

Chapter 24.30

WETLANDS

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24.30.005 Wetlands – General purposes.

The purposes of this chapter are to:

- A. Achieve no net loss of wetlands and minimize adverse impacts.
- B. Maintain wetland and buffer functions, such as, but not limited to, cleansing surface water, storing and conveying floodwater and providing fish and wildlife habitat, by avoiding or, where that is not possible, minimizing and mitigating impacts to wetlands and their buffers.
- C. Establish wetland buffers based on the wetland’s functions and values, sensitivity to impacts, rarity, whether or not it is replaceable, and site conditions.
- D. Provide for uses and activities in wetlands and associated buffers that have negligible impacts on such areas and provide for other uses that must be located in wetlands or buffers in a way that will avoid or minimize potential impacts.
- E. Provide for mitigation of impacts to wetlands and their buffers.

24.30.010 Wetlands – Applicability.

This chapter applies to all property within unincorporated Thurston County containing wetlands as defined in chapter 24.03 TCC, and/or associated buffers required by this chapter. The Thurston County Wetlands Inventory on file at the Resource Stewardship Department identifies the approximate location of many wetlands. However, it is the actual presence of a wetland and/or buffer on a parcel that triggers the requirements of this section, regardless of whether or not the wetland has been mapped.

24.30.015 Wetlands – Exempted wetlands.

In some cases there may be an administrative need to place size thresholds on wetlands that are to be regulated. It is not possible to conclude from size alone what functions a particular wetland may

be providing. If there are alternative mitigations options available, such as mitigation banking or in-lieu fee (ILF) programs, then small impacts within the service area of the bank or ILF should be mitigated by using the available alternative mitigation options. Wetlands exempted under this title may also be subject to state and federal regulation.

Until such time as alternative mitigation options are established for Thurston County, the following language applies:

- A. Wetlands less than 1,000 square feet in size are exempt from this section if they meet any of the following criteria:
 - 1. They are not located in a riparian habitat area or critical area buffer as described in this title;
 - 2. They are not a functional part of a mosaic wetland (as described in the Wetland Rating System for Western Washington); or
 - 3. They do not provide essential habitat for priority wildlife species (see TCC 24.25.065).

24.30.020 Wetlands – Determination of boundaries.

If a wetland report is required, the determination of the wetland edge or boundary shall be carried out by a qualified wetland scientist, as described in TCC 24.35.370 in accordance with the 1987 US Army Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, as amended.

24.30.025 Wetlands – Rating wetlands.

The Washington State Department of Ecology’s most recently approved version of the Wetland Rating System for Western Washington shall be used to determine the wetland’s category and its score for habitat, water quality, and hydrologic functions. Wetland categories and function scores shall be determined, as the wetland exists at the time of the rating, with the exception of illegal modifications.

24.30.030 Wetland categories.

- A. Category I. Category I wetlands include wetlands that are rare; particularly sensitive to disturbance; relatively undisturbed (as described in Ecology’s Washington State Wetland Rating System for Western Washington) with ecological attributes that are impossible to replace within a human lifetime; or provide a high level of functions. They include:
 - 1. Estuarine wetlands larger than one acre that are relatively undisturbed, as described in Ecology’s Washington State Wetland Rating System for Western Washington (e.g., no diking, ditching, filling, cultivation, grazing, and less than ten percent vegetative cover by non-native plant species);

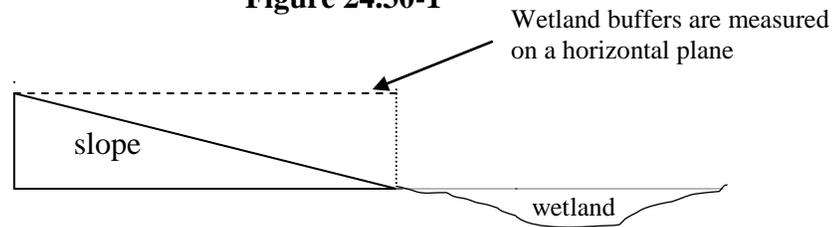
2. Natural Heritage Wetlands designated by the Washington Department of Natural Resources (DNR) Natural Heritage Program due to their high quality and relatively undisturbed condition (as described in Ecology's Washington State Wetland Rating System for Western Washington), or because they support plants listed by the DNR Natural Heritage Program as threatened or endangered;
 3. All bogs;
 4. Mature and old growth forested wetlands larger than one acre;
 5. Wetlands in coastal lagoons; and
 6. Wetlands with a total score for functions of 70 or more points under Ecology's Wetland Rating System for Western Washington.
- B. Category II. Category II wetlands provide high levels of some functions and are difficult, though not impossible, to replace. They include:
1. Estuarine wetlands smaller than one acre and estuarine wetlands larger than one acre that are altered to a greater extent than specified in TCC 24.30.030(A)(1) ;
 2. Wetlands identified by the DNR Natural Heritage Program as containing "sensitive" plant species; and
 3. Wetlands with functions scoring between 51 and 69 points under Ecology's Wetland Rating System for Western Washington.
- C. Category III. Category III wetlands have functions scoring between 30 and 50 points under Ecology's Wetland Rating System for Western Washington. Typically, they have been disturbed and contain less diverse wildlife habitat or are more isolated from other habitat than Category II wetlands.
- D. Category IV. Category IV wetlands have levels of functions scoring 29 or fewer points under Ecology's Wetland Rating System for Western Washington. Typically, they are extensively altered.

24.30.035 Wetland buffers.

To retain the natural functions of wetlands and the adjacent associated riparian functions, buffers shall be established consistent with this section. TCC 24.30.045 identifies the standard wetland buffer widths. These standard buffer widths may be reduced pursuant to TCC 24.30.050, increased pursuant to section 24.30.055 TCC, or reconfigured pursuant to TCC 24.30.060. Buffers shall be maintained in their existing condition, except as provided for in this chapter.

24.30.040 Wetland buffers – General standards.

- A. Measurement. Buffer widths shall be measured on a horizontal plane outward from the outer edge of the wetland, established consistent with TCC 24.30.020, along a perpendicular line.

Figure 24.30-1

- B. Buffers on created wetlands. All wetlands created, as mitigation for wetland impacts, shall have buffers consistent with Table 24.30-1, as modified by TCC 24.30.055, based on the expected wetland category and function scores upon completion of the mitigation. The approval authority in consultation with a qualified wetland scientist shall make this determination.
- C. Buffers on enhancement sites. The approval authority may establish buffers for wetlands that were voluntarily enhanced or restored based on the wetland's pre-enhancement condition. Buffers shall remain in effect as long as the owner of the property at the time the county authorized the enhancement retains ownership. The approval authority may require that the wetland be rated prior to the enhancement or restoration. The Resource Stewardship Department shall record the approved buffer width and any associated rating with the Auditor on the property title.

24.30.045 Wetland buffers – Standard width.

Table 24.30-1 identifies the standard buffer widths. Buffer widths are specified for both water quality and habitat protection. The widest of the applicable buffers under habitat and water quality applies.

Table 24.30-1 Standard Wetland Buffer Widths

The Larger of the Buffers for Habitat and Water Quality Applies												
BUFFER TO PROTECT HABITAT												
	Low Habitat Value	Moderate Habitat Value								High Habitat Value		
	0-18	19-21	22	23	24	25	26	27	28	29	30	31 - 36
Point score for habitat from the wetland rating form under the Wetland Rating System for Western Washington.												
Buffer width for habitat for all wetlands except estuarine wetlands and coastal lagoons	(See section on Water Quality below)	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'
Buffer width with mitigation under 24.30.050 TCC		100'	100'	105'	120'	135'	150'	165'	180'	195'	210'	225'
Buffer width for estuarine wetlands and coastal lagoons	220'											
BUFFER TO MAINTAIN WATER QUALITY												
Natural heritage wetlands, bogs, and wetlands containing sensitive plant species documented by the DNR Natural Heritage Program	250'											
Wetlands less than 10,000 square feet in size that are not a functional part of a mosaic wetland, do not support priority wildlife species, and do not drain to a stream or a Category I or II wetland	50'											
All other wetlands not listed in the preceding two rows	100'											

24.30.050 Wetland buffers – Reduced width.

The approval authority may reduce the buffer width specified in Table 24.30-1, except when prohibited by TCC 24.30.055, as provided for below. The applicant shall submit information demonstrating that the proposed project qualifies for a reduction under this section. The approval authority may require technical review by a qualified wetland scientist in consultation with Ecology, at the applicant's expense, to verify and evaluate the information submitted by the applicant. The buffer reduction shall not adversely affect the functions of the adjacent wetlands. For a reduced buffer width, the applicant shall demonstrate compliance with all of the criteria below:

A. **Reduced Impacts.** If a wetland or buffer mitigation plan is submitted that meets the criteria in Table 24.30-2, the approval authority may reduce the standard buffer width required by Habitat Scores, not including estuarine or coastal lagoons, by twenty-five percent (25%), or to the extent that it equals the buffer width required in Table 24.30-1 to maintain water quality, whichever produces the wider buffer, if:

1. The approval authority determines that the proposed reduction in buffer width, coupled with the proposed mitigation plan, would result in better protection of the wetland or better wetland or 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 wetland 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's qualified wetland scientist.

Factors to be considered include, but are not limited to, meeting the criteria of Table 24.30-2, 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 wetland's position in the landscape; slope; and soils. The approval authority may consult with Ecology or others with expertise as necessary to evaluate the applicant's proposal.

2. The degradation of the wetland and buffer was not caused while the property was in the applicant's ownership or within the previous seven years, whichever is greater. This does not apply to damage from lawful land uses prior to *[the effective date of this ordinance]*; and
3. The applicant submits maintenance and monitoring plan and performance surety consistent with chapter 24.70 TCC.
4. The buffer reduction is consistent with all other applicable requirements of this chapter.

Table 24.30-2 Required Measures to Mitigate Impacts to Wetlands

Measures are required, where applicable to a specific proposal.

Disturbance	Required Measures to Minimize Impacts
Lights	<ul style="list-style-type: none"> • Direct lights away from wetland and buffers.
Noise	<ul style="list-style-type: none"> • Locate activity that generates noise away from wetland. • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source. • For activities that generate relatively continuous, potentially

Disturbance	Required Measures to Minimize Impacts
	<p>disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer.</p>
Toxic runoff	<ul style="list-style-type: none"> • Treat and contain any toxic runoff. • Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered. • Establish covenants limiting use of pesticides within 150 ft of wetland. • Apply integrated pest management standards.
Stormwater runoff	<ul style="list-style-type: none"> • To improve existing water quality runoff that may be impacting wetland functions. Retrofit existing storm water detention and treatment for roads and existing adjacent development. • Prevent channelized flow from lawns that directly enters the buffer. • Use Low Intensity Development techniques (per PSAT publication on LID techniques).
Change in water regime	<ul style="list-style-type: none"> • In order to maintain wetland hydrology and discharge only clean stormwater toward the wetland. Stormwater should be treated; then infiltrated, detained, and/or dispersed outside the wetland buffer for any new runoff from impervious surfaces and new lawns. Permanent improvements to the site hydrology that would improve wetland functions and not create offsite flooding. This may include, but is not limited to, removal of a lawfully established agricultural ditch draining a wetland or delivering sediment, pollutants or excess nutrients to a wetland.
Pets and human disturbance	<ul style="list-style-type: none"> • Use privacy fencing at buffer edge OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion. • Place wetland and its buffer in a separate tract or protect with a conservation easement.
Dust	<ul style="list-style-type: none"> • During construction or for commercial or industrial activities, use best management practices to control dust.

Disturbance	Required Measures to Minimize Impacts
Disruption of corridors or connections/Habitat enhancement	<ul style="list-style-type: none"> • In order to improve habitat quality and connectivity, a vegetation enhancement plan that improves areas with minimal trees and vegetation and proposes removal of invasive vegetation and replacing it with ground cover and shrubs that will provide dense vegetative cover at maturity. Planting noninvasive plants that provide improved filtration of sediment, excess nutrients, and pollutants that may be present. • Maintain habitat connections to offsite areas that are undisturbed. • Restore corridors or connections to offsite habitats by replanting.

B. Isolated buffers.

1. If topographic breaks (e.g., bluffs) or a legally established road (not including logging roads), railroad or other lineal facility or barrier physically separates and functionally isolates a portion of the wetland buffer, the approval authority may allow the buffer width to be reduced to the minimum extent needed to exclude the isolated area if:
 - a. The facility or barrier was established prior to *[the effective date of these regulations]*; and
 - b. The area to be segregated from the buffer does not perform any biological or hydrological functions related to the wetland or the unsegregated portions of buffer.
2. The applicant shall provide the approval authority with sufficient information to enable him/her to determine whether or not the subject area qualifies under TCC 24.30.050(B)(1) above. The approval authority may require technical review by a qualified professional, at the applicant's expense, to verify and evaluate the information submitted by the applicant.

24.30.055 Wetland buffers – Increased width.

The approval authority shall require an increase in the buffer width specified in Table 24.30-1 when a wider buffer is necessary to protect wetland and buffer functions, specified in subsections A and B below. Buffer widths expanded pursuant to this section shall not be decreased through other provisions of this chapter.

- A. Steep slopes. If the wetland buffer contains a slope greater than thirty percent that is at least fifteen feet high, the buffer shall be sized per Table 24.30-1 or the approval authority, in

consultation with a qualified professional, may increase the buffer width up to twenty-five percent to protect water quality and prevent impacts from erosion. Slopes defined as geologic hazard areas shall meet the standards of Chapter 24.15 TCC.

- B. Inadequate vegetative cover to maintain water quality. If the standard buffer specified in Table 24.30-1 has inadequate vegetative cover to protect the wetland from sedimentation, excess nutrients, pollutants or damaging changes in pH, the approval authority, in consultation with a qualified professional, may increase the buffer width twenty-five percent to protect water quality. (For purposes of this section, inadequate buffers lack dense, continuous vegetation spanning a distance specified Table 24.30-1 for maintenance of water quality, or as modified by subsection A above).

In lieu of increasing the buffer width, the approval authority may allow implementation of a buffer planting plan as described in a revegetation/enhancement plan. This buffer planting plan shall provide for planting of all bare and sparsely vegetated areas within the portion of the buffer needed to maintain water quality (per Table 24.30-1 or as modified by Subsection A above.) with grasses and native shrubs, at densities that will effectively filter/absorb sediment, nutrients and pollutants, as determined by the approval authority. The applicant shall submit a surety consistent with chapter 24.70 TCC and provide for monitoring and maintenance to ensure survival or replacement of the planted vegetation.

24.30.060 Wetland buffers – Reconfiguration.

The approval authority may authorize or require reconfiguration of wetland buffers as follows:

- A. Preservation of high quality habitat.
1. If the wetland or buffer contains variations in sensitivity or habitat quality the approval authority, in consultation with WDFW or Ecology, may require reconfiguration of the buffer to preserve the higher quality/sensitive habitat.
 2. If necessary to maintain connectivity to areas that provide important associated wildlife habitat, or if the area abutting the standard buffer contains 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, in consultation with WDFW, require reconfiguration of buffers to provide connection to the adjacent habitat.
 3. Reconfigured buffers authorized by this section shall be no less than the width specified in Table 24.30-1 to maintain water quality, or no less than 75% of the standard buffer, whichever is greater, and shall contain the same square footage as the standard buffer. The reconfigured buffer shall not exceed one hundred percent of the square footage of the standard buffer, as modified pursuant to TCC 24.30.050(B) or 24.30.055, without the landowner's consent.
- B. Development consistent with preservation of wetland and buffer functions. The approval authority may reconfigure the buffer width, except for buffers associated with bogs and Natural Heritage Wetlands, to accommodate proposed development. If necessary, the

approval authority may have a qualified professional review and evaluate the submitted information at the applicant's expense. The applicant shall demonstrate compliance with all of the criteria below.

1. The proposed use cannot be accommodated on the site without reconfiguration of the buffer (see TCC 24.30.050).
 2. The scale, design, or orientation of the proposed land use has been adjusted to the extent practical to minimize buffer alteration.
 3. Demonstration that the wetland and/or buffer contains variations in sensitivity due to existing physical characteristics (e.g., variations in topography, soils, vegetation, or wildlife usage), and that the wetland functions would benefit from a wider buffer in places, and would not be adversely impacted by a narrower buffer in other places.
 4. If the wetland has a wildlife habitat score of 20 or more points under Ecology's Washington State Wetland Rating System for Western Washington, the applicant shall submit a habitat assessment demonstrating that wildlife habitat will not be significantly diminished and that documented habitat-sustaining priority or locally important wildlife species (see TCC 24.25.065) will not be affected.
 5. The reduction in buffer width will occur where it will have the least potential impact on the wetland and buffer functions. Area will be added to portions of the buffer where it would most benefit wetland and buffer functions. The reconfigured buffer shall maintain all wetland functions.
 6. Any landscaped area shall extend no more than fifteen feet from the edge of the structure's footprint (outside wall at the foundation) toward the wetland if the buffer width reduction allows the landscaped area to intrude into the area that was formerly buffer.
 7. The reconfigured buffer shall be no less than one hundred feet wide at any point, or no less than 75% of the standard buffer, whichever is more. The reconfigured buffer shall contain the same square footage as the standard buffer. It shall not exceed one hundred percent of square footage of the standard buffer, as modified pursuant to TCC 24.30.050(B) or 24.30.055, without the landowner's consent.
 8. The reconfiguration is accomplished within the project site boundaries or in an abutting conservation easement or tract approved by the county that protects the buffer from alteration, except as provided for in this section.
- C. Other buffer reconfigurations that do not meet the above criteria require a Reasonable Use Exception (chapter 24.45 TCC).

24.30.065 Wetland buffers – Tree protection.

Trees within wetland buffers with driplines that extend beyond the upland edge (furthest from the wetland) of buffers with a wildlife habitat rating of 20 points or more under the Wetland Rating System for Western Washington shall be protected as follows:

- A. A tree protection area extending a minimum of five feet beyond the dripline of trees twelve inches or greater in diameter (at 4 ½ feet above the ground) and stands of trees shall be established and protected from disturbance during site development.
- B. Tree protection areas shall be identified on all applicable site development and construction drawings submitted to the county.
- C. Temporary fencing at least 30 inches tall shall be erected 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 as a no entry area. If the tree protection area spans more than 0.25 miles, 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 are prohibited in tree protection areas.
- F. The county may authorize use of alternate tree protection techniques that provide an equal or greater level of protection.

24.30.070 Wetland mitigation.

All unavoidable adverse impacts to wetlands and associated buffers shall be mitigated consistent with the provisions of this section. A qualified wetland scientist shall identify the wetland functions using the best professional judgment and the best available technology, consistent with guidance from the Department of Ecology, including but not limited to the following documents: Wetland Rating System for Western Washington; Wetland Mitigation in Washington State, Parts 1 and 2; and Selecting Wetland Mitigation Sites Using a Watershed Approach.

- A. Equivalent or improved wetland functions. Mitigation shall achieve equivalent or improved wetland and buffer functions. The applicant's qualified wetland scientist shall demonstrate that the proposed mitigation will provide functions that are at least equal to the lost or diminished wetland and buffer functions or explain the reasons why that level of mitigation cannot be attained (e.g., it may not be possible to mitigate unavoidable impacts to a bog).
- B. Location of mitigation. Mitigation shall be on-site unless the approval authority, in consultation with Ecology, determines that paragraphs 1-5 below apply. In that case, mitigation may be allowed offsite within the subwatershed of the impacted site. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advanced mitigation.

1. There are no mitigation opportunities available on-site due to physical constraints such as hydrology, soils, the size of the property, the location of existing development, the presence of noxious weeds or invasive plants; potential adverse impacts from surrounding land uses; or other factors; or
 2. On-site mitigation would require elimination of high quality upland habitat; or
 3. Off-site mitigation has a greater likelihood of providing equal or improved wetland and buffer functions than mitigation of the impacted wetland and buffer; or
 4. The hydrology and ecosystem of the impacted site will not be substantially damaged by the proposed wetland and/or buffer impacts; or
 5. County-adopted goals or policies for flood storage, flood conveyance, habitat or other wetland functions justify location of the mitigation measures at another site.
- C. Mitigation in-kind. Mitigation for impacts to estuarine wetlands, coastal lagoons and associated buffers shall be as determined to be appropriate by the approval authority in consultation with the WDFW and Ecology. Mitigation for all other lost or diminished wetland and buffer functions shall be in-kind, unless the applicant demonstrates that:
1. Higher levels of wetland and buffer functions would result from an alternate approach; or
 2. The impacted wetland and buffer provide minimal functions (e.g., they score less than twenty points for habitat and less than five points for water quality under Ecology's Wetland Rating System for Western Washington) and the proposed mitigation action(s) will result in a wetland with greater functions or provide functions shown to be limiting within a watershed; or
 3. Physical constraints make in-kind mitigation impossible; or
 4. Out-of-kind replacement will best meet the county's adopted goals or policies for the watershed; or
 5. The impacted wetland cannot be mitigated in-kind, based on best available science.
- D. Wetland mitigation timing. Where feasible, mitigation projects shall be completed prior to the related wetland alteration or immediately following temporary disturbance of a wetland or buffer. The approval authority may allow the required mitigation to begin up to one year following occupancy of the associated project or commencement of the permitted activity if the applicant's qualified wetland scientist demonstrates to the approval authority's satisfaction that the delay is warranted and will not create environmental degradation or be injurious to the public health, safety, or welfare. Reasons for the requested delay could include, but are not limited to, environmental conditions that could cause project failure, "work windows" specified by the WDFW to avoid fish or wildlife impacts, or seasonal

planting or grading constraints. The applicant shall submit a surety consistent with chapter 24.70 TCC to ensure the completion and success of the required mitigation.

- E. Protection of the mitigation site. The area where the mitigation occurred and any associated buffer shall be located in a critical area tract or a conservation easement consistent with chapter 24.65 TCC.
- F. Mitigation for illegal alterations. See chapter 24.92, Enforcement – violations – penalties.

24.30.075 Wetland mitigation – Types.

Mitigation for lost or diminished wetland and buffer functions shall rely on a type listed below in order of preference. A lower preference form of mitigation shall only be used if the applicant's qualified wetland scientist demonstrates to the approval authority's satisfaction that all higher ranked types of mitigation are not viable, consistent with the criteria in this section.

- A. Restoration. Rectifying the impact by restoring the affected wetland and associated buffer. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland or its buffer. For the purpose of tracking net gains in wetland acres, restoration is divided into:
 - 1. Re-establishment. Re-establishing a wetland and buffer on a site formerly occupied by a wetland. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland or buffer. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.
 - 2. Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.
- B. Establishment (Creation). The manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site where a wetland did not previously exist. Establishment results in a gain in wetland acres. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species.
 - 1. If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the approval authority may authorize creation of a wetland and buffer upon demonstration by the applicant's qualified wetland scientist that:
 - a. The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that creation of a wetland at the site will not likely cause hydrologic problems elsewhere;

- b. The proposed mitigation site does not contain invasive plants or noxious weeds or that such vegetation will be completely eradicated at the site;
 - c. Adjacent land uses and site conditions do not jeopardize the viability of the proposed wetland and buffer (e.g., due to the presence of invasive plants or noxious weeds, stormwater runoff, noise, light, or other impacts); and
 - d. The proposed wetland and buffer will eventually be self-sustaining with little or no long-term maintenance.
- C. **Enhancement.** The manipulation of the physical, chemical, or biological characteristics of a wetland site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in some wetland functions and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. Activities typically consist of planting vegetation, controlling non-native or invasive species, modifying site elevations or the proportion of open water to influence hydroperiods, or some combination of these activities. Habitat enhancement is not eligible as a sole method of mitigation. Applicants proposing to enhance wetlands or associated buffers shall demonstrate how the proposed enhancement will increase the wetland's/buffer's water quality functions, how this increase in function will adequately compensate for the impacts, and how all other existing wetland functions at the mitigation site will be protected.
- D. **Protection/Maintenance (Preservation)**
Removing a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This includes the purchase of land or easements, repairing water control structures or fences. This term also includes activities commonly associated with the term "preservation". Preservation does not result in a gain of wetland acres. Permanent protection of a Category I or II wetland and associated buffers at risk of degradation, will be used if:
1. The approval authority determines that the proposed preservation is the best mitigation option;
 2. The proposed preservation site is under threat of undesirable ecological change due to permitted, planned, or likely actions that will not be adequately mitigated under existing regulations;
 3. The area proposed for preservation is of high quality. The following features may be indicative of high quality sites:
 - a. Category I or II wetland rating using the wetland rating system for western Washington.
 - b. Rare wetland type (for example, bogs, mature forested wetlands, estuarine wetlands);
 - c. The presence of habitat for priority or locally important wildlife species (see chapter 24.25.065 TCC); or

- d. Priority sites in an adopted watershed plan.
- 4. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by a land trust, consistent with chapter 24.65 TCC and TCC 24.30.340-410.
- 5. Ratios for preservation in combination with other forms of mitigation generally range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being impacted and the quality of the wetlands being preserved. Ratios for preservation as the sole means of mitigation generally start at 20:1.

24.30.078 Wetland mitigation-Approaches

Compensatory mitigation for lost or diminished wetland and buffer functions shall rely on an approach listed below in order of preference. A lower preference approach to mitigation shall only be used if the applicant's qualified wetland scientist demonstrates to the approval authority's satisfaction that all higher ranked approaches to mitigation are not viable, consistent with the criteria in this section.

- A. Permittee-responsible mitigation. In this situation, the permittee performs the mitigation after the permit is issued and is ultimately responsible for implementation and success of the mitigation. Permittee-responsible mitigation may occur at the site of the permitted impacts or at an off-site location within the same watershed.
- B. Cooperative mitigation projects. The approval authority may encourage, facilitate and approve cooperative projects wherein a single applicant or other organization with demonstrated capability may undertake a mitigation project with funding from other applicants if:
 - 1. Construction of one or several larger wetlands is preferable to several small wetlands; and
 - 2. Persons proposing cooperative compensation projects submit a joint permit application; demonstrate the organizational and fiscal capability to act cooperatively; and demonstrate that land acquisition, construction, long-term monitoring and management can and will be provided consistent with the provisions of this section.
- C. Wetland mitigation banks for unavoidable impacts to wetlands. An applicant may use credits from a wetland mitigation bank certified under chapter 173-700 WAC if:
 - 1. The approval authority determines that it would provide appropriate compensation for the proposed impacts; and
 - 2. The mitigation will occur within the service area where the wetland or buffer impact would occur; and

3. The proposed use of credits is consistent with the terms and conditions of the certified bank instrument; and
 4. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the certified bank instrument; and
 5. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the certified bank instrument.
- D. **In-Lieu Fee Mitigation.** Is an alternative mitigation program for unavoidable impacts to wetlands. An approved in-lieu-fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor, a governmental or non-profit natural resource management entity. Credits from an approved in-lieu fee program may be used when paragraph 1-6 below apply:
1. The approval authority determines that it would provide environmentally appropriate compensation for the proposed impacts.
 2. The mitigation will occur on a site identified using the site selection and prioritization process in the approved in-lieu-fee program instrument.
 3. The proposed use of credits is consistent with the terms and conditions of the approved in-lieu-fee program instrument.
 4. Land acquisition and initial physical and biological improvements of the mitigation site must be completed within three years of the credit sale.
 5. Projects using in-lieu-fee credits shall have debits associated with the proposed impacts calculated by the applicant's qualified wetland scientist using the method consistent with the credit assessment method specified in the approved instrument for the in-lieu-fee program.
 6. Credits from an approved in-lieu-fee program may be used to compensate for impacts located within the service area specified in the approved in-lieu-fee instrument

24.30.080 Wetland mitigation – Ratios.

- A. **Mitigation ratios.** The ratio of impacted wetland acreage to mitigation acreage shall be determined using the ratios specified in Table 24.30-3. Buffer mitigation shall occur at a 1:1 ratio of buffer impact to mitigation impact. The approval authority, in consultation with Ecology, shall establish the ratio of impacted wetland acreage to mitigation acreage on a case by case basis, based on the factors listed in subsection B below. The ratio of impacted wetland and buffer acreage to mitigation acreage shall not be less than 1:1, provided that buffers for created wetlands are sized consistent with TCC 24.30.035-065.

- B. The approval authority shall consider, at a minimum, the following when establishing the mitigation ratio:
1. The category and quality of the impacted wetland(s) and buffer(s) and, if the mitigation is proposed to occur at existing wetlands offsite, the quality of any wetlands at the mitigation site;
 2. The direct and indirect impacts to the affected wetlands and buffers.
 3. The degree to which the proposed alteration would destroy or reduce wetland and/or buffer functions at the impacted site, including consideration of impacts to hydric soil and disruption of groundwater or surface water flows. Hydric soils are shown in Table 24.30-5 at the end of this chapter.
 4. The probable success of the proposed mitigation in fully replacing all lost and diminished wetland and buffer functions based on:
 - a. The project team's demonstrated success in designing, constructing, and monitoring the proposed type of mitigation in wetlands of the same hydrogeomorphic classification (e.g., slope, riverine, or depressional);
 - b. Documentation indicating that the hydrologic and soil conditions at the mitigation site are supportive of the proposed mitigation and that the site is free of invasive plants and noxious weeds or will be made free of such plants;
 - c. If the mitigation was conducted in advance of the impact, whether it is successful in achieving the performance standards specified in the mitigation plan;
 - d. The long-term functions and values of the proposed mitigation;
 - e. The timing of the proposed mitigation relative to the proposed wetland and buffer impacts and the time frame within which the wetland and buffer functions will be fully replaced;
 - f. The quality and completeness of the applicant's proposed mitigation plan (see TCC 24.35.380), and
 - g. Other relevant factors.
- C. Category III and IV wetlands. The maximum mitigation ratio for impacts to Category III and IV wetlands shall be 1:1 under the following circumstances:
1. The wetland is not located in a riparian habitat area (see TCC 24.25.015-040);

2. The wetland is not a functional part of a mosaic wetland (as described in the Wetland Rating System for Western Washington);
 3. The wetland has a score for habitat of 19 or fewer points under the Wetland Rating System for Western Washington;
 4. The applicant's qualified professional has evaluated the wetland and determined that it does not provide essential habitat for priority wildlife species (see TCC 24.25.065);
 5. A hydrologic analysis performed by a qualified professional demonstrates that the wetland does not provide important hydrological functions that cannot be replaced at another location (such as cleansing contaminated stormwater that would otherwise flow to a water body or preventing flooding of structures). The analysis shall be at the applicant's expense; and
 6. The impacted wetland is under 4,000 square feet in size.
- D. Credit/debit method. To aid in the implementation of off-site mitigation, the County may develop a program which allows mitigation based on the "credit/debit" method developed by the Department of Ecology ("Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report (March 2012), Publication #10-06-011, or as revised).

Table 24.30-3

Category and Type of Wetland	MAXIMUM MITIGATION RATIOS				
	Re-establishment or Creation	Rehabilitation	Re-establishment or Creation (R/C) and Rehabilitation (RH)	Re-establishment or Creation (R/C) and Enhancement of Water Quality or Storage Functions (E)	Enhancement of Water Quality or Storage Functions Only
	The acreage of compensating wetlands and buffers (calculated separately): The acreage of impacted wetlands and buffers (calculated separately) The ratio for buffer mitigation is 1:1.				
All Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1
All Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category II - Estuarine	12:1 or case-by-case basis, whichever is greater	4:1 Rehabilitation of an estuarine wetland only	12:1 or case-by-case basis, whichever is greater	12:1 or case-by-case basis, whichever is greater	Not allowed
All other Category II	3:1	8:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category I – Mature/old growth forested wetlands	Not allowed	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	Not allowed
Category I - Scoring 70 points or more for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I -Natural Heritage Wetland	Not allowed	6:1 Rehabilitation of a Natural Heritage site only	Not allowed	Not allowed	Not allowed
Category I -Coastal Lagoon	Not allowed	6:1 Rehabilitation of a coastal lagoon only	Not allowed	Not allowed	Not allowed
Category I- Bog	Not allowed	6:1 Rehabilitation of a bog only	Not allowed	Not allowed	Not allowed
Category I -Estuarine	12:1 or case-by-case basis, whichever is greater	6:1 Rehabilitation of an estuarine wetland only	12:1 or case-by-case basis, whichever is greater	12:1 or case-by-case basis, whichever is greater	Not allowed

24.30.085 Wetlands – Standards and allowable uses and activities within wetlands and associated buffers.

The land uses and activities listed in Table 24.30-4 are allowable in wetlands and associated buffers as specified in that table, subject to the standards of this title, the applicable zoning district, and the Shoreline Master Program, as amended. Water dependent uses allowed by the Shoreline Master Program are permitted subject to the requirements of that program and this chapter. Uses and activities inconsistent with the Shoreline Master Program and all land uses and activities not allowed or addressed by Table 24.30-4 are prohibited within wetlands and associated buffers. The general standards listed in TCC 24.30.090 apply to all uses in Table 24.30-4. Standards provided in TCC 24.30.100-420 apply to specific uses in wetlands and their buffers, and are in addition to other requirements of this title. Table 24.30-4 contains the primary section references for each activity covered by this chapter.

Table 24.30-4
ALLOWABLE USES IN WETLANDS AND BUFFERS AND RELATED RESTRICTIONS

	Wetland Category			
	I	II	III	IV
Agricultural uses, existing and ongoing	Refer to chapter 17.15 TCC			
Agricultural uses, new <i>TCC 24.30.090 & 24.01.055</i>	X	X	P	P
Asphalt batch plants	X	X	P	P
Boat launching ramps, docks, piers and floats- New, maintenance and replacement <i>TCC 24.30.110</i>	X	P	P	P
Bridge or culvert maintenance or repair <i>TCC 24.30.140</i>	P	P	P	P
Bridge or culvert replacement <i>TCC 24.30.130</i>	P	P	P	P
Bridge or culvert – new construction <i>TCC 24.30.280</i>	X	X	P	P
Clearing, grading, excavation, dredging or removal of soil, organic matter, or material in conjunction with a permitted activity <i>TCC 24.30.150</i>	P	P	P	P
Critical facilities	X	X	X	X
Destruction or alteration of wetland vegetation through shading, intentional burning, or planting of vegetation that would alter the character of the wetland that is not part of an activity approved under this chapter	X	X	X	X

LEGEND

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

Table 24.30-2 (cont.) RESTRICTED USES AND ACTIVITIES	Wetland Category			
	I	II	III	IV
Draining or flooding a wetland or other activities that result in a significant change of water temperature, quality, physical or chemical characteristics (e.g., pH), quantity, timing, or duration of the water entering the wetland or altering the wetland's water level not addressed elsewhere in this table	X	X	X	X
Drilling and testing for a required report or study, scientific sampling, research, or other site investigation using hand powered tools <i>TCC 24.30.160</i>	A	A	A	A
Drilling and testing for required report or study, scientific sampling, research, or other site investigation using mechanized equipment <i>TCC 24.30.160</i>	P	P	P	P
Emergency Temporary Authorization	Refer to chapter 24.90 TCC			
Enhancement/restoration <i>TCC 24.30.170</i>	P	P	P	P
Existing lots vested prior to [<i>the effective date of this ordinance</i>] – Development	Refer to chapter 24.50 TCC			
Fencing	Refer to chapter 24.60 TCC			
Filling, dumping, or discharging not associated with a permitted activity	X	X	X	X
Forestry, except forest practices regulated by chapter 76.09 RCW	X	X	X	X
Gardens for personal consumption <i>TCC 24.30.210</i>	A	A	A	A

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Table 24.30-2 (cont.) RESTRICTED USES AND ACTIVITIES	Wetland Category			
	I	II	III	IV
Golf courses, parks, playgrounds, athletic fields, and expansive landscaped areas maintenance <i>TCC 24.30.190</i>	P	P	P	P
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).	X	X	X	X
Intensive uses that involve use or storage of hazardous materials or would generate excessive nutrients, sediments, or pollutants on property containing wetlands and/or buffers <i>TCC 24.30.200</i>	P	P	A	A
Lawfully established existing uses not addressed in this table	A	A	A	A
Mineral extraction – new and expanded operations <i>TCC 24.30.220</i>	X	X	P	P
Mitigation required by the county <i>TCC 24.30.070 - .080</i>	P	P	P	P
Nonconforming uses/structures – Maintenance, repair, alteration, expansion, replacement	Refer to chapter 24.50 TCC			
On-site sewage disposal system or drain field – maintenance, repair, and replacement <i>TCC 24.30.240</i>	P	P	P	P

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Table 24.30-2 (cont.) RESTRICTED USES AND ACTIVITIES	Wetland Category			
	I	II	III	IV
On-site sewage disposal system or drain field within 300 feet of Category I bogs or Natural Heritage Wetlands – new	P	P	P	P
Open space (e.g., critical area tract)	A	A	A	A
Public facility	X	X	X	X
Public project of significant importance	X	X	X	X
Recreation activities – passive and low impact (e.g., bird watching, nonmotorized boating, bicycling, canoeing, fishing, hiking, hunting, jogging, photography, and similar activities) <i>TCC 24.30.250</i>	A	A	A	A
Recreation facilities, trails, and trail-related facilities – new construction <i>TCC 24.30.250, 260</i>	P	P	P	P
Recreation – swimming and fishing access <i>TCC 24.30.250, 260</i>	P	P	P	P
Recreation facilities – active (e.g., athletic fields, playgrounds, golf courses, parks, day camps, and camping sites) <i>TCC 24.30.260</i>	X	X	X	X
Roads – replacement and minor expansion <i>TCC 24.30.270</i>	P	P	P	P
Roads – expansion <i>TCC 24.30.280</i>	P	P	P	P
Roads – new construction <i>TCC 24.30.280</i>	X	X	P	P

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Table 24.30-2 (cont.) RESTRICTED USES AND ACTIVITIES	Wetland Category			
	I	II	III	IV
Signs	Refer to chapter 24.60 TCC			
Slope stabilization or retaining wall <i>TCC 24.30.290</i>	P	P	P	P
Stormwater conveyance system or detention/treatment facility – maintenance and repair <i>TCC 24.30.315</i>	P	P	P	P
Stormwater retention/treatment facilities, temporary sediment control ponds, and surface water conveyance systems – construction <i>TCC 24.30.300, 310</i>	P	P	P	P
Stream relocation <i>TCC 24.30.090</i>	P	P	P	P
Subdivisions	Refer to chapter 24.55 TCC			
Utility service lines – new installation <i>TCC 24.30.320</i>	P	P	P	P
Utility lines and facilities in existing rights-of-way – new installation <i>TCC 24.30.320</i>	P	P	P	P
Utility transmission lines, utility corridors, and other facilities outside of existing improved roads and utility corridors – new construction <i>TCC 24.30.320</i>	P	P	P	P
Vegetation removal – enhancement projects <i>TCC 24.30.380</i>	X	P	P	P

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Table 24.30-2 (cont.) RESTRICTED USES AND ACTIVITIES	Wetland Category			
	I	II	III	IV
Vegetation removal – noxious weeds <i>TCC 24.30.400</i>	A	A	A	A
Vegetation removal – invasive plants <i>TCC 24.30.390</i>	P	P	P	P
Vegetation removal – hazard trees <i>TCC 24.30.350</i>	P	P	P	P
Vegetation removal – aquatic weeds <i>TCC 24.30.410</i>	P	P	P	P
Water dependent uses not specifically addressed in this table <i>TCC 24.30.420</i>	X	P	P	P
Water elevation gages – installation <i>TCC 24.30.090</i>	A	A	A	A
Wells <i>TCC 24.30.330</i>	X	P	P	P
Wildlife blind or nesting structure <i>TCC 24.30.090</i>	A	A	A	A

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24.30.090 Wetlands – General standards.

The following requirements apply, as applicable, to all uses and activities listed in Table 24.30-4.

- A. Regulatory differences. Differences in regulations because of the overlap of two or more critical areas or the Shoreline Master Program for the Thurston Region, as amended, 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 are prohibited if they are inconsistent with the Shoreline Master Program for the Thurston Region, or as amended.
- B. Avoidance of impacts to wetlands and associated buffers. All allowed uses and activities on sites containing wetlands or associated buffers shall be designed and constructed to avoid or, where that is not possible, minimize all adverse impacts to wetlands and associated buffers. Applicants must demonstrate an inability to avoid impacts as a prerequisite to the county authorizing impacts to wetlands or associated buffers. Impacts shall be minimized by sensitive site design, limiting the degree or magnitude of the use or activity, use of appropriate precautions and technology during construction and implementation of the permitted activity, or by taking other appropriate action.
- C. Direct Impacts to Category III and IV wetlands. Uses and activities may directly impact Category III and IV wetlands between 1,000 and 4,000 square feet in size and their associated buffers with mitigation, pursuant to this chapter under the following circumstances:
 1. Compliance with all of the criteria below shall be demonstrated:
 - a. The wetland is not located in a riparian habitat area (see TCC 24.25.015-040);
 - b. The wetland is not a functional part of a mosaic wetland, as described in Ecology's Wetland Rating System for Western Washington;
 - c. The wetland has a score for habitat of 19 or fewer points under Ecology's Wetland Rating System for Western Washington;
 - d. The applicant's qualified professional has evaluated the wetland and determined that it does not provide habitat for priority wildlife species (see TCC 24.25.065); and
 - e. A hydrologic analysis performed by the applicant's qualified professional demonstrates that the wetland does not provide important hydrological functions that cannot be replaced at another location (e.g., cleansing contaminated stormwater runoff that would otherwise flow to a water body).
 2. If there are alternative mitigations options available, such as mitigation banking or in-lieu fee (ILF) programs, then small impacts within the service area of the bank or ILF should be mitigated through the available mitigation options. If more than one

option is available, then the most environmentally preferable option should be chosen for mitigation.

- D. **Timing.** Uses and activities authorized in wetlands and buffers with a habitat score of 29 or more points under Ecology's Wetland Rating System for Western Washington shall be undertaken, constructed or installed during the time frame specified by the review authority in consultation with the WDFW and/or Ecology to minimize habitat impacts.
- E. **Mitigation.** All adverse impacts to wetlands and associated buffers caused by approved uses and activities shall be mitigated consistent with TCC 24.30.070-080. The County may require a fee to recover the cost of monitoring mitigation projects required pursuant to this chapter.
- F. **Surety.** Applicants for proposals involving, as a condition of permit approval, mitigation of wetland and/or buffer impacts shall submit to the County a surety consistent with chapter 24.70 TCC.
- G. **Access.** Pedestrian access to wetlands and buffers is allowed, unless the approval authority determines that sensitive conditions or wildlife warrant access limitations. The approval authority may require that the perimeter of wetland buffer be fenced if warranted to protect wildlife, habitat or sensitive plant species documented by the DNR Natural Heritage Program, consistent with chapter 24.60 TCC.
- H. **Temporary field marking.** The perimeter of the wetland 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. The temporary markings shall be maintained throughout the duration of the development activity. Also see TCC 24.30.065 and 24.30.150.

24.30.100 Wetlands – Agricultural activities.

Refer to chapter 17.15 TCC for regulations on existing and ongoing agricultural activities.

24.10.105 Biosolids application.

Biosolids application and uses shall be regulated by the Washington 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.

24.30.110 Wetlands – Boat launching ramps, piers, docks and floats.

Boat launching ramps, piers, docks and floats are prohibited in estuarine wetlands and Category I wetlands. They may be permitted in lakes with Category II, III and IV wetlands consistent with the Shoreline Master Program for the Thurston Region, as amended, consistent with TCC 24.25.110, and all of the following:

- A. **New Docks, floats and piers.** Floating docks, floats and piers in lakes may be permitted in Category II, III or IV wetlands and buffers where the lake fringe wetland vegetation is less than 16 feet wide. When possible, the dock/float/pier shall be located where there is a

natural gap in the wetland vegetation that does not require access maintenance. No treated wood or other hazardous material shall be used in the construction of the dock, float or pier or placed in, over, or beside (within 100 feet) of the water.

- B. **Boat launches.** Public boat launches may only be permitted in lake fringe wetlands and buffers if there is no existing public access to the lake, and if there is no alternative location outside of the wetland or buffer to accommodate the boat launch. When possible, the boat launch shall be located where there is a natural gap in wetland vegetation. Parking areas, restrooms and other facilities related to boat launches shall be located outside of the wetland and/or wetland buffer. The facility shall be designed to minimize direct, untreated stormwater runoff from the site into the wetland.
- C. **Maintenance.** Maintenance of legally established piers, docks, floats and boat launches is allowed provided that neither the width nor the length of the dock, pier, float, or boat launch is increased and 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.
- D. **Replacement.** Legally established 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. See the Shoreline Master Program, as amended, for other regulations that apply in shoreline jurisdiction.
- E. For the purposes of this section, floats shall include, but are not limited to: floating docks, mooring buoys, navigational aids and swimming floats.

24.30.130 Wetlands – Bridge and culvert replacement.

Replacement of a bridge or culvert is allowed if necessary to conform to current standards or as part of a development approved consistent with this chapter, if:

- A. The existing bridge or culvert was lawfully established;
- B. There is not another alternative available that has less adverse impact on the wetland and buffer and any associated stream/riparian habitat area (see TCC 24.25.130);
- C. The bridge or culvert is designed to avoid or, where that is not possible, minimize impacts to the wetland and any associated stream/riparian habitat area, and it is in compliance, to the greatest extent possible, with TCC 24.30.280 below. (In the case of culverts in a Type F or S stream see TCC 24.25.130);
- D. In the case of culverts in wetlands associated with 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.

24.30.140 Wetlands – 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;
 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. Maintenance of a bridge or culvert within the Shoreline Master Program must be consistent with the SMP and may require a shoreline permit or review;
 6. It meets the conditions of any required Hydraulic Project Approval from WDFW, which shall be posted in a conspicuous location on site.
- B. Clearing of culverts does not require a permit. Clearing of culverts shall be limited to removal of sediment and debris from the culvert and its inlet, invert, and outlet.

24.30.150 Wetlands – Clearing and grading.

Clearing and grading within wetlands and buffers is only allowed to the minimum extent necessary to accommodate a use permitted pursuant to this chapter, as determined by the approval authority. Also see chapter 14.37 TCC regarding grading requirements and chapter 15.05 TCC regarding stormwater and erosion control.

- A. Erosion control. Erosion control shall be done consistent with chapter 15.05 TCC. In no case shall sediment from clearing and grading or other development activities be allowed to reach wetlands or portions of the buffer not approved for development.

- B. Fencing the clearing limits. The clearing limits within the wetland or buffer shall be marked with temporary fencing. Signage shall be placed on the fence indicating that the area beyond is a no entry area. If the perimeter of the area to be cleared spans more than 0.25 miles, the clearing limits may be staked and flagged rather than fenced. The fencing and stakes are subject to inspection by the approval authority prior to the commencement of permitted activities. The temporary fencing or stakes shall be maintained throughout construction and shall not be removed until permanent signs, if required pursuant to chapter 24.60 TCC, are in place.
- C. Timing. Clearing and grading in wetlands and buffers shall only occur between May 1 and October 1. The county may temporarily suspend grading during this period if excessive rainfall might cause erosion and sedimentation that could affect a wetland or dependent fish or wildlife. The county may allow clearing and grading outside of this period if all drainage will flow away from the wetland. The approval authority may waive this requirement if the wetland will be eliminated consistent with the provisions of this chapter. If the wetland and buffer has a habitat score above 20 points or, absent a rating, the approval authority determines that the site supports breeding, nesting, or rearing of wetland dependent species, the clearing and grading shall be scheduled in compliance with TCC 24.30.090(D).
- D. 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.

24.30.160 Wetlands – Drilling.

- A. Drilling with human powered, non-mechanical, hand-held equipment. Gauge installation, non-mechanical site exploration and, 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 around the well shall be restored upon completion of the activity.
- B. Mechanized drilling and boring. Mechanical auguring under the direction of a Professional Engineer licensed in the State of Washington, well drilling allowed pursuant to TCC 24.30.330 , and boring consistent with TCC 24.30.320 are allowed provided that the approval authority determines, in consultation with a qualified biologist and engineer, the drilling or boring is appropriate, subject to the following:
 - 1. The applicant shall identify and minimize potential impacts to all wetland functions. This shall include demonstration that the drilling or boring will not dewater the wetland;
 - 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 wetland and associated buffer;

3. The associated spoils shall be contained, the disturbed area around the well shall be restored upon completion of the activity; and
4. Related equipment and materials shall be stored outside of the wetland and buffers except as necessary for daily operations.

24.30.170 Wetlands – Enhancement/restoration.

The approval authority may, in consultation with Ecology and WDFW and others with expertise as warranted, approve enhancement or restoration of wetlands and buffers. (See TCC 24.30.035-065).

24.30.180 Wetlands – Existing lawfully established uses.

Existing, lawfully established uses not specifically addressed in this chapter may continue to the extent that they are consistent with other provisions of this title. However, existing uses in wetlands and/or buffers shall employ best management practices to minimize adverse impacts on the wetlands and buffers.

24.30.190 Wetlands – Golf courses, parks, playgrounds, athletic fields, and expansive landscaped areas – Maintenance.

Maintenance of approved golf courses, parks, playgrounds, athletic fields, and expansive landscaped areas within the buffers of Category I wetlands, Category II bogs, Category II wetlands containing sensitive plants identified by the DNR Natural Heritage Program, and areas within 100 feet of associated Type S or F streams or within 100 feet of other wetlands or streams shall conform to the following:

- A. Application of fertilizers and other chemicals. Fertilizer, herbicide and pesticide management practices for golf courses, parks, playgrounds, athletic fields and other landscaped areas of one acre or larger in size that encroach into the wetland buffer shall comply with the following:
 1. Integrated Pest Management practices shall be used for pest control.
 2. The applicant shall submit a maintenance plan for review and approval by the approval authority identifying the timing and amount of fertilizer, herbicide, or other chemicals proposed to be used on the site. The application rate for such substances shall not exceed the application guidelines on the product packaging. The approval authority may require a reduced application rate if necessary to prevent harmful effects on wetlands or dependent fish or wildlife. Applicable WSU Extension Office BMPs or other BMPs accepted by the approval authority shall be used for maintaining grassed areas and other landscaping. See Critical Aquifer Recharge Areas, TCC 24.10.140 regarding the storage of hazardous materials.
 3. If necessary to maintain water quality in bogs, Natural Heritage Wetlands, or wetlands containing sensitive plants identified by the DNR Natural Heritage Program, the approval authority may require use of stormwater treatment methods that provide a high level of stormwater cleansing, consistent with the Drainage Design and Erosion Control Manual for Thurston County, as amended (chapter 15.05 TCC). The approval authority may require an evaluation of the water quality at the

outflow of stormwater facilities draining to wetlands identified in this section and require remedial action as necessary to sustain the wetland/sensitive plant species.

4. The approval authority may require additional protective measures as necessary to maintain water quality.
- B. No expansion of disturbed area. Maintenance shall not involve expansion of the lawn, landscaping, ditch, or other disturbed area into the wetland or buffer.

24.30.200 Wetlands – Intensive uses.

New and existing intensive uses on sites containing Category I or II wetlands or associated buffers shall comply with the applicable requirements in this section. 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 following initial construction that could reach the wetland and buffer or significantly alter the quantity, frequency or the timing of water reaching the wetland.

- A. Identify risks. Applicants for new intensive uses on sites that contain a Category I or II wetland or associated buffer that have potential to degrade the wetland or buffer, as determined by the approval authority, shall submit information that identifies and evaluates the potential risks the proposed use poses for the wetland and buffer. This shall include, as applicable, whether noise, glare, sediment, effluents, altered pH, the amount, timing, or duration of groundwater flows or altered surface hydrology would be harmful to aquatic life, birds, or other wildlife or sensitive plants listed under the DNR Natural Heritage Program.
- B. Protective measures. The approval authority shall require measures to avoid potential adverse impacts on wetlands and buffers. (Also see chapter 20.54 TCC, Special Uses).
 1. The approval authority may require the use of best management practices for new and existing intensive uses to mitigate existing and potential impacts in order to protect water quality, wetland functions, and sensitive plants listed by the DNR Natural Heritage Program. In addition, the approval authority may require applicants for new intensive uses to employ integrated pest management; install and maintain vegetative filter strips (up to fifty feet in width) at the outer edge of the wetland buffer; install fencing; direct lights away from the wetland(s); locate noisy activities away from the wetland; require buildings on the site to be located or oriented where they would have the least impact on the wetland and associated buffer (this may include orientation of a building so that the building itself acts as a shield to buffer the wetland); or employ other mitigation measures that would be effective in preventing pollutants and sediment from reaching the wetland, preventing damage to the wetland and buffer and avoiding adverse impacts on dependent wildlife.
 2. Harmful pollution. 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 wetland plants, aquatic life or wildlife, 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 Category I and II wetlands, consistent with best available science and protection of public health and safety.

- C. Expert review. The approval authority may call upon experts, at the applicant's expense, as necessary to evaluate information submitted by the applicant.
- D. Monitoring. The approval authority may require that uses on property containing Category I wetlands be reviewed at five-year intervals to ensure that it is operating consistent with this Section and any conditions of approval. The approval authority may require remedial action as warranted to protect water quality, wetlands, and associated buffers consistent with the provisions of this section.

24.30.210 Wetlands – Landscaping and gardening – Maintenance.

Maintenance of legally existing landscaping and gardening for personal consumption is permitted within existing gardens and new gardens located within the portion of a buffer approved for residential development pursuant to this chapter (see also chapter 24.50 TCC) subject to the standards listed in this section.

- A. Clearing or tree removal to accommodate gardens or lawns shall not be permitted in the wetland, wetland buffer, or outside of the portion of the site authorized for development pursuant to this chapter;
- B. Integrated Pest Management practices shall be used for pest control;
- C. Best management practices shall be used for fertilization and weed control;
- D. The approval authority may require other protective measures as necessary to maintain water quality and protect wildlife; and
- E. For landscaping in areas larger than one acre, see TCC 24.30.190.

24.30.220 Wetlands – Mineral extraction.

Mineral extraction may only be permitted within designated areas pursuant to the designation requirements for mineral lands (chapter 20.30B TCC), the mineral extraction code (chapter 17.20 TCC), and with a special use permit (chapter 20.54 TCC). Within designated mineral lands, mineral extraction and asphalt batch plants are prohibited within Category I and II wetlands and their buffers. Mineral extraction and asphalt batch plants may be permitted in Category III and IV wetlands eligible for mitigation replacement under the provisions of TCC 24.30.090.

24.30.230 Wetlands – On-site sewage disposal systems – New.

New on-site sewage disposal systems are subject to all of the following:

- A. New on-site sewage disposal systems. Onsite sewage disposal systems shall be located outside wetlands and their buffers. This may require systems that provide a higher level of sewage treatment. The sewage disposal system shall be located as far from the wetland as possible and have the least adverse impact on water quality and to the wetland and buffer.

Also see Article IV, The Rules and Regulations of The Thurston County Board of Health Governing Disposal of Sewage.

- B. Separation from bogs and Natural Heritage Wetlands. New on-site sewage disposal systems shall not be allowed within 300 feet of Category I bogs, Natural Heritage Wetlands, or wetlands draining to a stream listed by the Washington Department of Ecology under Section 303(d) of the Clean Water Act as impaired for nutrients unless the applicant demonstrates that due to soil conditions, surficial geology, the direction of ground water flow or other relevant factors, the sewage disposal system will not adversely impact the wetland or sensitive plants identified by the Washington Department of Natural Resources Natural Heritage Program. The approval authority shall review the information submitted by the applicant and consult with the Washington Department of Ecology and others with expertise, as needed, prior to allowing the proposed sewage disposal system within 300 feet of such wetlands. Any approved sewage disposal systems shall be located as far from the wetland as possible.
- C. For lots created prior to *[the effective date of this ordinance]* that cannot meet the above criteria, refer to chapter 24.50 TCC.

24.30.240 Wetlands – On-site sewage disposal systems – Maintenance, repair and replacement.

- A. Maintenance of approved functioning septic systems is allowed as recommended by the Thurston County Health Department.
- B. Failing sewage disposal systems. Failing on-site sewage disposal systems in wetland buffers shall be remedied through the method that results in the least impact to the wetland and buffer, including relocation to an alternate site. This may require methods and/or systems that provide a higher level of sewage treatment. Replacement of failing, or substandard, sewage disposal systems shall not be allowed within the wetland or wetland buffer unless there is no alternative site available outside of such areas to accommodate the facilities. Clearing of existing vegetation to remedy a failing sewage disposal system shall be minimized. The approval authority may require the applicant to demonstrate that due to physical constraints (e.g., topography, soil conditions, or the site's configuration), another configuration would not allow the development to occur without intrusion or with less intrusion in the wetland and/or buffer than the proposal.
- C. If the failing sewage disposal system must be replaced with a new on-site sewage disposal system within a buffer, it shall be located on a portion of the site that has been previously disturbed by development and as far from the wetland as possible. 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 wetland and buffer, as determined by the approval authority.
- D. Replacement of sewage septic systems for new development shall be considered a new septic system under TCC 24.30.230.

24.30.245 Wetlands – 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).

24.30.250 Wetlands – 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 trail in the wetland buffer, provided that the trail is three (3) feet or less in width, not paved and constructed with minimal pervious material such as wood chips.
- B. Passive recreation activities.

24.30.260 Wetlands – Recreation facilities, trails, and trail-related facilities – Administrative approval.

- A. Passive recreation. The approval authority may allow trails and trail-related, passive recreation facilities, such as, but not limited to, identification and interpretive signs, nature/wildlife viewing platforms, and fishing access within wetland buffers if it is determined that there is no alternative outside the buffer. Trail alignment, construction, and maintenance shall adhere to all of the following requirements:
 - 1. Location.
 - a. Trails and related facilities shall, to the extent feasible, be placed on existing levees, road grades, abandoned railroad lines, utility corridors, or other previously disturbed areas.
 - b. When trails cannot be located outside of the wetland buffers or on existing disturbed corridors within the buffers, they shall be located as far from the wetland as possible, except for access points for wildlife viewing, fishing, and recreational use authorized pursuant to this chapter.
 - c. Trails and related facilities (e.g., viewing platforms and benches) allowed in wetland buffers shall be located, aligned and constructed to minimize disturbance to wetland functions, avoid the most sensitive and productive wildlife habitat (e.g., documented breeding, nesting, and rearing areas), and minimize removal of trees, shrubs, snags, and other significant wildlife habitat.
 - d. Parking areas and other facilities associated with these trails, not specifically provided for in this section and Table 24.30-4, shall be located outside of the wetland and/or wetland buffer.

2. Stair tower, stairway, and mechanical lift. See chapter 24.25 TCC, Fish and Wildlife Conservation Areas; and chapter 24.15 TCC, Geologic Hazards and the Shoreline Master Program, as amended.
 3. Protect water quality. Trails and related facilities shall incorporate measures (e.g., check dams or devices to induce sheet flow of stormwater runoff) as needed to assure that runoff from such trails/facilities does not create channels in the buffer or directly discharge to wetlands or streams.
 4. Trail width. The width of trails extending through a wetland buffer shall be minimized consistent with any applicable state or federal standards. Access paths extending through the wetland buffer to the water's edge shall be no more than three feet in width unless they are designated for public access and 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 the wetland or buffer beyond the trail corridor.
 5. Impervious surfaces. Trails shall not be paved unless they are specifically designed to be accessible by handicapped persons. Trails shall be designed for nonmotorized use, with the exception of motorized wheelchairs. The approval authority may allow regional trails on former road or railroad beds to be paved when they extend through wetland buffers. Where impervious surfaces are used, they shall be minimized consistent with applicable standards (e.g., ADA and Washington Department of Transportation standards.)

Raised boardwalks shall be used in wet areas provided that they are not treated with hazardous materials that would be harmful to wetland water quality, dependent wildlife, or sensitive wetland plants documented by the DNR Natural Heritage Program. Viewing platforms shall not be made of continuous impervious materials or treated with toxic materials that could leach into the wetland or associated buffer. The "footprint" of viewing platforms shall be as small as possible in order to minimize impacts (e.g., through the use of pin piles).

Fill shall not be allowed in wetlands.
 6. Salvage plants. Native vegetation disturbed by trail construction shall be made available for salvage.
 7. Parking areas and other facilities associated with trails, not specifically provided for in this section or Table 24.30-4, shall be located outside of the wetland and/or wetland buffer.
- B. Active recreation. If there is no alternative location, public swimming and fishing access may be located within wetland buffers to the minimum extent necessary to accommodate the use, as determined by the approval authority. Non water-dependent active recreational uses

such as playgrounds, athletic fields, campgrounds, picnic areas and related restrooms and parking areas shall be located outside of wetlands and wetland buffers.

- C. Golf courses. Wetlands and associated buffers within proposed new golf courses shall be protected and remain in natural condition, except as provided for by TCC 24.30.090(C). They shall not be designated as play areas of the golf course, but may be included in the course design provided all other applicable provisions of this chapter are met.

24.30.270 Wetlands – Road replacement and minor expansion.

Existing roads and driveways constructed prior to *[the effective date of this ordinance]* 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, consistent with state and federal regulations, provided that all of the following criteria are met:

- A. Capacity. The capacity of the road is not increased;
- B. Minimize impact. No wetlands are filled or degraded, except as provided for in this chapter. When possible, given physical and technical constraints, road widening shall occur on the side of the road furthest from the wetland. In the event other critical areas are present, the approval authority, in consultation with others with expertise, shall determine where the proposed road expansion would have the least impact on the critical areas; and
- C. Expansion limits. Such road expansion does 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 section extend more than ten feet beyond the existing roadbed. Only one minor expansion shall be allowed per road segment pursuant to this section.

24.30.280 Wetlands – Roads/streets, railroads, bridges and culverts – New and expanded.

Proposed road and railroad crossings of wetlands and/or associated buffers shall be avoided unless the approval authority determines that it is not possible. Proposed road or railroad crossings of wetlands and buffers and expansion of existing roads exceeding the limitations of TCC 24.30.270 shall follow all applicable local, state, and federal laws and the applicable requirements listed below. These requirements also apply to private access roads and driveways. (Also see TCC 24.25.280).

- A. Public safety. Expansion of existing roads is allowed in all wetlands and buffers to the minimum extent necessary to protect public safety, consistent with subsection D below. This provision does not apply to expansion for capacity. Expansion for additional capacity shall comply with the criteria for new or expanded roads.
- B. Criteria for allowing crossings. The approval authority may authorize new and expanded road crossings in wetlands and buffers as follows:
 - 1. Category I and II wetlands and buffers. Category I and II wetlands shall not be crossed unless it is necessary to accommodate public safety improvements to an

existing road. Category I and II wetlands and the inner seventy-five (75) percent of their standard buffers may only be crossed by roads through a Reasonable Use Exception and by meeting all of the criteria in this section.

2. Category III - IV wetlands and buffers. The most suitable type of new crossing shall be determined by the approval authority on a case-by-case basis. New and expanded roads are permitted in Category III and IV wetlands and their buffers that meet the criteria for replacement under TCC 24.30.090(C). New and expanded roads may be permitted in Category III-IV wetlands and buffers not meeting the criteria in TCC 24.30.090(C), if:
 - a. The wetland is not a functional part of a mosaic wetland (as described in Ecology's Wetland Rating System for Western Washington);
 - b. The road complies with subsection D below.
- C. Access roads and driveways shall be subject to the following requirements, as well as subsection D below.
1. Utility maintenance access. The director may allow maintenance roads for utility corridors accommodating transmission lines, pipelines, and similar major utilities when the applicant demonstrates to the director's satisfaction that the road is necessary. Maintenance roads shall not be allowed where they would adversely impact bogs, Natural Heritage Wetlands, or wetlands with a score for habitat of 29 or more points under Ecology's Wetland Rating System for Western Washington.

If allowed, maintenance roads shall be located in the least impactful location in the outer twenty-five percent of the buffer contiguous to the utility corridor, on the side away from the wetland. To the maximum extent practicable, access for utility maintenance within wetland buffers shall be limited to access points rather than by a continuous access road extending through the buffer. The width of the maintenance road shall be minimized; in no event shall it be wider than fifteen feet.
 2. Agricultural access. Refer to chapter 17.15 TCC for regulations on existing and ongoing agricultural activities.
- D. Road crossings, including private access roads, shall comply with all of the following requirements:
1. Wetlands not meeting TCC 24.30.090(C): New and expanded roads shall not be allowed in wetlands and/or buffers unless the applicant demonstrates to the approval authority that:
 - a. It is essential (e.g., to provide access to property where no other access is physically possible or available with less impact on the wetland), or in the case of a road expansion, is needed for public safety;

- b. There is no alternative crossing location that would have less impact on wetland and buffer functions, dependent fish and wildlife, and sensitive wetland plant species documented by the DNR Natural Heritage Program. The applicant shall demonstrate that alternative access with less impact on the wetland and buffer is not physically possible, or that an easement allowing use of the alternative alignment cannot be obtained at reasonable terms as determined by the approval authority; and
 - c. It meets the requirements for existing lots in chapter 24.50 TCC.
 2. Proposed crossings that would negatively impact Category I or II wetlands or associated buffers, or wetlands in riparian habitat areas shall not be allowed unless the applicant demonstrates to the approval authority's satisfaction that the absence of the requested crossing would landlock the property and leave it with no economically viable use. The approval authority may require that crossings be accomplished with a bridge rather than a culvert if it would significantly reduce wetland impacts.
 3. If allowed pursuant to this section, new crossings and associated facilities shall:
 - a. Serve multiple properties and be designed to accommodate conduit for utility lines whenever possible. To the extent legally permissible, as part of the development approval process, the developer shall work with the county to provide for a street layout and wetland and buffer crossing location that will minimize the need for additional crossings in the future to serve surrounding property. The approval authority may waive this requirement if the additional road width required to serve multiple properties would be more detrimental to the wetland, associated buffer, or other critical area than individual access roads/driveways; and
 - b. Have the narrowest width possible, consistent with applicable county road standards and protection of public safety. Clearing to accommodate the crossing shall be minimized, consistent with the protection of the most important habitat, as determined by the approval authority.
 4. Crossings using culverts shall use superspan or oversize culverts sufficient to allow wildlife passage, consistent with chapter 24.25 TCC.
 5. The design of crossings in wetlands associated with streams 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. Culverts 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. Approved crossings 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.

6. Bridges are preferred for spanning Category I and II wetlands.
- E. Logging roads. Crossings of wetlands and/or buffers within areas proposed for development that were allowed by a State Forest Practices Permit but do not meet the requirements of this chapter, and any unlawfully established roads, shall be removed. The roadbed shall be restored to a condition consistent with the surrounding undisturbed areas.

24.30.290 Wetlands – Slope stabilization.

Slope stabilization is allowed in wetland buffers, consistent with the provisions of this title, only where erosion or landsliding threatens a primary structure, including but not limited to houses, barns and places of business, utility facilities, including wells, or a roadway. Bioengineering shall be used where possible consistent with TCC 24.25.300.

24.30.300 Wetlands – Stormwater facilities – New and expanded generally.

Stormwater facilities (e.g., detention, retention, treatment, and conveyance facilities) associated with new roads and other development shall be designed and located outside of wetlands and wetland buffers, except as otherwise provided in TCC 24.30.310. Stormwater facilities shall not be allowed in the buffers of Category I and II wetlands, including bogs or Natural Heritage Wetlands, with the exception of stormwater conveyance pipes extending through the outer twenty-five (25) percent of the standard buffer when there is no alternative. No discharges of stormwater shall be allowed to flow to bogs or Natural Heritage Wetlands.

24.30.310 Wetlands – Stormwater facilities – New and expanded stormwater facility.

New and expanded stormwater facilities (e.g., detention, retention, treatment, and conveyance facilities) may only be allowed in the outer twenty-five percent (25%) of Category III and IV wetland buffers, or in wetlands meeting the criteria of TCC 24.30.090(C) if all of the following are met:

- A. The facilities are consistent with the Drainage Design and Erosion Control Manual for Thurston County, as amended (chapter 15.05 TCC).
- B. The facilities are designed and sized to only to accommodate stormwater from:
 1. Development allowed in the buffer pursuant to this chapter; and/or
 2. Existing or new impervious surfaces within or adjacent to the buffer when there is no available alternative outside of the buffer for accommodating stormwater due to topographic or other physical constraints.
- C. Design and location.
 1. The facilities shall be designed and located to minimize impacts on the wetland or buffer; and.
 2. The approval authority may require that the proposed development be redesigned or reduced in scale to avoid or minimize impacts to the wetland or buffer; and

3. No other location is feasible; and
 4. The location of such facilities will not degrade the functions of the wetland and buffer; and
 5. Stormwater facilities shall be limited to the twenty-five percent of the standard buffer furthest from the wetland, unless another location is necessary to accommodate stormwater from a road or bridge.
 6. Stormwater facilities shall not be allowed in portions of the buffer that have been reduced in width pursuant to TCC 24.30.050.
 7. Portions of buffers expanded pursuant to TCC 24.30.055 shall not be used to accommodate stormwater facilities.
- D. Treatment. All stormwater from stormwater facilities, with the exception of conveyance facilities extending through the buffer, shall be treated prior to release to a wetland buffer, consistent with the Clean Water Act, the Drainage Design and Erosion Control Manual for Thurston County, as amended (chapter 15.05 TCC), and other applicable state and federal standards pertaining to water quality and treatment of stormwater. Direct stormwater outfalls to wetlands are prohibited.
- E. Avoid channelization. Stormwater flows released to wetland buffers, with the exception of conveyance facilities extending through the buffer, shall be dispersed as sheet flow at the outer edge of the buffer 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 be installed outside of the buffer to maintain sheet flow within the buffer.
- F. Open and vegetated. Stormwater detention, retention, and treatment ponds in wetland buffers shall be open and, to the extent possible, vegetated with native plants. 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). Vegetation shall be maintained and, if necessary, planted adjacent to all open swales, channels, and ponds in order to retard erosion, filter sediments and 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.
- G. Protection of wetland hydrology. Wetland hydrology shall be protected through the development process, as determined by the director and pursuant to the Drainage Design and Erosion Control Manual for Thurston County, as amended (chapter 15.05 TCC). Post-development wetland hydrology shall match pre-development wetland hydrology unless the approval authority determines that changes in hydrology will not harm wetland functions.

The approval authority may require a hydrologic study if it is determined that the project has potential to significantly impact a wetland. The approval authority may call upon experts as needed, at the applicant's expense, to evaluate the study.

- H. Roadside stormwater conveyance facilities. Roadside stormwater conveyance facilities (e.g., swales, ditches, and pipes) may be extended through wetland buffers within rights-of-way. When possible and practical, they shall be along the side of the road furthest from the wetland. If the conveyance facility must be located along the side of the road closest to the wetland, it shall be located as close to the road/sidewalk as possible, consistent with public safety. In no case shall facilities that infiltrate stormwater be less than 100 feet from a Category I-III wetland or 50 feet from a Category IV wetland.

Stormwater conveyance facilities shall be designed and constructed consistent with the BMPs listed in the Regional Road Maintenance ESA Program Guidelines, 2002, and, if applicable, the Drainage Design and Erosion Control Manual for Thurston County, as amended (chapter 15.05 TCC).

- I. Use of wetlands for stormwater storage. Use of Category II-IV wetlands for storage of stormwater (not including stormwater facilities) is only allowed for public projects designed to halt or improve deteriorated wetland conditions, consistent with TCC 24.30.300, other applicable provisions of this chapter, and the following:
1. The project shall be for the purpose of solving an existing problem, not to accommodate stormwater generated from new impervious surfaces; and
 2. The alteration in the timing, amount, duration and quality of stormwater reaching the wetland shall not be harmful to wetland functions, dependent aquatic life, wildlife, and native plants.
 3. Category I wetlands shall not be used for stormwater storage.
- J. Temporary stormwater management facilities. If there is no alternative to avoid impacts to wetlands and buffers, surface water discharges may be allowed from new temporary sediment control ponds, retention/detention facilities, or other temporary surface water management structures located beyond the buffer and, if necessary, within the outer twenty-five (25) percent of Category III and IV wetland buffers.

24.30.312 Wetlands – Stormwater facilities – Engineered stormwater dispersion.

The dispersion area of storm water dispersion systems, as defined by the Thurston County DDECM, shall not be considered a stormwater facility as described in TCC 24.30.300-310, and regulated as such, unless a physical structure is incorporated within the design that impacts the standard wetland buffers. Storm water dispersion facilities whose dispersion area includes any portion of a wetland buffer 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 wetland buffer.

- B. Sheet flow and concentrated flow dispersion, done in accordance with the Thurston County DDECM, of storm water meeting runoff treatment requirements of the Thurston County DDECM is allowed at the outside edge of the wetland buffer.
- C. The required dispersion area, calculated under the DDECM, for sheet flow and concentrated flow dispersion from pervious and impervious surfaces, done in accordance with the Thurston County DDECM, may only include that portion of a wetland buffer outside of the minimum area considered necessary for water quality as shown in Table 24.30-1.
- D. Native vegetation in the wetland and buffer 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 wetland. If water quality impacts are anticipated or observed, additional stormwater treatment methods shall be implemented.

24.30.315 Wetlands – Stormwater facilities – Maintenance or repair.

- A. Best management practices. Maintenance and repair of existing stormwater retention, detention, treatment and conveyance systems is permitted in wetlands and associated buffers. County owned stormwater facilities within wetlands or buffers accommodating runoff from county roads shall be maintained consistent with the BMPs listed in the Regional Road Maintenance Program Guidelines, January 2002, as amended. Other stormwater facilities within wetland buffers 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, as amended (chapter 15.05 TCC). The approved maintenance plan shall be consistent with the wetland and buffer protection provisions of this chapter.
- B. No expansion. Maintenance of stormwater facilities shall not result in their expansion within the wetland or buffer or result in additional or channelized discharges of water to a wetland or buffer.

24.30.320 Wetlands – Utility lines and facilities – New.

- A. New utility lines and facilities in rights-of-way. Installation of utility lines and facilities is permitted in existing rights-of-way within wetlands and associated buffers, consistent with applicable regulations (see title 13, TCC) and the provisions of this chapter. When possible, utility installation shall occur on the side of the utility corridor or road furthest from the wetland. In the event that other critical areas are present, the approval authority, in consultation with others with expertise, shall determine where the proposed facilities would have the least impact on the critical areas and associated buffers. Mitigation of any impacts may be required consistent with the provisions of this title.

B. Individual service lines.

1. Overhead lines and cables serving an individual use are permitted in wetland buffers if:
 - a. They meet state and federal requirements;
 - b. The applicant demonstrates that an alternative location with less impact on the wetland and buffer is not available (e.g. new service line cannot be combined with a legally existing driveway, approved road crossing, or another utility's existing crossing);
 - c. The alignment has the least impact on the wetland and buffer; including minimizing vegetation removal and avoiding wildlife habitat impacts; and
 - d. Paths or roads are not needed in the wetland or buffer to install or maintain the facilities.
2. Poles supporting overhead lines shall be located outside of the wetland. They shall be located outside of the buffer to the greatest extent possible. If a pole is necessary within the buffer, it shall be located as far from the wetland as possible where it is least damaging to the wetland and dependent wildlife, as determined by the approval authority. Disturbance of the buffer shall be minimized and no herbicides, pesticides or other hazardous materials shall be applied to the buffer or wetland in the course of installing the line(s) and pole(s). Poles in wetland buffers shall not be treated with toxic substances that could harm the wetland, buffer, dependent wildlife, or sensitive plants documented by the DNR Natural Heritage Program.
3. Buried service lines serving an individual use are permitted in the outer twenty-five (25) percent of standard wetland buffers consistent with this chapter upon demonstration that they will not have more than a temporary adverse impact on the wetland or buffer. The site shall be restored upon completion of the installation. Buried service lines within the inner seventy-five (75) percent of standard wetland buffers and in wetlands require a Reasonable Use Exception.

C. New transmission lines/utility corridors.

1. Where possible, new transmission, distribution lines and cables crossing wetlands or buffers, shall be contained within an existing roadbed, railroad bed, bridge, elevated walkway, conduit, or other disturbed area where they would have the least adverse impact on wetland and buffer functions. If the utility lines will be consolidated with, or parallel to, an existing utility crossing, they shall be located at the minimum separation distances established by the county for such uses, so long as the minimum distances so established also meet the applicable industry, state and national gas and electric safety standards.

2. The approval authority shall not authorize a new utility corridor within a wetland and buffer unless the applicant demonstrates that there is no alternative available outside of the wetland and buffer. New transmission lines and utility corridors within Category I and II wetlands and the inner seventy-five (75) percent of their standard buffers require a Reasonable Use Exception. When proposing to cross wetlands and/or buffers, the applicant shall demonstrate to the approval authority's satisfaction that the crossing is essential and there is no alternative alignment or crossing method with less impact to the wetland, associated buffer and other critical areas. This shall include identification of the alternative alignments, crossing methods (including boring), their feasibility, and potential impacts.
3. When it is necessary to cross the wetlands or buffers outside of the locations identified above, the corridor shall be in compliance with the following standards:
 - a. The corridor shall be aligned where it would have the least impact on the wetland functions and associated buffers using the least damaging alternative method.
 - b. The utility corridor within the wetland and buffer shall have the minimum width practicable, as determined by the approval authority, while still adhering to safe operating clearances and industry standards. Clearing shall be limited to the minimum necessary to locate the utility.
 - c. The utility corridor within the wetland and buffer 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 in the future.
 - d. If the approval authority determines that overhead lines or lines buried in trenches would be detrimental to the wetland, buffer or dependent fish or wildlife, the proposed crossings shall, when physically feasible, be accomplished by boring beneath the wetland and buffer. Entrance and exit portals shall be located outside of the wetland and buffer, if possible. Bore pits shall be restored upon project completion.
 - i. If trenching or boring is proposed to be used to accommodate utility lines, the applicant shall evaluate its effect on the flow of groundwater sustaining the wetland. As determined by the review authority, the applicant may be required to submit a hydrological study prepared by a geologist licensed in the State of Washington or a professional engineer licensed in the State of Washington with experience in hydrogeologic analysis to determine whether ground water flows would likely be altered to the detriment of the wetland. The approval authority may call upon technical experts as needed, at the applicant's expense, to evaluate the report.

- ii. Trenching and boring beneath a wetland and buffer shall not be required/allowed if it would interrupt the ground water connection to the wetland to the extent that the wetland or dependent wildlife would be damaged.
- e. Utility corridors shall be revegetated with appropriate native vegetation, at not less than preconstruction densities. Restoration shall occur immediately upon completion of construction or as soon thereafter as possible due to seasonal constraints or work windows established pursuant to this chapter. (See 24.30.090(D) and 24.30.150 TCC). The applicant shall submit a performance surety consistent with chapter 24.70 TCC to ensure that the planted vegetation survives or is replaced.
- f. Staging areas for equipment and materials shall be located outside of the wetland and buffer.
- g. Applicants shall submit a maintenance plan for approval by the county consistent with the provisions of this chapter.

24.30.330 Wetlands – Wells – New.

- A. New individual and community wells serving approved uses shall only be allowed within the outer 25% of buffers of Category II-IV wetlands if there is not sufficient buildable area on the property outside the buffer to accommodate the well, as determined by the approval authority. Well houses are not permitted in wetlands and buffers. Also see Article III of the Rules and Regulations of the Thurston County Board of Health Governing Water Supplies, as amended, and chapter 24.50 TCC.
- B. Access to wells approved within buffers 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 ten feet) to provide access for maintenance vehicles. Mitigation for impacts to wetland buffers may be required, including increased buffers in adjacent areas or enhanced vegetation.
- C. Maintenance of the trail/access road shall not involve the use of herbicides or other hazardous materials.

24.30.340 Wetlands – Vegetation removal – General.

Removal of vegetation within wetlands and buffers shall be prohibited except as provided for in this chapter. Also see TCC 24.30.150.

24.30.350 Wetlands – Vegetation removal – Tree removal.

- A. Hazard trees. The county may authorize limbing, thinning or removal of hazard trees located in the wetland or buffer provided that compliance with all of the criteria below can be met:
1. The county may require the applicant to submit a report from a certified arborist or professional forester that documents the hazard. If such a report is required, the arborist shall recommend suitable replacement trees for any trees that are removed pursuant to this subsection.
 2. Tree cutting is limited to limbing or crown thinning in compliance with Tree Care Industry Association (formerly the 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 eliminate the hazard, disease-free trees shall be pushed over into the wetland buffer. Snags shall be left in place to provide habitat unless a communicable disease or invasive pest that threatens adjacent habitat is present.
 3. All vegetation severed from the tree shall be left within the buffer unless removal is warranted due to the presence of invasive pests or potential for disease transmittal to healthy vegetation.
 4. Hazard tree removal in wetlands shall be mitigated as required by this chapter. At minimum, mitigation shall include replacement with native tree species at a ratio of 3:1 for each tree removed. The replacement trees shall have a minimum 15 gallon pot size, a height of four (4) feet, and be three (3) years old. Additional mitigation may be required based on site conditions, habitat type and wetland functions as determined by the Resource Stewardship Director. The applicant may be required to submit reports for maintenance and monitoring of planted vegetation at the discretion of the director.
- B. Forest practices. Harvesting of trees under an approved Class II or Class III forest practices permit is not subject to this chapter.

24.30.360 Wetlands – Vegetation Removal – Harvesting.

The approval authority, in consultation with the Washington Departments of Natural Resources (Natural Heritage Program), Fish and Wildlife, and Ecology or United States Fish and Wildlife Service staff, may allow harvesting of plants and plant materials provided compliance with all of the criteria below can be met:

- A. The harvest shall not comprise more than twenty percent of any single plant;
- B. The species harvested must comprise forty percent or more of the vegetation in the wetland or buffer area.

- C. Harvested material shall not consist of any threatened or endangered species pursuant to chapter 24.25 TCC.
- D. No root material shall be harvested, except as provided for TCC 24.30.370.

24.30.370 Wetlands – Vegetation removal – Salvaging.

Salvage of whole plants is allowed in wetlands and buffers approved for impacts from development.

24.30.380 Wetlands – Vegetation removal – Other allowed vegetation removal.

Removal of vegetation is allowed as part of an approved habitat restoration or enhancement project in the wetland or associated buffer. Other vegetation may be removed from wetlands and associated buffers provided compliance with all of the criteria below can be met:

- A. Removal of vegetation shall be the minimum extent necessary for surveying or testing purposes.
- B. The approval authority may allow trimming of vegetation to provide a view corridor in the outer (furthest from the wetland) twenty-five (25) percent of the standard buffer of Category III and IV wetlands with a wildlife habitat rating of 19 points or less under the Wetland Rating System for Western Washington, provided that trimming is limited to view corridors with maximum widths of 20 feet. Trimming shall be limited to limbing or crown thinning in compliance with Tree Care Industry Association (formerly the National Arborist Association) pruning standards. No more than 30% of the live crown of a tree may be removed in any three year period. Trimming shall not include felling, topping, or removal of trees or jeopardize the tree's survival. Snags shall be left in place except as provided for in TCC 24.30.350(A).

24.30.390 Wetlands – Vegetation removal – Invasive species.

When removing invasive species, removal of native vegetation within wetlands and buffers shall be prohibited, and shall be in compliance with all of the criteria below. Also see TCC 24.30.150.

- A. Plant removal shall be performed such that it will not cause significant damage to untargeted vegetation, impair water quality or any wetland or buffer function.
- B. Activity that would expose more than 100 square feet of soil within 100 feet of the wetland shall require submission of a plan for county approval that identifies the proposed plant removal and site restoration consistent with the provisions of this section. The method of vegetation removal must be approved in writing by the Thurston County Resource Stewardship Department, consistent with this section and all applicable county, state, and federal regulations prior to initiation of any such vegetation removal.
- 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 the chapter 15.05 TCC. If the area of exposed soil exceeds 100 square feet and lies within 100 feet of a wetland, it shall be planted with appropriate native plants 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 wetland and buffer functions.

24.30.400 Wetlands – Vegetation removal – Noxious weeds.

- A. Removal of noxious weeds, as defined by Chapter 16-750 WAC, under the direction of the Thurston County Noxious Weed Control Agency, is permitted in wetlands and associated buffers consistent with a county approved integrated pest management plan, applicable county and state regulations, and TCC 24.30.390(A), (C) and (D). Prior to requiring removal of noxious weeds within a Category I wetland or associated buffer, the noxious weed control staff shall consult with the Planning and Environmental Division of the Resource Stewardship Department to evaluate alternative methods of weed removal and the associated risks to the wetland and buffer.
- B. When removing noxious weeds, removal of native vegetation within wetlands and buffers shall be prohibited. Also see TCC 24.30.150.

24.30.410 Wetlands – Vegetation removal – Aquatic weed removal.

Aquatic weed removal consistent with an integrated pest management plan is only allowed subject to applicable local and state regulations (e.g., HPA and NPDES permits).

24.30.420 Wetlands – Water dependent uses.

When there is no practicable alternative outside of the wetland and associated buffer, the approval authority may allow alteration of wetlands and buffers subject to and defined by the Shoreline Master Program for the Thurston Region, as amended, to the minimum extent necessary to accommodate water dependent structures and uses. Such uses shall be designed and installed to minimize impacts on wetlands and buffers consistent with the provisions of this chapter.

**Table 24.30-5
Hydric Soils of Thurston County**

MAP SYMBOL	SOIL UNIT NAME
14	Bellingham silty clay loam
29	Dupont muck
36	Everson clay loam
41	Godfrey silty clay loam
45	Hydraquents, Tidal
65	McKenna gravelly silt loam, 0 to 5% slopes
69	Mukilteo muck
70	Mukilteo muck, drained
75	Norma fine sandy loam
76	Norma silt loam
88	Puget silt loam
95	Riverwash
100	Scamman silty clay loam, 0 to 5% slopes
101	Scamman silty clay loam, 5 to 20% slopes
104	Semiahmoo muck
105	Shalcar muck
106	Shalcar variant muck
116	Tacoma silt loam
120	Tisch silt loam

Source: Soil Survey of Thurston County, Washington