practical, at the least impacting time of year, and in conformance with applicable local, state and federal regulations.

B. New and expanded public flood protection measures and other instream structures, such as, but not limited to, high flow bypasses, dikes, levees, tide gates, dams, weirs and other flood control structures may be allowed on Type S and F streams only when demonstrated to be necessary to protect human life or as part of a watershed basin restoration project approved by the county, consistent with state or federal requirements, in consultation with the WDFW and others with experience. These may also be allowed subject to Chapter 24.90 TCC, Emergency Authorization.

C. Minimize Impacts. The approval of a new or expanded instream structure shall be consistent with a critical area report (see Chapter 24.35 TCC) prepared by a qualified biologist and engineer, if appropriate, that identifies and provides for the mitigation of any adverse habitat impacts, including restoration of all affected instream and riparian habitat features.

D. Species of Concern. All structures, activities, uses, and alterations proposed to be located in Type S or F streams or in Type Np and Ns streams that drain to Type S or F streams, directly to Puget Sound, a pond regulated by this title, or habitat of any other species of concern shall be located and designed so that they will not degrade habitat or water quality, including water temperature. Fish bypass facilities shall be provided where needed to allow fish migration. Structures that would prevent the migration or travel of salmonids or other native fish shall not be allowed.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.210 Instream structures—Repair, maintenance or renovation.

Repair, maintenance or renovation of lawfully established instream structures including, but not limited to dams, dikes, levees, high flow bypasses and revetments, is permitted provided that the facilities are not increased in height or length or expanded waterward. Any necessary stabilization shall be accomplished with bioengineering techniques to the maximum extent practicable, consistent with TCC 24.25.300. The site shall be restored with appropriate native vegetation, as determined by the approval authority.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.220 Intensive uses.

Intensive uses on parcels containing fish and wildlife habitat conservation areas shall comply with the applicable requirements in this section.

A. Types of Intensive Uses. For the purposes of this section, intensive uses include those uses that store or use hazardous materials, pesticides, or herbicides in quantities regulated by TCC 24.10.140, or would generate excessive nutrients, sediments, or pollutants that could reach the important habitat area or associated buffer or significantly alter the quantity or the timing of water reaching a stream, lake or pond such that the survival of native or anadromous fish would be jeopardized.

B. Identify Risks. Applicants for new intensive uses on sites that contain streams, lakes, ponds or priority species conservation areas or abut marine waters, that have potential to degrade such habitat areas, as determined by the approval authority in consultation with the WDFW and others with expertise, shall

submit information that identifies and evaluates the potential risks the proposed use poses for the habitat areas.

This shall include, as applicable, whether sediment, effluents, altered pH, the amount, timing, or duration of groundwater flows or altered surface hydrology, noise, or glare would be harmful to aquatic life, birds, or other wildlife.

C. Protective Measures. The approval authority shall require measures to avoid, or if that is not possible, minimize, potential adverse impacts on the important habitat area and any associated buffer.

1. The approval authority may require, as warranted, the use of BMPs for new and existing intensive uses. In addition, the approval authority may require applicants for new intensive uses to use integrated pest management; provide and maintain vegetative filter strips (up to fifty feet in width); install fencing; locate noisy activities away from the habitat area; require buildings on the site to be located or oriented where they would have the least impact on the habitat; or employ other mitigation measures that would be effective in preventing pollutants and sediment from reaching a water body, preventing damage to the important habitat area and avoiding adverse impacts on dependent wildlife, including maintaining stream flows and temperature necessary to sustain fish.

2. If pollution or emissions from a type of proposed use (e.g., smoke stacks associated with asphalt plants, incinerators, or other industrial operations) have been demonstrated scientifically as causing damage to the important habitat or species, the approval authority may require use of BMPs and require that the use be located on the project site where the emissions would pose the least risk of polluting the important habitat area, consistent with best available science and protection of public health and safety.

D. Expert Review. The approval authority may call upon experts, at the applicant's expense, as necessary to help evaluate information submitted by the applicant.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.230 Landscaping and gardening—Maintenance.

A. Maintenance of lawfully established lawns, landscaping, gardens, athletic fields, playgrounds, parks and similar uses is permitted in important habitat areas and associated buffers provided it does not involve any expansion beyond the existing, developed area.

B. Gardening. Gardening for personal consumption within existing gardens is permitted. New gardens may be established within portions of priority upland habitat areas, marine riparian habitat area, pond buffers, and riparian habitat areas approved for development pursuant to this chapter. No clearing or tree removal outside of the area authorized for development shall be permitted to accommodate such gardens.

C. Landscaping and screening requirements for development under other county regulations such as the zoning code, shall include flexibility in design and vegetation when located adjacent to a fish and wildlife habitat conservation area. This may include incorporation of native, vegetation local to the area, consistent with the habitat area or species use, and/or alternate screening methods such as fencing rather than trees.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.240 Mineral extraction—Asphalt plants.

Mineral extraction and asphalt batch plants are allowed in the riparian management zone landward of any documented channel migration hazard area, subject to TCC 24.25.140. Mineral extraction and asphalt batch plant

proposals on property containing streams or marine, lake or pond shorelines subject to this chapter shall be reviewed to determine if stormwater or sediment from the activity would be harmful to aquatic life in such waters. In addition, an analysis shall be performed to determine if mineral extraction or asphalt batch plants would diminish or change groundwater flows and temperatures to the water body such that elevated temperatures would adversely affect dependent fish and wildlife. Impacts to air quality, or lighting, noise or other impacts to specific species shall be evaluated and mitigated through the special use permit process. Mitigative measures shall be required to avoid, or if that is not possible, minimize, the potential adverse impacts (Also see Chapter 20.54 TCC, Special Uses and Chapter 17.20 TCC, Mineral Extraction Code).

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.250 On-site sewage disposal systems and sewer lines—New.

A. New on-site sewage disposal systems and sewer lines serving an approved use may be allowed in fish and wildlife habitat conservation areas as specified in Table 24.25-3, subject to Chapter 24.50 TCC.

B. New on-site sewage systems and sewer lines shall be consistent with applicable provisions of Article IV of The Thurston County Sanitary Code, and the applicable provisions of this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.260 On-site sewage disposal systems—Repair/Replacement.

A. Failing on-site sewage disposal systems shall be remedied through compliance with Article IV of the Thurston County Sanitary Code and the method that results in the least impact to the important habitat area and associated buffer. Replacement sewage disposal systems shall not be allowed within the riparian habitat area, marine riparian habitat area, or pond buffer unless there is no alternative site available outside of such areas to accommodate the facilities. Clearing of existing vegetation to remedy the failing system shall be limited to the minimum area necessary for the replacement system.

B. If the failing sewage disposal system must be replaced with a new on-site sewage disposal system, when possible, it shall be located on a portion of the site that has been disturbed by development and as far from any water body, priority species habitat, and any documented one-hundred-year channel migration zone as possible (see Chapter 24.20 TCC, Frequently Flooded Areas). The approval authority may require the applicant to demonstrate that due to physical constraints (e.g., topography, soil conditions, or the configuration of the site), another site configuration would not allow the development to occur without intrusion or with less intrusion into the important habitat area and associated buffer than the proposal.

C. If a suitable disturbed area is not available to accommodate the on-site sewage system, it shall be located where it would be least harmful to the important habitat, as determined by the approval authority in consultation with WDFW.

D. Replacement on-site sewage systems and sewer lines shall be consistent with applicable provisions of Article IV of the Rules and Regulations of the Thurston County Board of Health Governing Disposal of Sewage, and the applicable provisions of this chapter.

E. Regular maintenance such as septic pumping, mechanical repairs and inspections are allowed without critical area review permits.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.265 Reclaimed water.

Critical area regulations will be proposed when more information is available to Thurston County from the Regional Groundwater Recharge Scientific Study, and using other studies and information for reclaimed water following the requirements of the Growth Management Act (Chapter 36.70A RCW).

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.267 Recreation facilities, trails, and trail-related facilities—Exemptions.

The following uses are exempt from the need for a critical area permit:

A. Construction and/or maintenance of a private ground trail using hand tools in the riparian habitat area, provided that the trail is three feet or less in width, not impervious (e.g. gravel, rocked, paved), and constructed with minimal vegetation removal and minimal pervious material such as wood chips. Construction of the trail shall not cause a public safety risk.

B. Passive recreation activities.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.270 Recreation facilities, trails, and trail-related facilities.

A. Trails and Related Facilities. Trails and related facilities shall avoid habitat sustaining priority species and species of local importance to the greatest extent possible. The approval authority may allow trails and trail-related, passive recreation facilities, such as, but not limited to, nature viewing areas, benches, identification and interpretive signs, viewing platforms, and fishing access within important habitat areas if it is determined that there is no practicable or reasonable alternative. Trail alignment, design, construction, and maintenance shall adhere to the following requirements:

1. Location.

    a. Trails and related facilities shall, to the extent feasible, be placed on existing levies, road grades, abandoned rail lines, utility corridors, or other previously disturbed areas.

    b. Except for access points for wildlife viewing, fishing, and recreational use authorized pursuant to this chapter, trails and trail related facilities shall be located outside or on the outside edge of important habitat areas to minimize disturbance and clearing.

    c. Trails and related facilities (e.g., viewing platforms and benches) allowed in important habitat areas shall be located, aligned and constructed to minimize disturbance to important habitat area functions, and to avoid the most sensitive and productive wildlife habitat (e.g., documented breeding, nesting, spawning and rearing areas). Trails and related facilities shall not be located where they would negatively impact a priority species or species of local importance. The approval authority may require signage to avoid intrusion into habitat areas at times when priority or locally important wildlife species are sensitive to disturbance. When necessary to avoid habitat impacts, footbridges shall be used to cross water bodies rather than culverts.

    d. The trail alignment shall minimize removal of conifer trees twelve inches or greater in diameter, shrubs, and snags and preserve priority habitats.

    e. Parking areas and other facilities associated with trails, not specifically provided for in this section or Table 24.25-3, shall be located outside of the important habitat area.

2. Trail Width. Trails shall not exceed four feet in width unless they are designed to accommodate handicapped persons. In that case, the trail and associated clearing shall be the minimum width that complies with the Americans with Disabilities Act (ADA). Clearing shall be done with hand tools unless the approval authority determines that the scale of the project necessitates mechanized equipment and its use will not harm important habitat areas beyond the trail corridor.

3. Protect Water Quality. Trails and related facilities shall incorporate water quality protection measures (e.g., check dams or devices, such a perforated pipe, to reduce sheet flow of stormwater runoff) as needed to assure that runoff from such trails/facilities does not create channels in the riparian habitat area, marine riparian habitat area, or buffer that directly discharge to a stream, pond, lake or Puget Sound.

4. Salvage Plants. Native vegetation disturbed by trail construction shall be made available for salvage.

5. Impervious Surfaces. Trails shall not be paved unless they are specifically designed to be accessible by handicapped persons. The approval authority may allow regional trails to be paved on former railroad rights-of-way extending through important wildlife habitat. Where impervious surfaces are used they shall be minimized consistent with applicable standards (e.g., ADA and Washington Department of Transportation standards). Raised boardwalks may be used in wet areas provided that they are not treated with hazardous materials that would be harmful to water quality or sensitive species. Viewing platforms shall not be made of continuous impervious materials or be treated with toxic substances that could leach into the important habitat area. The "footprint" of viewing platforms shall be as small as possible in order to minimize impacts (e.g., through the use of pin piles).

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.275 Active recreation.

A. Active Recreation. Water related active recreation, such as swimming areas, may be located within the buffers for ponds and marine habitat areas to the minimum extent necessary to accommodate the use, consistent with the Shoreline Master Program for the Thurston Region (1990), or as amended, and as determined by the approval authority. Related restrooms and parking areas shall be located outside of such areas. Uses such as active use parks, athletic fields, golf courses, operation of motorized recreational vehicles (ORVs), campgrounds, picnic areas, and related restrooms and parking areas shall not be located in important habitat areas or associated buffers.

B. Golf Courses. Important habitat areas shall not be adversely impacted in designated play areas of the golf course, but they may be included in the course design provided all other applicable provisions of this chapter are met. Important habitat areas and associated buffers within golf courses shall remain in their existing condition, except as provided for in this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.280 Roads/streets, railroads, and associated bridges and culverts—New and expanded.

Proposed road and railroad crossings of streams, riparian habitat areas, marine riparian habitat areas, riparian and marine management zones, and lake and pond buffers and other important habitats shall follow all applicable local, state, and federal laws and the requirements listed below. These requirements also apply to private access roads.

A. New road, railroad and bridge crossings of the habitats and buffers listed above shall be prohibited except where there is no alternative for an essential crossing (e.g., to provide access to property where no other access is physically possible or available) with less impact on the important habitat area.

Where the approval authority determines that alternative access with less impact on the important habitat area is physically possible, prior to authorizing a new crossing, the applicant shall demonstrate that the necessary property or easement for the alternative access cannot be obtained at reasonable terms or that the alternative is otherwise cost prohibitive.

B. Alignment. Roads within habitat areas, where necessary, shall be aligned as follows:

1. Crossings shall occur, to the extent practical, where they would have the least adverse impact on important habitat. Proposed crossings that would degrade salmonid spawning or rearing areas, priority wildlife habitat, or stands of mature conifer trees (e.g., at least one hundred years old) in riparian areas, shall not be allowed unless the applicant demonstrates to the approval authority's satisfaction that the crossing is essential and that no other crossing location would have less impact on habitat functions. Priority shall be given to protecting salmonid spawning and rearing areas from adverse impact. Crossings shall be located, to the greatest extent practical, to avoid fragmentation of priority habitats (e.g., prairie and oak woodlands).

2. Road alignments shall, to the extent possible and consistent with this section, avoid bends in the stream, areas with highly erodible soils and landslide prone areas (see Chapter 24.15 TCC, Geologic Hazards), unless the approval authority determines that mitigation measures will allow the project to occur without a net loss of habitat functions or increased public safety risks. (See Chapter 24.20 TCC, Frequently Flooded Areas and Chapter 24.30 TCC, Wetlands).

3. New roads crossing riparian habitat areas or streams shall be aligned perpendicular to the channel where possible. If that is not possible, they shall be aligned as close as possible to perpendicular at an angle greater than sixty degrees to the centerline of the stream channel. The approval authority may allow a deviation from this standard to avoid impacting high quality riparian habitat (e.g., mature conifers and wetlands associated with streams) or other critical areas if the net effect of the alternative alignment would reduce impact on the affected critical areas or if necessary to preserve public safety. Roads in riparian habitat areas shall not extend parallel to the stream.

4. The road alignment shall avoid, to the maximum extent practical, conifer trees greater than twelve inches in diameter at four and one-half feet above the ground, measured on the uphill side of the tree and shall stay five feet outside of the dripline of oak trees.

5. Maintenance roads may be located in utility corridors if the approval authority determines that they are essential and they are located in the least impactive location in the outer half of the habitat area or buffer contiguous to the utility corridor on the side away from any water body. To the maximum extent practicable, access for utility maintenance within riparian habitat areas, marine riparian habitat areas, and pond buffers shall be limited to access points rather than by an access road extending parallel to the water body. The width of the maintenance road shall be minimized; in no event shall it be greater than fifteen feet.

C. Serve Multiple Properties. Crossings of Type S and F streams shall be aligned, whenever possible, to serve multiple properties and be designed to accommodate conduit for utility lines. The county shall require the applicant for a new road crossing, to the extent legally permissible, to work with the county to provide for a street layout and crossing location that will minimize the need for additional stream crossings in the future to serve surrounding property.

D. Spacing of Crossings.

1. Crossings of Type S and F streams shall not be allowed if the number of existing road and utility corridor crossings plus the proposed crossing would equal or exceed two crossings per 0.6 river miles in the affected stream segment, unless:

a. The approval authority determines that mitigation measures will allow the project to occur without a net loss of stream and riparian habitat functions. (For example, due to removal of an existing stream crossing at another location along the stream or restoration of degraded riparian area); or

b. The absence of the requested crossing would landlock the property.

2. The approval authority may require that crossings spaced closer than called for in this subsection be accomplished with a bridge rather than a culvert if it would significantly reduce habitat impacts.

E. Minimize Crossing Width. Crossings of streams, riparian habitat areas, marine waters, marine riparian habitat areas, and pond or lake buffers shall have the narrowest width possible, consistent with applicable county road standards and protection of public safety. Clearing to accommodate the road shall be minimized, consistent with the protection of the most important habitat, as determined by the approval authority.

F. Bridge and Culvert Design. The design of stream crossings shall be consistent with the WDFW Fish Passage Design at Road Culverts, 2003, as amended, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000, as amended. Bridges are preferred on Type S and F waters unless physically infeasible. Culverts approved to be installed on Type S and F streams shall be arch/bottomless or the equivalent that provides comparable fish protection, as determined by the approval authority in consultation with WDFW and others with expertise. Crossing in estuaries shall be designed to avoid interruption of tidal flows. The approval authority may require that crossings in estuaries be accomplished with a bridge rather than a culvert if it would significantly reduce habitat impacts.

G. Avoidance of Flood Hazards. See Chapter 24.20 TCC.

H. Logging Roads within Sites Proposed for Development. Crossings of important habitat areas within sites proposed for development that were allowed by a state forest practices permit but which do not meet the requirements of this chapter, and any unlawfully established roads, shall be removed. The former roadbed shall be restored to a condition consistent with the surrounding undisturbed areas. The approval authority may require soil amendment to enable plant survival and drainage in the restored area.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.290 Road replacement and minor expansion.

Existing public roads constructed prior to July 24, 2012 may be replaced or widened (e.g., for safety improvements) within the footprint of the existing road bed and in portions of the right-of-way that have been previously cleared or graded as part of permitted road work provided that all of the following criteria are met:

A. Capacity. The capacity of the road is not increased.

B. Minimize Impact. When possible, road widening shall occur on the side of the road furthest from the important habitat area unless other critical areas are present, in which case the approval authority, in consultation with others with expertise, shall determine, given physical and technical constraints, where the proposed road expansion would have the least impact on the critical areas.

C. Expansion Limits. Such road expansion shall not extend beyond the outer edge of existing roadside ditches, or encroach into areas that are predominately covered with native vegetation. In no case shall a road expansion authorized pursuant to this chapter extend more than ten feet beyond the existing roadbed. Only one minor expansion shall be allowed per road segment pursuant to this section.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.295 Single-family residential, new.

A. ~~New and existing~~Existing single-family residential uses are subject to Chapter 24.50 TCC.

B. New single-family uses in stream, lake, pond, and marine riparian management zones (RMZs):

1. Impervious areas shall not cover more than 35 percent of the total RMZ area; and

2. No residential or associated accessory use shall be established within 100 feet of the ordinary high watermark, or channel migration zone where one exists; and

~~1.~~3. Uses in RMZs shall utilize all applicable source control BMPs, including construction BMPs, found in the Stormwater Management Manual for Western Washington, 2024 or as updated, and the Thurston County Drainage Design and Erosion Control Manual, 2022 or as updated.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.300 Shoreline and slope stabilization.

The approval authority may authorize stabilization of stream banks, lakes, ponds, and marine shorelines only where it is determined that, it is necessary to protect lawfully established, existing threatened structures as defined in this title and by the Shoreline Master Program for the Thurston Region (1990) as amended and applicable; and that cannot be relocated with less impact to fish and wildlife habitat conservation areas or other critical areas; or to protect unusually high value natural resources/wildlife habitat (e.g., or priority species locations or a wetland associated with a stream). Stabilization of pond, marine or stream shorelines, is only allowed as provided for in the Shoreline Master Program, as amended, and consistent with this section. Any proposal for slope/bluff stabilization must be supported by a geological assessment from a qualified geotechnical professional and a biologist and shall adhere to the following preferential order:

A. Nonstructural Shoreline Protective Techniques. When stabilization methods are deemed necessary by the director, nonstructural shoreline protective techniques are preferred to concrete bulkheads, riprap or other types of shoreline armoring. Nonstructural techniques may include but are not limited to: beach nourishment, coarse beach fill, gravel berms, vegetation plantings and bioengineering. Best available science shall be used to evaluate the best techniques for protection as determined by the director. Refer also to the Washington Department of Ecology publications "Slope Stabilization and Erosion Control Using Vegetation" (1993, Publication 93-30), and "Marine Shoreline Armoring and Puget Sound" (2010, Publication 10-06-003.

B. Bioengineering. Stabilization of stream, lake, pond and marine shorelines, if necessary, shall be accomplished with bioengineering or similar soft stabilization techniques unless the applicant's qualified engineer and biologist demonstrates that such techniques are not sufficient to protect structures and facilities listed in this section from erosion and slope failure. (See Washington's Integrated Stream bank Protection Guidelines for bioengineering designs.) The stabilization shall be designed and installed to minimize adverse impacts on the habitat's functions.

C. Combination of Bioengineering and Hard Armoring. If the applicant's qualified engineer and biologist demonstrate to the approval authority's satisfaction that bioengineering alone will not be sufficient to protect structures and facilities listed in this section, the approval authority, in consultation with a biologist and qualified engineer, at the applicant's expense, may authorize a combination of bioengineering and structural solutions that is least damaging to the habitat. The stabilization shall be

designed and installed to minimize adverse impacts on the habitat's functions. The structural stabilization solutions shall comply with subsection (D) below.

D. Structural Techniques (e.g., bulkhead, gabion, riprap, revetments, or wall). If the applicant's qualified engineer and biologist demonstrate to the approval authority's satisfaction that the nonstructural techniques provided for in this section are not possible or will not be sufficient to protect structures and facilities listed in this section from erosion and slope failure, they may, in consultation with a biologist and qualified engineer at the applicant's expense, propose a structural stabilization solution consistent with the following:

1. Hard armoring, such as rip-rap and bulkheads, may only be used when the applicant demonstrates to the approval authority's satisfaction that a public facility, public road, utility (not individual service lines that can be relocated), sole access road, or occupied structure cannot be safely and practically maintained without such measures. The armoring shall be the minimum dimension necessary to protect the structure.

2. Hard armoring shall not be allowed along Type S or F streams, in marine habitat areas, or in salmonid spawning, migration or rearing areas unless it is necessary to protect critical public facilities, human life, or a threatened dwelling.

3. Structural techniques shall only be allowed along riparian habitat areas when:

   a. It is to protect a legally permitted threatened structure; and

   b. The residence and normal appurtenances are located within the 2:1 slope measured from the toe of the bluff or within the fifty-foot top of slope buffer, whichever is greater; and

   c. Only if a geotechnical assessment completed per Chapter 24.35 TCC finds that the structure to be protected will be threatened based on the long-term erosion rate (thirty—fifty year average) within the next three years if toe protection is not provided.

E. Designed by Engineer. A professional engineer licensed in the State of Washington with demonstrated expertise regarding hydraulic actions along shorelines shall design stabilization projects along streams and marine shorelines in consultation with a qualified biologist.

F. Avoid Intrusion into the Important Habitat Area. Any new or replaced shoreline protective structures shall be placed as close to the existing bank as possible and parallel to the natural shoreline. In areas where dry land has been previously created by fill behind the bulkhead, the replacement structure should be designed to remove the fill and place the new structure as close to the historical OHWM as possible.

G. Repair, Maintenance or Renovation. Repair, maintenance, or renovation of lawfully established shoreline stabilization structures is permitted consistent with state and federal regulations and the Shoreline Master Program for the Thurston Region, provided that the facilities are not increased in height or length or expanded waterward. Replacement of existing shoreline stabilization structures shall be considered a new use, except as provided for by the Shoreline Master Program for the Thurston Region (see Section XVIII, Shoreline Protection).

H. Nontoxic Materials. Approved stabilization shall only use materials that do not pose a risk to water quality, consistent with best available science.

I. Slope Stabilization. Slope stabilization is only allowed in important habitat areas, if consistent with Chapter 24.15 TCC, Geologic Hazards and Chapter 24.20 TCC, Frequently Flooded Areas, and only where erosion or landsliding threatens a use listed in this section. Bioengineering shall be used where possible.

J. A mitigation plan for impacts to fish and wildlife conservation areas including the shoreline ecological functions as a result of the armoring shall be prepared by a qualified biologist and implemented immediately following construction. Mitigation measures may include temporary or perpetual beach feeding with appropriate substrate, additional woody debris, revegetation of the adjacent upland area, or other measures designed to minimize the impacts to the nearshore environment from armoring.

K. Prior to any approval of shoreline armoring, the applicant shall demonstrate that other measures have been taken to address the erosion or other threats to the structure. This includes improving or installing a functioning drainage system, minimizing impervious areas, restoration of trees and other native vegetation on the adjacent buffer slope or bluff, possible relocation of structures, or other measures that would improve stabilization and reduce the threat to the structure.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.310 Stair tower, stairway, and mechanical lift.

Stair towers, stairways, and mechanical lifts may be permitted consistent with the Shoreline Master Program for the Thurston Region, and the following requirements:

A. Avoid Habitat Impacts. Stair towers, stairways, and mechanical lifts shall not be located, designed, or constructed such that they would ground on serf smelt, Pacific sand lance or herring spawning beds, or on eelgrass beds (Zostera spp.).

B. Treated Wood. Any treated wood proposed to be used in the construction of the stair tower, stairway and/or mechanical lift that would be placed in, over, or within 100 feet of the water is subject to county approval. Only treatments that pose a negligible risk to water quality shall be permitted.

C. Armoring. Riprap or other armoring shall not be placed on a beach to protect stair towers, stairways or mechanical lifts.

D. Footprint. The footprint of the stair tower, stairway, and mechanical lift shall be the minimum necessary to accommodate the proposed use.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.320 Stormwater facilities—New.

New and expanded stormwater facilities (e.g. detention, retention, treatment and conveyance facilities) shall not be constructed within priority prairie habitat. New stormwater facilities may be constructed within other important habitat areas and associated buffers consistent with the Drainage Design and Erosion Control Manual for Thurston County, as amended (Chapter 15.05 TCC) and the Clean Water Act, under the following conditions:

A. No Alternative. The applicant shall demonstrate that there is no alternative for accommodating stormwater with less impact on the important habitat area due to topography or other physical constraint. The facilities shall be designed and located to minimize impacts on the important habitat area.

B. Accommodation of Stormwater Generated Within the Habitat Area. New roads and other development located adjacent to important habitat areas shall be designed and located so any associated stormwater facilities are located outside of the important habitat area. The approval authority may require that the proposed development be redesigned or reduced in scale to avoid or minimize impacts to the important habitat area.

Any new retention, detention, or treatment facilities shall be designed and sized to only accommodate stormwater generated from impervious surfaces (e.g., roads and bridges) within or immediately adjacent to the important habitat area or new impervious surfaces approved consistent with this chapter.

C. Size Limits and Location. Use of riparian habitat areas, marine riparian habitat area or pond or lake buffers for stormwater retention, detention or treatment shall be limited to the twenty-five percent of the riparian habitat area, marine riparian habitat area, or buffer furthest from the water body, unless another location is necessary to accommodate stormwater from a road or bridge. In no case shall the size of the facility exceed twenty-five percent of the habitat area/buffer on the parcel(s) under development. The stormwater facility shall not cause an increase in water temperature or degradation of water quantity and quality of fish-bearing streams.

D. Roadside Stormwater Conveyance Facilities. Roadside stormwater conveyance swales and ditches may be extended through important habitats within rights-of-way. When possible, they shall be located along the side of the road furthest from the habitat area. If the conveyance facility must be located along the side of the road closest to the important habitat area, it shall be located as close to the road/sidewalk as possible, consistent with public safety.

E. Open and Vegetated. Stormwater detention, retention, and treatment ponds in important habitat areas shall be open and, to the extent possible, vegetated with native plants present in the area. Invasive vegetation shall not be planted. Stormwater conveyance facilities shall be open and vegetated with non invasive plants unless the approval authority determines, in consultation with the applicant's qualified engineer, that design constraints or protection of public safety warrant burying the conveyance facility (e.g., underground storage is needed or the facility would span a steep slope and must be "tight lined" to avoid slope failure - see Chapter 24.15 TCC, Geologic Hazards). Vegetation shall be maintained and, if necessary, planted adjacent to all open swales, channels, and ponds in order to retard erosion, filter sediments, pollutants, and (if warranted to maintain water temperatures necessary to sustain aquatic life) shade the water, consistent with the Drainage Design and Erosion Control Manual for Thurston County, as amended (Chapter 15.05 TCC), and the Clean Water Act.

F. Avoid Channelization.

1. With the exception of conveyance facilities extending through the important habitat area and/or associated buffer, stormwater shall be dispersed as sheet flow at the outer edge of the important habitat area to avoid channelization and allow filtration of sediment, nutrients, and pollutants and infiltration of water. The approval authority may require, if slopes exceed five percent, that obstructions or devices (e.g., perforated pipe) be installed to maintain sheet flow within the important habitat area and associated buffer.

2. When an outfall to a stream, pond, or marine waters is necessary, it shall be designed to mitigate any adverse impacts to aquatic life. This may include, if warranted, a conveyance system and outfall structure that simulates natural conditions and provides habitat features necessary for fish feeding, cover and reproduction. If stabilization of an outfall along a Type S or F stream or marine shoreline is necessary, bioengineering techniques shall be used to the maximum extent practical, consistent with state and federal regulations (See TCC 24.25.300).

G. Treatment. All stormwater from stormwater systems shall be treated prior to release to a water body consistent with the Clean Water Act and Chapter 15.05, TCC.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.323 Stormwater facilities—Engineered stormwater dispersion.

The dispersion area of stormwater dispersion systems, as defined by the Thurston County DDECM, shall not be considered a stormwater facility as described in TCC 24.25.320, and regulated as such, unless a physical structure is incorporated within the design that impacts the FWHCA. Stormwater dispersion facilities whose dispersion area includes any portion of a FWHCA are allowed as an element of a stormwater system under the following circumstances:

A. Dispersion of runoff from back yards of development and downspout dispersion, done in accordance with the Thurston County DDECM, is allowed at the outside edge of the FWHCA.

B. Sheet flow and concentrated flow dispersion, done in accordance with the Thurston County DDECM, of stormwater meeting runoff treatment requirements of the Thurston County DDECM is allowed at the outside edge of the FWHCA.

C. The required dispersion area for sheet flow and concentrated flow dispersion from other pervious and impervious surfaces, done in accordance with the Thurston County DDECM, may only include that portion of a FWHCA outside of the minimum area considered necessary for water quality protection or one hundred fifty feet whichever is greater.

D. Native vegetation in the FWHCA may be increased but shall not be cleared or altered to accommodate stormwater treatment.

E. In no case shall dispersion methods be approved that may cause water quality impacts to the FWHCA. If water quality impacts are anticipated or observed, additional stormwater treatment methods shall be implemented.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.325 Stormwater facilities—Maintenance or repair.

Maintenance and repair of existing stormwater retention, detention, treatment and conveyance systems is permitted in fish and wildlife habitat conservation areas and associated buffers, consistent with the following:

A. Best Management Practices. County-owned stormwater facilities within riparian habitat areas, marine riparian habitat area, and pond/lake buffers accommodating runoff from county roads shall be maintained consistent with the BMPs listed in the Regional Road Maintenance Program Guidelines, January 2002, and, as applicable, the Drainage Design and Erosion Control Manual for Thurston County, Chapter 15.05, TCC.

B. Other stormwater facilities within marine riparian habitat areas, pond/lake buffers, and riparian habitat areas shall be maintained consistent with a maintenance plan approved by the Thurston County Department of Water and Wastewater Management in accordance with the Drainage Design and Erosion Control Manual for Thurston County. The approved maintenance plan shall provide at least as much protection for the important habitat area as the provisions of this chapter.

C. No Expansion. Maintenance of stormwater facilities shall not result in their expansion within the riparian habitat, priority habitat, or marine riparian habitat area or pond/lake buffers or result in channelized discharges of water to such areas.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.330 Stream relocation.

The approval authority, in consultation with state and federal agencies with jurisdiction, may only allow streams to be relocated subject to state permit requirements, provided the proposal complies with the following:

A. Plans. The applicant shall submit plans identifying the extent to which the stream would be altered. The plans shall depict the existing stream channel, the location of the proposed stream channel, site topography with contours at two-foot intervals or less, proposed uses or restoration of the original stream channel including any grading and filling, proposed stream bed design and materials, the channel migration zone, stream bank stabilization, riparian area enhancement/restoration, and methods to preserve and relocate existing fish and aquatic life affected by the project.

B. Equal or Better Habitat Function. The replacement stream channel provides an equal or better habitat for all fish species, and affected important marine species, maintains or improves water quality, and does not have a net adverse impact on other critical areas.

C. Replicate or Improve Stream Characteristics. The original ecological value of the stream and riparian habitat area shall be recreated or enhanced, to the extent feasible. The natural channel dimensions shall be replicated or improved including substantially identical depth, width, length, gradient, channel complexity and horizontal alignment (meander lengths) as the original location or the upstream and downstream channel. The stream bottom shall be restored with materials identical or similar to the original streambed. Removal of vegetation and large woody debris (logs) shall be minimized. However, the approval authority may allow deviation from the original conditions if it is determined that an alternative configuration or materials would improve habitat quality (e.g., by adding structure, cover, pools, spawning gravels, etc).

D. Flooding. The flood carrying capacity of the relocated stream and floodplain shall not be diminished, as demonstrated by a professional engineer licensed in the State of Washington. (Also see Chapter 24.20 TCC, Frequently Flooded Areas.)

E. Channel Migration Zone. The applicant shall identify the channel migration zone for the watercourse at the project site and for the reach upstream and downstream of the site (for a distance of at least five hundred feet). The design and construction of the project shall not preclude channel movement, except as necessary to protect public safety or existing structures, consistent with TCC 24.25.300.

F. Impacts on Marine Habitat. Stream relocation shall minimize impacts to important marine habitat protected by this chapter. Any impacts to such areas shall be mitigated. Relocated streams entering Puget Sound shall not be contained in pipes within the marine riparian habitat area, with the exception of road crossings permitted consistent with this chapter.

G. Riparian Width and Condition. Any stream that is relocated shall have a riparian habitat area width as specified in Table 24.25-1 or as modified pursuant to TCC 24.25.015-24.25.040. The stream bank configuration shall be restored to the original or improved conditions, consistent with the latest edition of WDFW's Integrated Streambank Protection Guidelines. The riparian habitat area shall be replanted with native vegetation that replicates the natural, undisturbed riparian condition in species, size and densities.

H. Blockages. Stream alteration projects in Type S and F streams shall not result in blockage of side channels that would impede fish or adversely impact other priority wildlife species. Known fish barriers in side channels involved in the project site shall be removed as part of the approved stream alteration project.

I. Monitoring and Surety. The applicant shall submit a monitoring plan for county approval to ensure that the project functions as approved. The applicant also shall submit a surety to the county, consistent

with TCC 24.70, sufficient to correct any project failures or to replace any vegetation that does not survive.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.340 Utility lines and facilities—New.

Installation of utility lines and facilities is permitted in existing rights-of-way and utility corridors consistent with applicable regulations (see Title 13, TCC). The alignment of underground utility lines outside of existing rights-of-way shall avoid important habitat areas to the greatest extent possible. The approval authority may allow underground utility lines within these areas when it is determined that there are no practicable alternatives or if the utility lines will be consolidated with a road crossing or parallel to an existing utility crossing at the minimum separation distances established by the county for such uses.

A. Utility Corridors. Utility corridor alignment, construction, restoration, and maintenance shall adhere to the following standards:

1. Utility corridor alignment shall fall outside of important habitat areas and associated buffers to the maximum extent possible where it would have the least impact on the functions of important habitat area and associated buffers. The approval authority may require submission of a feasibility study that demonstrates that alternative routing with less impact on important habitat areas is not possible. Utility corridors shall not be located in habitat used for salmonid rearing or spawning or by a species listed as endangered or threatened by the state or federal government unless there is no other crossing site with less impact on these species and the habitat functions.
2. Utility corridors shall not parallel a stream within a riparian habitat area unless there is no alternative.
3. The utility corridor shall have the minimum width practicable.
4. The utility corridor alignment and utility installation shall not cause an increased risk of landslide or significant erosion that would impact an important habitat.
5. Utility corridor construction and maintenance shall maintain and protect the hydrologic and hydraulic functions of streams.
6. Clearing shall be limited to the minimum necessary to locate the utility. Cutting of conifer trees greater than twelve inches in diameter (at four and one-half feet above the ground on the uphill side of the tree) shall be avoided to the maximum extent possible and priority habitats preserved, consistent with the preservation of the most important habitat.
7. The utility corridor shall provide for other necessary uses and facilities whenever possible. Conduit containing new utilities shall be sized to provide capacity for additional lines and cables when feasible.
8. Utility corridors shall be revegetated with appropriate native vegetation, compatible with the utility facility and, whenever possible, equivalent to preconstruction densities. Restoration shall occur immediately upon completion of construction or soon thereafter under seasonal constraints or work windows established pursuant to this chapter. The applicant shall submit a performance surety consistent with Chapter 24.70 TCC to ensure that such vegetation survives or is replaced.

B. Stream Crossings. New utility lines and cables, sewer lines, and water lines are permitted to cross streams if they are in compliance with applicable local, state and federal regulations, and the following standards.

1. Dry Streams. Dry, intermittent streams may be crossed with open cuts during a time period approved by the county and any agency with jurisdiction.
2. Existing Crossings. Where possible, new lines and cables crossing perennial streams shall be contained within an existing roadbed, railroad bed, bridge, elevated walkway, conduit, or other existing structure.
3. Boring. When it is not possible to use existing crossings, new crossings shall, when physically and economically feasible, be accomplished by boring beneath the scour depth and hyporheic zone of the of the stream's active channel and, where documented, the one-hundred-year channel migration zone. (See TCC 24.20.045 and 24.20.055). Bore pits associated with the crossings shall be restored upon project completion.
4. Alignment. When use of existing structures or boring is not feasible to accommodate new utility lines, the stream/riparian habitat area crossing shall be aligned perpendicular to the channel where possible. If that is not possible, stream crossings shall be aligned at an angle greater than sixty degrees to the centerline of the stream channel consistent with the preservation of the most important habitat, as determined by the approval authority in consultation with the WDFW.
5. Staging Areas. Staging areas for equipment and materials shall be located outside of the important habitat area.
6. Maintenance Plan. Applicants shall submit a maintenance plan for the corridor for approval by the county consistent with the provisions of this chapter.
7. Overhead utility crossings of streams may be permitted if the review authority determines that it is method with the least impact on the critical area.

C. Individual Service Lines. Overhead lines or cables serving an individual use are permitted if no alternative is available, they meet state and federal requirements and do not impair wildlife use of the important habitat area. Poles supporting such lines shall be located outside of the important habitat area when feasible. If a pole is necessary within the important habitat area, it shall be located where it would be least damaging to the habitat, as determined by the approval authority in consultation with the WDFW.

Buried service lines serving an individual use are permitted upon demonstration that they will not have an adverse impact on the important habitat area. The site shall be restored upon completion of the utility installation.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.350 Vegetation removal—General.

For guidance regarding vegetation removal along marine bluffs, see the Vegetation Management Guide for Puget Sound Bluff Property Owners, Washington Department of Ecology. Also see TCC 24.25.140.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.360 Vegetation removal—Native vegetation.

Removal of native vegetation within priority habitat, marine riparian habitat areas, and riparian habitat areas shall be prohibited except as provided for in this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.370 Vegetation removal—Oak woodlands.

Removal of Douglas fir trees within oak woodlands and thinning of oaks within oak savanna habitat is allowed subject to county approval based on a critical area report (e.g. Habitat Management Plan) that demonstrates that these activities will enhance the habitat.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.380 Vegetation removal—Noxious weeds and invasive plants.

A. Removal of noxious weeds, under the direction of the Thurston County Noxious Weed Control Board, is permitted in important habitat areas consistent with a county approved integrated pest management plan, applicable county and state regulations, and this section.

B. Removal of invasive plants is permitted subject to the criteria in this section. Plant removal shall be performed such that it will not increase the likelihood of stream bank erosion, marine bluff erosion (see Chapter 24.15 TCC), significantly damage untargeted vegetation, or impair any habitat functions. The method of removal shall be approved in writing by Thurston County Resource Stewardship Department, consistent with applicable county, state, and federal regulations.

C. Hand tools shall be used for plant removal unless the approval authority determines that the scale of the project warrants use of small scale equipment (e.g., riding mowers or light mechanical cultivating equipment) or other method (i.e., application of herbicide with a state and federally approved formulation by a licensed applicator in accordance with the safe application practices on the label) and use of the equipment/method does not pose a significant risk to untargeted areas, habitat functions, or water quality.

D. Erosion shall be effectively controlled and exposed areas shall be stabilized immediately following plant removal consistent with Chapter 15.05 TCC. If the area of exposed soil exceeds one hundred square feet, it shall be planted with appropriate native plant species present in the area at a density that will provide complete ground cover at maturity, unless the approval authority determines that the area will revegetate naturally without jeopardizing water quality or the important habitat area.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.390 Vegetation removal—Hazard trees.

The county may authorize the limbing, thinning or removal of hazard trees in important habitat areas and associated buffers provided that:

A. The county may require the applicant to submit a report from a certified arborist or professional forester that documents the hazard. If so, the arborist shall recommend suitable replacement trees for any trees that are removed pursuant to this subsection.

B. Tree cutting is limited to limbing or crown thinning in compliance with National Arborist Association pruning standards, unless the tree has a disease that would jeopardize the survival of other trees, or felling the tree is otherwise justified by the landowner/expert. Where limbing or crown thinning is not sufficient to address the hazard, the tree shall be pushed over into the important wildlife habitat and toward a stream or marine waters if present.

C. Snags shall be left in place to provide habitat unless they have a disease that would jeopardize other trees. All trees and branches cut in the important habitat area and buffer shall remain there unless the tree is diseased.

D. The landowner shall replace any tree that is taken down with field grown native trees at least two feet in height. In riparian habitat areas, replacement trees shall be native and appropriate to the location, such as Oregon white oak in prairie riparian habitat. Replacement ratios shall be based on the tree species impacted. Appropriate prairie adapted species shall be planted in prairie areas provided that they do not interfere with the integrity or survival of an oak stand. Replacement trees shall be planted from October to February. The county may also require that a watering, maintenance and monitoring plan be submitted to ensure their survival.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.400 Vegetation removal—Other.

Other vegetation may be removed from important habitat areas and associated buffers as follows:

A. Removal of vegetation to the minimum extent necessary for surveying or testing purposes, as determined by the approval authority.

B. Harvesting of plants and plant materials for restoration and enhancement projects provided the harvested material does not comprise more than twenty percent of any single plant, the species harvested comprises forty percent or more of the vegetation in the important habitat area/buffer on site, the harvested material consists of woody stems and twigs, and no root material is harvested, except as provided for in this section.

C. Salvage of whole plants in areas approved for development.

D. Removal of vegetation as part of an approved habitat restoration/enhancement project in the important habitat area.

E. Pruning and/or limb thinning

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.410 Water dependent uses.

The approval authority may allow alteration of the riparian habitat area, marine riparian habitat area, or pond buffer to the minimum extent necessary to accommodate water dependent structures and uses (as defined in the Shoreline Master Program for the Thurston Region, as amended) authorized by the shoreline master program when no other practicable alternative exists. Such uses shall be designed and installed to avoid or, where that is not possible, minimize impacts on important wildlife habitat consistent with the provisions of this chapter.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

24.25.420 Wells—New.

A. New individual and community wells serving approved uses shall only be allowed within important habitat area if there is not sufficient buildable area on the property outside the habitat area to accommodate the well, as determined by the approval authority. New well houses are not permitted in riparian habitat areas, marine riparian habitat area, pond buffers or priority species conservation areas. Also see Article III of the Rules and Regulations of the Thurston County Board of Health Governing Water Supplies.

B. Access to wells in important habitat areas shall be by a pervious trail no more than four feet in width unless the approval authority determines that it is necessary to provide vehicular access to a community well. In

that case, the approval authority may authorize an unimproved access of minimal width (no greater than eight feet) to provide access for maintenance vehicles.

C. Maintenance of the trail/access road shall not involve the use of herbicides or other hazardous materials.

D. Maintenance and repair of legally established, including nonconforming, wells located within important habitat area is allowed without critical areas permitting.

E. Legally nonconforming wells located within important habitat area in need of replacement shall be relocated whenever feasible. When no suitable alternative location exists, these wells may be replaced in-kind.

(Ord. No. 14773, § 3(Att. B), 7-24-2012)

APPENDIX 24.25-1

Table 24.25-4. Habitats of Local Importance

Habitat	Purpose of Habitat/Basis for Listing	Related Species
Cottonwood floodplains	Current floodplain regulations do not protect this habitat from being cleared for converting to agricultural uses. This is a habitat found only along the Nisqually River in Thurston County. Cottonwoods are a keystone species in many riparian zones (Johnson et al 2001).	Red-eyed vireo
Balds (dry plant communities, grasslands)	Globally unique and rare plant community. Primarily located in SE corner of Thurston County, vicinity of Bald Hills. Similar to prairies, but smaller and shallower soils (associated with bedrock outcrops).	
Prairie or Westside Prairie	Important prairie or westside prairie habitat means herbaceous, non-forested (forested means greater than or equal to sixty percent forest canopy cover) plant communities that can either take the form of a dry prairie where soils are well-drained or a wet prairie. Priority dry prairie areas have a minimum size of one acre. In addition, some areas dominated by Scot's (Scotch) Broom (non-native shrub) or other invasive species to prairies shall be considered prairie if the area is restorable and when there are native prairie species in the understory below the shrubs. Such marginal and restorable areas can be less valuable, but may have significant value if they are large in area, or in a landscape that connects two or more prairies. Small areas less than one acre with characteristics meeting the definition of prairie habitat which are functionally connected to another larger prairie habitat within approximately one-half mile are also important prairie habitat areas. Mima mounds shall be preserved to the greatest practicable extent as determined by the review authority. See the definitions for prairie habitat, dry prairie, and wet prairie.	Mazama pocket gopher, Taylor's checkerspot butterfly, Mardon skipper, streaked horned lark Many species associated with prairie habitat are protected under the Thurston HCP and the requirements under Chapter 17.40 TCC.
Oregon White Oak Habitat	Important Oak Habitat means stands of Oregon white oak (Quercus garryana) or oak/conifer associations where canopy coverage of the oak component of the stand is twenty-five percent or more; or where total canopy coverage of the stand is less than twenty-five percent, but oak accounts for at least fifty percent of the canopy coverage. The latter is often referred to as oak savanna. Important oak habitat consists of stands greater	Western gray squirrel

	than or equal to one acre (0.4 hectares) in size. Single oaks or stands less than one acre (0.4 hectares) shall also be considered an important habitat when found to be particularly valuable to fish and wildlife (i.e. they contain many cavities, have a large diameter at breast height, are used by priority species, or have a large canopy), or are located in degraded habitat areas. Individual oak trees and stands of pure oak or oak conifer associations less than one acre in size that are located in close proximity to an oak habitat larger than one acre may also be considered an important habitat.	
Springs and seeps (includes mineral springs)	Forested springs/seeps are protected in the Forests and Fish Report to protect stream associated amphibians (SAA), protect water quality, etc. fifty-foot no cut buffer required. Mineral springs are important to Band-tailed pigeons, especially during breeding season.	Band Tailed Pigeon

Table 24.25-5. Wildlife Species of Local Importance

Common Name	Scientific Name	Basis for Listing as Locally Important
Birds:		*The following bird species depend on prairie habitat and are declining in population due to loss of habitat. They serve as indicator species for relatively large and/or healthy prairie and may assist in protection of prairie habitat.*
Western Meadowlark	Sturnell neglecta	Prairie species. Needs large open areas. Found on Joint Base Lewis McChord (JBLM), Mima Mounds, and Olympia Airport year round.
Lazuli Bunting	Passerina amoena	Prairie species. Declining populations. Found near Scatter Creek and Joint Base Lewis McChord (JBLM).
Common nighthawk	Chordeiles minor	Prairie species. Population declining significantly.
American Kestrel	Falco sparverius	Prairie species. Population is declining. Nests in cavities. Can use nest boxes.
Northern Harrier	Circus cyaneus	Prairie and herbaceous wetlands. Ground nester. Uncommon breeding in Washington.
American Bittern	Botaurus lengitinosus	State of Washington Birds classifies A. Bittern as a Species of Immediate Concern for wetlands.
Olive-sided Flycatcher	Contopus cooperi	State of Washington Birds classifies Olive-sided Flycatcher as a Species of Immediate Concern for forests.
Short-eared owl	Asio flammeus	State of Wa Birds classifies Short-eared owl as a Species of High Concern for grasslands.
Amphibians and Reptiles:		*The following amphibian species ranges have been significantly reduced due to habitat alteration and development. Sensitive to site and landscape alterations, specifically that limit breeding and foraging site connectivity, and dispersal/seasonal corridors.*
Olympic Torrent Salamander	Rhyacotriton olympicus	Three of the four species of Rhyacotritoninae occur in Thurston County - Olympic Torrent, Columbia Torrent, and Cascade Torrent. Cascade and Columbia Torrent salamanders are both listed as State Candidate Species by WDFW. Erik Neatherlin of WDFW and Bill Leonard, Biologist with WDOT, both recommend listing the Olympic Torrent Salamander as a Locally Important

		Species due to their association with old-growth forests and sensitivity to increased temperatures and sedimentation in streams and headwaters.
Tailed Frog	Ascaphus truie	Sensitive to timber harvest. Survival may depend on protection of cool flowing streams required for breeding and larval development. Likely to be affected by increased water temperatures occurring after timber harvest. Headwater stream protection through buffers is important mitigation measure.
Cope's Giant Salamander	Dicamptodon copei	Cope's giant salamander (Dicamptodon copei) are sensitive to habitat change and fragmentation from development. Both species would be expected to occur in the extreme SE portion of the county, similar to the two PHS species, Cascades torrent salamander and Van Dyke's salamander. The SE portion of the county in the headwaters of the Deschutes systems and the Nisqually system in the vicinity of Alder lake should be considered a "hot" region for all four (2 PHS, 2 local species mentioned) as this area is the only place they are likely to occur in the county. (Source: E. Neatherlin, WDFW)
Pacific Giant Salamander	Dicamptodon tenebrosus	May be associated with old-growth forests. Found in moist coniferous forests. During breeding season found in or near streams. Closely associated with high gradient streams with coarse substrate.

~~**Table 24.25-6. Prairie Soils**~~

~~Series Name~~	~~SCS Map Symbol #~~
~~Baldhill~~	~~5, 6, 7, 8~~
~~Cagey~~	~~20~~
~~Everett~~	~~32, 33~~
~~Grove~~	~~42~~
~~Indianola~~	~~46, 47~~
~~Nisqually~~	~~73, 74~~
~~Spana~~	~~109~~
~~Spanaway~~	~~110, 111, 112, 113, 114~~
~~Tenino~~	~~117~~

Table 24.25-6~~7~~. Diagnostic Wet Prairie Plants

Scientific Name	Common Name
Camassia leichtlinii	giant camas
Camassia quamash	common camas
Carex densa	dense sedge*
Carex feta	green-sheath sedge
Carex tumulicola	foot-hill sedge
Carex unilateralis	one-sided sedge
Deschampsia cespitosa	tufted hairgrass
Deschampsia danthonioides	annual hairgrass
Downingia yina	Cascade downingia

Eryngium petiolatum	Oregon coyote thistle*
Lomatium bradshawii	Bradshaw's lomatium* Federally Endangered Species
Lotus pinnatus	bog bird's-foot-trefoil*
Lupinus polyphyllus	large-leaf lupine
Perideridia gairdneri	Gairdner's yampah
Plagiobothrys figuratus	fragrant popcorn flower
Polemonium carneum	great polemonium*
Polygonum bistortoides	American bistort*
Potentilla gracilis	graceful (fanleaf) cinquefoil
Ranunculus alismifolius	plantain-leaf buttercup
Ranunculus orthorhynchus	bird's-food buttercup
Saxifraga integrifolia	northwestern saxifrage
Saxifraga oregana	bog saxifrage
Sidalcea malviflora var. virgata	rose checkermallow*
Sisyrinchium idahoense	Idaho blue-eyed-grass
Veratrum californicum	California false hellebore
Veratrum viride	American false hellebore*
* Rare Wet Prairie Species	

Table 24.25-~~7~~8. Diagnostic Dry Prairie Plants (Common and Rare)

Scientific Name	Common Name
Apocynum androsaemifolium	spreading dogbane
Balsamorhiza deltoidea	deltoid balsamroot
Brodiaea coronaria ssp. coronaria	harvest firecracker-flower
Camassia quamash	common camas
Carex inops ssp. inops	long-stolon sedge
Castilleja levisecta	golden Indian paintbrush * Federal Threatened Species
Castilleja hispida	harsh Indian paintbrush
Danthonia californica	California oatgrass
Delphinium menziesii	Puget Sound larkspur
Delphinium nuttallii	upland larkspur
Dodecatheon hendersonii	Henderson's shootingstar
Erigeron speciosus	showy fleabane (aspen fleabane)
Eriophyllum lanatum var. lanatum	common woolly sunflower
Festuca idahoensis v. roemeri	Roemer's fescue
Fragaria virginiana	Virginia strawberry
Fritillaria affinis	chocolate lily
Hieracium scouleri	hound's-tongue hawkweed
Koeleria macrantha (cristata)	prairie Junegrass
Linanthus bicolor	bicolored desert-gold
Lomatium triternatum	ternate desert-parsley
Lomatium utriculatum	foothills desert-parsley
Lomatium nudicaule	barestem biscuitroot
Lupinus albicaulis	sickle-keel lupine

Lupinus lepidus var. lepidus	prairie lupine
Microseris laciniata	cut-leaf silverpuffs
Plectritis congesta	shortspur seablush
Potentilla gracillis	fanleaf cinquefoil
Ranunculus occidentalis var. occidentalis	western buttercup
Saxifraga integrifolia	northwestern saxifrage
Sericocarpus rigidus	aster Curtus (white topped aster)
Silene scouleri	Scouler's catchfly
Sisyrinchium idahoense	Idaho blue-eyed-grass
Solidago missouriensis	Missouri goldenrod
Solidago simplex var. simplex (S. Spathulata)	sticky goldenrod
Solidago spathulata	spikelike goldenrod
Trifolium willdenowii (T. tridentatum)	springbank clover
Triteleia grandiflora	Howell's triteleia
Triteleia hyacinthina	white triteleia
Viola adunca	early blue violet (sand violet)
Viola praemorsa var. nuttallii	upland yellow violet
Zigadenus venenosus var. venenosus	meadow death-camas

(Ord. No. 14773, § 3(Att. B), 7-24-2012; Ord. No. 16216, § 3(Att. B, § IX), 11-22-2022)