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Gap Analysis

Lewis County Critical Areas Ordinance Update

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Prepared for:

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1. Introduction

With passage of the Growth Management Act (GMA), local jurisdictions throughout Washington State, including Lewis County (County), were required to develop policies and regulations to designate and protect critical areas. Critical areas are defined in the GMA and the Revised Code of Washington (RCW) 36.70A.030(5) to include wetlands, fish and wildlife habitat conservation areas, frequently flooded areas, critical aquifer recharge areas, and geologically hazardous areas. The GMA requires local jurisdictions to periodically review and evaluate their adopted critical areas policies and regulations.

An ongoing requirement of the GMA is for local jurisdictions to periodically review and evaluate their adopted critical areas policies and regulations. In accordance with the GMA, the county periodically updates the Comprehensive Plan. The County will complete this update to critical areas policies and regulations by June 2025. This includes the requirement to include the best available science (BAS). A BAS document and Department of Commerce (Commerce) Critical Areas Checklist are being drafted concurrently with this report. Any deviations from science-based recommendations will be identified, assessed, and explained per Washington Administrative Code [WAC] 365-195-915. In addition, jurisdictions are to give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

The County's critical areas policies are codified in Lewis County Code (LCC) Title 17-Land Use and Development Regulations (Specifically 17.38-Critical Areas), and these will be discussed in the following gap analysis. Critical areas are also addressed in the Shoreline Management Plan (SMP) in Title 17.25 however the SMP is not covered in this Gap Analysis.

This gap analysis provides a review of the current critical areas regulations, noting gaps where existing regulations may not be consistent with BAS or the GMA. It also makes recommendations for improvements to general aspects of the CAO such as clarity, consistency, ease of use etc. The primary intention of this gap analysis is to help guide the update of the County's critical areas policies and regulations. Resources including, but not limited to, the Washington State Department of Commerce (Commerce) Critical Areas Handbook v 3.0[1], Department of Ecology (Ecology) Wetland Guidance for Critical Areas Ordinance (CAO)[2], Washington State Department of Fish and Wildlife (WDFW) Priority Habitats and Species Publications[3] and Department of Natural Resources (DNR) Geologic Hazards and the Environment[4] were reviewed to assess any discrepancies between state policies, BAS and the Lewis County CAO.

[11] CriticalAreasHandbook_allcombined.pdf | Powered by Box
[2] Wetland Guidance for Critical Areas Ordinance Updates (wa.gov)
[3] Priority Habitats and Species: Publications | Washington Department of Fish & Wildlife
[4] Geologic Hazards and the Environment | WA - DNR

1.1 Document Organization

Recommendations for updating the County's existing critical areas regulations are provided in Sections 2 through 9. Section 2 addresses the general provisions that are applicable to all critical areas; Sections 3 through 9 address the different types of critical areas covered by the GMA. To highlight findings of the gap analysis, a code review summary table is provided at the beginning of each section. Where a potential gap is identified, subsections provide further discussion.

2. Administration

This section addresses code sections that are applicable to all types of critical areas. This includes covers Article I (LCC 17.38.010-110) and Article II (LCC 17.38.130). A summary of recommended updates is provided in Table 1.

Table 1. Administration review summary

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.010	Statement of authority and title	No changes required.	
NEW	Purpose.	Recommend adding a purpose section.	Clarity.
17.38.020	Applicability	1-Change "in within" to "within." 2-Note other agency permit requirements still apply.	1-Clarity. 2-BAS.
17.38.030	Relationship to other regulations	Change to "shall address the requirements for each of the critical areas."	Clarity.
17.38.040	Mapping of known critical areas	No changes required.	
17.38.050	Administration	No changes required.	
17.38.060	Activities that do not require a Lewis County permit	1-Consider link to Article II in text	1-Clarity.
17.38.070	Critical area assessment report	Consider adding reporting requirements for other impacted critical areas such as CARA and geohazard areas (listed below in mitigation requirements but not here).	Clarity and increased protection of human health and safety.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.080	General mitigation requirements	Recommend noting critical areas and their buffers are subject to mitigation sequencing.	Clarity.
17.38.090	Mitigation monitoring	Recommend updating monitoring period and reporting requirements.	Clarity.
17.38.100	Mitigation assurance	No changes required.	
17.38.110	Qualified professional required	No changes required.	
17.38.130	Activities allowed without a permit in critical areas and buffers	1-Rephrase applicability provision 1. 2- Review and update stormwater management facility exemption. 3- Consider moving this to 17.38.060.	1-Clarity. 2-BAS. 3-BAS.

2.1 Statement of authority and title (LCC 17.38.010)

Regulations protecting critical areas are required by RCW 36.70A.060 and RCW 36.70A.172. It could also noted that WAC 365-195-900 through 925 provide guidelines.

2.2 Purpose. (LCC 17.38.015 – *NEW*)

We recommend adding a purpose section to the Critical Areas Ordinance (CAO). The purpose statement would establish how the CAO meets existing laws and policies regarding critical areas and provides consistent review of projects. If this new section is added with proposed numbering, remaining Article 1 numbering can remain as-is.

2.3 Applicability (LCC 17.38.020)

LCC code 17.38.020(2) states *"Administrative provisions of this chapter do not apply to lands in within the* LCC code 17.38.020(2) states *jurisdiction of the Shoreline Management Act (SMA). Projects within the jurisdiction of the SMA shall be processed under the Lewis County shoreline master program, SMP Chapter 7, Shoreline Administration."* We recommend removing "in" from sentence.

Recommend adding a provision noting other federal, state, local agency permitting may be required.

2.4 Relationship to other regulations (LCC 17.38.030)

LCC code 17.38.030(1) states *"Areas characterized by multiple critical areas shall address the requirements for each of the areas."* It is assumed to mean the requirement of each of the critical areas but is somewhat unclear. We recommend changing to *"shall address the requirements for each of the critical areas."*

2.5 Activities that do not require a Lewis County permit (LCC 17.38.060)

This section refers to another section of the code, however a hyperlink is not included. The organization is somewhat confusing with the second separate article listing activities. Consider moving Article II to this section under Administration.

2.6 Critical area assessment report (LCC 17.38.070)

This section states that critical area assessment reports are required for wetlands and fish and wildlife habitat areas but does not mention other critical areas. We recommend adding reporting requirements for other impacted critical areas such as critical aquifer recharge areas, frequently flooded areas, and geologically hazardous areas. Any protect that impacts a critical area or its buffer should be reviewed through a critical area assessment report.

General mitigation requirements (LCC 17.38.080)To ensure mitigation sequencing is applied to all critical areas and their buffers, recommend adding that detail to provision (2).

2.7 Mitigation Monitoring (LCC 17.38.090)

LCC 17.38.090(1)(a): Regionally a five-year monitoring period is commonly applied to mitigation plans. This is sufficient in most cases, assuming site maintenance is conducted. The ten-year monitoring period is less common and is typically applied to mitigation projects with longer-term performance standards, such as tree height. Recommend updating the language in this provision to provide more clarity on when longer-term monitoring is applied.

LCC 17.38.090(1)(c): Consider deleting provision (1)(c) or rewording to ensure the waiver is only applied to small scale restoration.

LCC 17.38.090(2): Recommend adding report requirements for shorter monitoring periods. Currently only the 10 year report schedule is stated.

2.8 Activities allowed without a permit in critical areas and buffers (LCC 17.38.130)

Recommend rewording provision LLC 17.38.130(1) for clarity. As it reads now, provision (1) does not clearly state how criteria a through c are applied.

Revise language under the stormwater management facility exemption (LCC 17.38.130(3)) to further limit exempt activities.

3. See the suggestion in subsection 2.3 above to move Article II (LLC 17.38.130) to LLC 17.38.060.Wetlands

This section addresses code sections that are applicable to wetland critical areas as located in LCC 17.38.200 through LCC 14.38.320. A summary of recommended updates is provided in Table 2.

Table 2. Wetland provisions review summary.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.200	Purpose	Consider adding no net loss terminology.	Consistency with GMA and BAS.
17.38.205	Other provisions apply	No changes required.	
17.38.210	Administration	No changes required.	
17.38.220	Identification	1-Update WAC and RCW references. 2-Consider adding USACE delineation manual and regional supplements. 3-Add study validity details.	1-GMA. 2-BAS. 3-Clarity & BAS.
17.38.230	Classification	Update wetland rating system to current version/publication.	BAS.
17.38.240	Mitigation sequencing	Consider a brief summary of mitigation sequencing here while retaining the cross-reference to LCC 17.38.080.	Efficiency and clarity.
17.38.250	Exemption from the requirements to avoid impacts	1-Note other agency permits may apply. 2-Update wetland rating reference.	1-BAS. 2-BAS.
17.38.260	Use intensity and determination of buffer width	Review along with current buffer recommendations from Ecology.	1-Applicability/ consistency with other code updates.
17.38.270	Required wetland buffers	1-Review and update buffer widths. 2-Clarify buffers for wetlands that are off-site.	1-Consistency with BAS. 2-Consistency with BAS.
17.38.280	Buffer width reduction	1-Delete provision (1). 2-Review & update buffer width reduction section relative to updates under 270 above.	1-BAS. 2- BAS.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.290	Buffer width averaging	No changes required.	
17.38.300	Mitigation	Consider updating to include preservation.	BAS.
17.38.310	References	No changes required.	
17.38.320	Wetland assessment	Update provision (1)(d) to ensure adequate wetland assessments when wetland area is off-property.	BAS.
17.38.330	Wetland mitigation plan	No changes required.	

3.1 Purpose (LCC 17.38.200)

It is recommended that the policy be updated from maintaining ecological functions to no net loss of ecological function for consistency with GMA language and Ecology guidance.

3.2 Administration (LCC 17.38.210)

Wetland reports are required only when they are within a certain proximity to mapped resources. No comprehensive map of wetlands exists in Lewis County; therefore, a wetland assessment should be provided on any property having suspected wetlands. We suggest that if hydrophytic vegetation, hydric soils, or wetland hydrology are known or suspected on a property, then a wetland review be conducted.

3.3 Identification (LCC 17.38.220)

We recommend editing text to reference RCW 36.70A.030(48)and WAC 173-22-035 instead of RCW 36.70A.175 and LCC 17.38.230. wetlands are determined by the 1987 Wetland Delineation Manual by the U.S. Corps of Engineers (USACE) and the 2010 Regional Supplement to USACE Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). We recommend specifying this delineation method in the code. Note: The state manual is no longer in use.

Note during of study validity in the code. Wetlands are dynamic and delineation studies are commonly accepted for a 5 year period.

3.4 Classification (LCC 17.38.230)

A new version of the wetland rating system was released since the code was last revised. WAC 365-190-090(3) recommends using a wetlands rating system that evaluates the existing wetland functions and values to determine what functions must be protected. The current version of the wetland rating system is the Washington State Wetland Rating System for Western Washington: 2014 Update, Version 2.0 (Hruby & Yahnke 2023). The Current Ecology publication number is 23-06-009. We recommend updating this publication reference and having this code adopt all additional revised versions of the

rating system. Version 2.0 similar to the prior 2014 publication. Changes were focused on clarifications, formatting improvements, updated website links, and annotations. Revisions are not considered significant, which is why it is labeled as version 2.0 of the 2014 update.

3.5 Mitigation sequencing (LCC 17.38.240)

Consider adding a brief description of mitigation sequencing here and cross-referencing LCC 17.38.080(2). This improves readability and helps emphasize the importance of avoidance and minimization and aligns with best available science.

3.6 Exemption from the requirement to avoid impacts (LCC 17.38.250)

Since this exemption may involve wetland fill, we recommend updating language to note state and federal approval is also required as applicable.

Update reference to the current version of the wetland rating system and/or cross-reference LCC 17.38.230.

3.7 Use intensity and determination of buffer width (LCC 17.38.260)

This section may be retained or deleted after reviewing wetland buffer regulatory approaches and updating sections LCC 17.38.270 and 280. Not all buffering approaches require a land use intensity definition. See Appendix B for further information.

3.8 Required wetland buffers (LCC 17.38.270)

Ecology updated buffer width recommendations in 2018 to account for revised habitat score ranges. That Ecology publication #05-06-008, revised July 2018, *Appendix 8-C: Guidance on Buffers and Ratios for Western Washington*, summarizes three buffer width alternatives that vary based on wetland category, land use, application of impact minimization measures, and/or habitat functions score (see Appendix A). That 2018 Ecology guidance is similar to the county's existing buffer approach.

The most recent Ecology buffer guidance is the *2022 Wetland Guidance for Critical Areas Ordinance (CAO) Updates*. *Appendix C – Buffer Approaches for Western Washington* of the 2022 document outlines three buffer options as a model for local jurisdictions. The three options vary based on wetland category, application of impact minimization measures, presence/absence of a habitat corridor, and/or land use intensity. We recommend the county reviews the 2022 Ecology buffer guidance (see Appendix B).

Both the 2018 and 2022 Ecology guidance documents are considered to be consistent with BAS and differ primarily in the framework around certain buffer alternatives and options.

We recommend that Lewis County review new potential buffer frameworks to consider which is best suited for the county.

Offsite wetlands

Wetlands may occur on parcels adjacent to a proposed project or be otherwise identified and/or impacted off-site from a proposed project. We recommend that to the greatest degree feasible, off-site wetland that may be impacted by a proposed project be inventoried, categorized and subject to the same buffer requirements as on-site wetlands. Survey guidelines often state to include 100 feet in any direction from project site as the "study area" including adjacent parcels and to estimate visually if access is not granted for delineation and classification. The County's wetland regulations already specify wetland assessment reports are required when a potential wetland is mapped within 300 feet of a subject property (LCC 17.38.210, Table 17.38-1).

3.9 Buffer width reduction (LCC 17.38.280)

Lewis County's table of minimization measures required for buffer reductions has been slightly modified from Ecology (2018). Specifically, activities and uses that cause disturbances are revised slightly, examples are modified, and a new impact category for buffers lacking adequate vegetation is included. Recommend relocating this table to the standard buffer section after reviewing buffer approaches (Appendix B).

The standard category/buffer widths underlying assumption is that they are vegetated in a natural state. Therefore, buffer reduction with enhancement is not recommended by Ecology.

Buffer reductions – existing developments [LCC 17.38.280(2) and (3)]

Consider updating language to reflect the functionally disconnected buffer area guidance from Ecology. This is an opportunity to provide additional clarity on buffer reductions to account for existing legally established land uses.

The rules for common line buffers could allow for extremely large buffer reductions depending on the orientation of surrounding land uses. Since reduction of this type do not align with Ecology's guidance or BAS, we recommend that Lewis County consider whether it would be appropriate to continue its use.

If common line buffers are continued, we recommend that the code acknowledge that there are circumstances in which this cannot be applied in circumstances where the maintenance of existing function is infeasible. It is also recommended that the code include no net loss verbiage in the reduction criteria.

3.10 Mitigation (LCC 17.38.300)

Consider adding preservation to the mitigation ratio table. This would allow preservation if it is demonstrated to be the best mitigation option, the site is under threat of ecologic change, the area is of high quality or important to ecologic sustainability of the watershed or sub-basin, and permanent legal preservation is provided. See Ecology recommendations in Appendix C of this report.

Consider listing mitigation options consistent with Ecology (2022) in order of preference to add clarity for applicants.

Consider adding an innovative mitigation option based on best available science. This may be applicable on a case-by-case basis. For example, wetland/stream restoration at a site where full buffer widths cannot be established due to surrounding existing land uses, but restoration is still beneficial.

3.11 Wetland assessment (LCC 17.38.320)

Update LCC 17.38.320(1)(d) to require applicants to attempt to obtain neighboring site access to assess potential on-site buffer encumbrances. If off-site access is not granted, a qualified professional is required to document estimated off-site wetland areas and associated buffers.

4. Fish and Wildlife Conservation Areas

This section addresses code sections that are applicable to Fish and Wildlife Habitat Conservations Areas. This includes LCC 17.38.400-17.38.510. A summary of recommended updates is provided in Table 3.

Table 3. Fish and Wildlife Habitat provisions review summary.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.400	Purpose	No changes required.	
17.38.410	Administration	1-Clarify permit options for impacts under (1)(a)(ii). 2-Expand WDFW consultation requirement to cover unmapped occurrences.	1-BAS. 2-BAS.
17.38.420	Designation	1-Consider adding riparian management zones. 2-consider adding habitat corridors.	1-BAS/consistency. 2-BAS.
17.38.425	Mitigation sequencing	No changes required.	
17.38.430	Buffer width reduction or averaging	1-Remove term 'reduction' from title. 2-Reduce limit of 75% for all waters.	1-BAS. 2-BAS.
17.38.440	Reduction of impacts	Clarify vegetation clearing in buffers and add tree retention criteria.	BAS.
17.38.450	Designation of locally important habitat	No changes required.	

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.465	Identification of aquatic habitat	1-Consider moving to earlier section. 2-Add that areas "do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company".	1-Clarity. 2-Consistency with Commerce guidelines.
17.38.470	Classification	1-Review WDFW BAS and recommendation and consider updating stream classifications. 2-Consider moving to earlier section.	1-BAS. 2-Clarity.
17.38.480	Classification of wildlife habitat	Consider moving to earlier section.	Clarity.
17.38.490	Inconsistencies between conditions on ground and mapping	No changes required.	
17.38.500	Aquatic habitat area assessment	No changes required.	
17.38.510	Fish and wildlife habitat mitigation plan	No changes required.	

4.1 Administration (LCC 17.38.410)

Since no comprehensive maps exist for species of concern, we recommend that consultation with WDFW occur in any circumstances where a species is known or suspected to occupy a site.

In LCC 17.38.410(1)(a)(ii), it is implied but not expressly stated that projects may be allowed to exceed development standards with the submittal of a mitigation plan. This should be clarified to reduce ambiguity, and we recommend that any impacts beyond the permitted development standards be channeled through a variance or RUE with the oversight of a hearing examiner.

4.2 Designation (LCC 17.38.420)

Aquatic priority habitats

In 2020, the Washington Department of Fish and Wildlife released new guidance (Rentz et al. 2020) for the protection of riparian areas. The guidance emphasizes a shift in terminology from the concept of "*stream buffers*" to "*riparian management zones*" (RMZs). A RMZ is defined as "*…a scientifically based description of the area adjacent to rivers and streams that has the potential to provide full function based on the SPTH [site potential tree height] conceptual framework*." Further, a RMZ is recommended to be regulated as a fish and wildlife habitat conservation area itself to protect its fundamental value, rather

than as a buffer for rivers and streams (Quinn et al. 2020). Stream buffers are established in local critical areas ordinances based on best available science and are intended to protect streams but may or may not provide full riparian function or a close approximation of it. To achieve full riparian function, the guidance recommends that RMZs be considered a delineable, regulatory critical area and that the guidance be applied to all streams and rivers, regardless of size and type.

Washington Department of Fish and Wildlife's current recommendations for establishing RMZ widths are based primarily on a site potential tree height framework. The site potential tree height is defined as "*…the average maximum height of the tallest dominant trees (200 years or more) for a given site class.*" Exceptions may occur where site potential tree height is less than 100 feet, in which case the agency recommends assigning a RMZ width of 100 feet at a minimum to provide adequate biofiltration and infiltration of runoff for water quality protection from most pollutants, but also in consideration of other habitat-related factors including shade and wood recruitment. A 100-foot-wide buffer is estimated to achieve 95% pollution removal and approximately 85% surface nitrogen (Rentz et al. 2020). Washington Department of Fish and Wildlife recommends measuring RMZ widths from the outer edge of the channel migration zone, where present, or from the ordinary high water mark where a channel migration zone is not present.

Riparian management zones or buffers that vary by location may present practical challenges for implementation and have considerations in equity. To analyze the potential range of SPTH in Lewis County, we conducted a review of the data available from the WDFW Site Potential Tree Height Mapping Tool, as described below. All overlapping polygons were removed so only polygons with the greatest SPTH in each area are included. The WDFW dataset is not inclusive of all lands in Lewis County but is believed to be representative. When multiple SPTH for various species were provided, only the largest SPTH was used in this calculation. The average SPTH in Lewis County is 211 ft: with a minimum of 100 ft, a first quartile of 194 ft, a median of 215 ft, a third quartile of 237 ft, and a maximum of 256 (Figure 1).

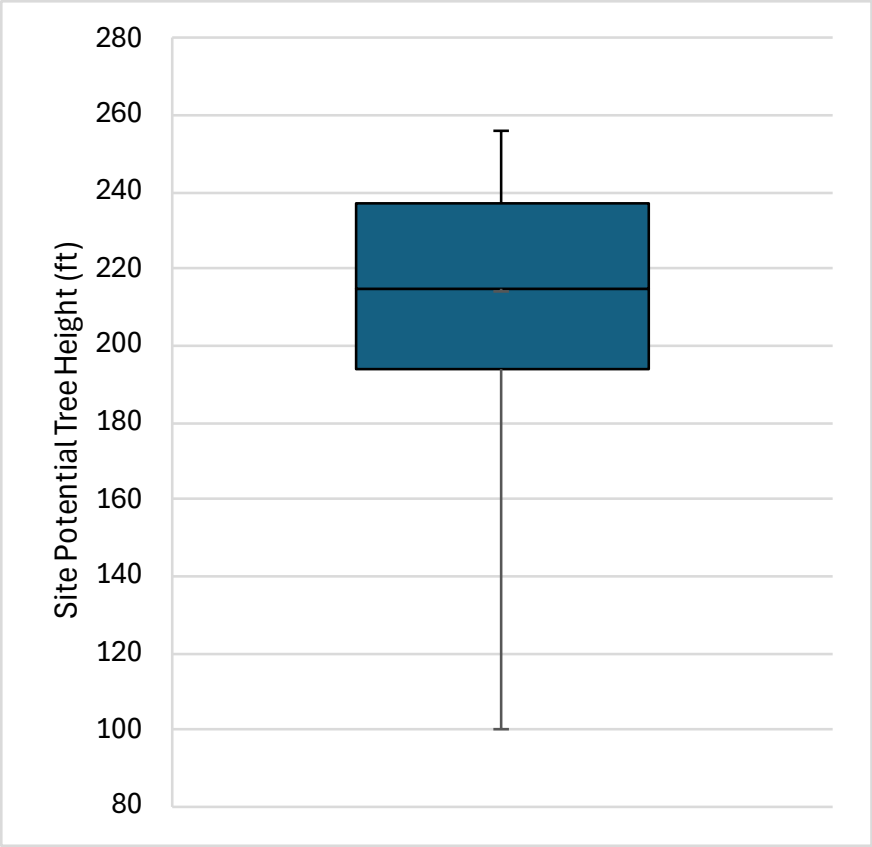

Figure 1. Box plot of SPTH distribution in Lewis County using data from the WDFW Site Potential Tree Height Mapping Tool. Upper and lower fences are Q3 and Q1 respectively with median in center, and whiskers are minimum and maximum; raw data downloaded on 6/18/24.

As a part of the CAO update, we recommend that Lewis County consider whether or not to follow WDFW recommended RMZ approach to stream classifications and buffer widths, including whether to incorporate the $SPTH_{200}$ Mapping Tool as part of stream buffer protection standards. This includes consideration of extending the buffer from the edge or channel migration zone or OHWM, whichever is greater, to align with the RMZ buffer recommendations in Rentz et al. (2020).

Regarding Table 17.38-6, we recommend that Lewis County further define water types by adopting WAC 222-16-030 by reference. The "DNR water types" have been subject to change over time, and this would avoid potential ambiguity. Additionally, the table implies that buffers extend only from the OWHM of streams. This should clarify that buffers extend from the OHWM of all aquatic priority habitats including lakes, ponds, streams, rivers, streams, and all other Waters of the State.

WDFW priority habitats and species

The code states: "Areas identified by and consistent with WDFW priority habitats and species criteria for federal or state endangered, threatened or sensitive species. The county shall defer to WDFW in regard to classification, mapping and interpretation of priority habitats and species." Due to the abundance of regulated species and habitat use of each species, it is not always clear what types of habitats are

regulated for each species. There are many ways which this can be described, and a common term in critical areas ordinance are habitats in which priority species have a "primary association." Although this is still subject to interpretation it excludes habitats in which a species may be found that are not a core part of its life history requirements.

Wildlife corridors

We recommend adding wildlife corridors as a regulated area under FWHAs. Wildlife corridor mapping is available through WDFW and other sources.

4.3 Buffer width reduction or averaging (LCC 17.38.430)

LCC 17.38.430(1)(c) states that buffer averaging standards must be limited to specified amounts "*except if the project is mitigated in accordance with LCC 17.38.080*." However, it is not explicitly stated that buffers can be reduced according to the code standards except through a variance or RUE. This should be clarified to state the intended regulation.

The allowance for buffer averaging up to 50% of the buffer width is greater than advised by the Department of Ecology and WDFW (Ecology 2022; Rentz et al. 2020).

4.4 Reduction of impacts (LCC 17.38.440)

Methods to minimize adverse impacts currently includes "retaining or planting native vegetation" and the section is vague on vegetation clearing in buffers. As vegetation type and condition are important to fish and wildlife, we recommend stating regulations regarding clearing native vegetation, invasive species, or planting. A maximum area of 500 square feet could be exempt, however larger areas should be assessed with a Critical Areas Report prepared by a qualified professional to assess impacts to FWHAs due to vegetation alterations with guidance to ensure no net loss of ecological value. Similarly, tree retention criteria could be added to code similar to Sammamish to ensure no net loss. We recommend adding hazard tree removal and LWD/snag retention requirements using guidance from Ecology and WDFW. Generally trimming or tree removal is prohibited within critical area buffers unless the tree has been determined to pose a significant risk to people or property by a qualified arborist or forester.

4.5 Identification of aquatic habitat (LCC 17.38.465)

Critical areas ordinances generally define and classify the critical area early in the section of code and other sections of this code define the critical areas earlier. Consider moving to an earlier section such as LCC 17.38.420 - *Designation*.

Current Department of Commerce Guidelines recommend adding the following phrase to the identification of habitat "*do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company*" (See Appendix A). Although similar language is used to define streams in LCC 17.14, it is not specified in the code that these features

are not regulated aquatic areas. We recommend that this exclusionary language be updated in the definitions and be appropriately referenced in the critical areas code.

4.6 Classification (LCC 17.38.470)

Review WDFW BAS synthesis and recommendations for riparian protections and update stream classifications accordingly. See summary in Section 4.2 above.

See above recommendation for Critical Areas Ordinance organization. We recommend moving this section up towards beginning of Article.

4.7 Classification of wildlife habitat (LCC 17.38.480)

See above recommendation for Critical Areas Ordinance organization. We recommend moving this section up towards beginning of Article.

Regarding resource versions, the most recent PHS Species List is credited with a publication date in 2008 and revised date in 2023. Additionally, WDFW has now published a wide range of PHS species management documents located at https://wdfw.wa.gov/species-habitats/at-risk/phs/recommendations. WDFW resource information should be updated to reflect current documents.

5. Geologically Hazardous Areas

This section addresses code sections that are applicable to geologically hazardous areas, as located in LCC 17.38.600 through LCC 17.38.720. A summary of recommended updates is provided in Table 4.

Table 4. Geologically hazardous areas review summary.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.600	Purpose	Elaborate purpose and add language for salmon and aquatic organisms.	Consistency with BAS.
17.38.610	Administration	No changes required.	
17.38.620	Designation	No changes required.	
17.38.630	Standards	No changes required.	
17.38.640	Classification of erosion hazard areas	Consider adding considerations for salmonid protection.	Consistency with Commerce guidance and BAS.

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.650	Classification of steep slope and landslide hazard areas	Consider adding considerations for salmonid protection.	Consistency with Commerce guidance and BAS.
17.38.660	Seismic hazard areas	No changes required.	
17.38.670	Volcanic hazard areas	No changes required.	
17.38.680	Mine hazard areas	No changes required.	
17.38.690	Channel migration zones	Consider adding Ecology guidance on CMZ delineation including Channel Migration Toolbox.	Consistency with Ecology guidance and BAS.
17.38.695	Alluvial fan hazards	No changes required.	
17.38.710	Geotechnical report	No changes required.	
17.38.720	Standards for mine hazard studies	No changes required.	

5.1 Purpose (17.38.600)

We recommend elaborating on the purpose of the code for GHAs and include not only public safety but reduction of impacts to salmonids and aquatic life. The following text from the draft BAS update prepared by Facet (2024) can be used to construct verbiage to for this purpose.

> *The purpose of regulating activities in geologically hazardous areas is to protect the public from potential risks. Geologic events may occur in hazardous areas that can result in property damage, injury, and the loss of life. The type of land use and development in these areas influences the level of risk and may, in some cases, increase the potential for a hazardous event. There is public interest in regulating these areas because a geologic event occurring on one property can impact large surrounding areas. It is important to identify where such hazard areas are located to ensure that activities and development in those areas is managed for safety and stability. Although the general protective approach is to avoid disturbing geologic hazard areas, WAC 365-190-080(4) states "Some geological hazards can be mitigated by engineering, design, or modified construction or mining practices so that risks to health and safety are acceptable".....*
>
> *.....Erosion and landslides are natural processes that contribute sediment, rocks, and large woody debris to streams and other waterbodies. The introduction of periodic pulses or chronic turbidity and suspended solids associated with erosion has been demonstrated to harm certain types of aquatic life, particularly salmonids (Bash et al. 2001). This can occur from activities such as clearing vegetation and the creation of new impervious surfaces, which can introduce sediments and pollutants to natural waterways (Booth 1991).*

5.2 Classification of erosion hazard areas and landslide hazard areas (17.38.640 and 17.38.650)

Erosion hazard areas may affect salmonids according to Commerce and WDFW. Erosion and mass wasting slide events can block streams or overload them with sediment in the short term. Seismic events can cause built objects to fall into streams, including pollutants such as chemicals and spilled fuels. We recommend consideration of WDFW recommendations that local governments give special protection to erosion and landslide hazard areas that can damage rivers and streams during mass wasting events. Riparian buffers help retain vegetation and control drainage on steep slopes.

5.3 Channel migration zones (17.38.690)

We recommend adding Ecology guidance on CMZ delineation including Channel Migration Toolbox.

6. Critical Aquifer Recharge Areas (CARAs)

This section addresses code sections that are applicable to CARAs as located in LCC 17.38.800 through LCC 17.38.870. A summary of recommended updates is provided in Table 5.

Table 5. Critical aquifer recharge areas review summary

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.800	Purpose	Expand on statement of purpose.	Consistency with state regulations.
17.38.810	Administration	No changes required.	
17.38.820	Designation	Consider adding RCW 90.44, 90.48 and 90.54 and WAC 173-11 and 173-200, DOH's Source Water Assessment Program (SWAP) and Ecology CARA guidance document to designation.	Consistency with Commerce and Ecology guidance and BAS.
17.38.830	Standards	No changes required.	
17.38.840	Conditions	No changes required.	
17.38.850	Aquifer sensitivity rating for Lewis County soil types	Consider adding additional factors for vulnerability such as depth to groundwater, aquifer connectivity and characteristics of vadose zone.	Consistency with Commerce guidance and BAS.
17.38.860	Critical aquifer recharge area report requirements	No changes required.	

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.870	Regulated activities and best management practices in critical aquifer recharge areas	No changes required.	

6.1 Purpose (17.38.800)

In addition to compliance with the Water Pollution Control Act, CARA regulations administer the Washington State Department of Health's wellhead protection guidance. These regulations also protect, not just recognize the connection between surface and ground waters, such as those important to the maintain base stream flows for anadromous fish. These may be added to the purpose of this code.

6.2 Designation (17.38.820)

Consider adding reference to RCW 90.44, 90.48 and 90.54 and WAC 173-11 and 173-200, DOH's Source Water Assessment Program (SWAP) and Ecology CARA guidance document to the designation.

6.3 Aquifer sensitivity rating for Lewis County soil types (17.38.850)

Consider adding additional factors for vulnerability such as depth to groundwater, aquifer connectivity and characteristics of vadose zone.

7. Frequently Flooded Areas (FFAs)

This section addresses code sections that apply to frequently flooded areas as located in LCC 17.38.900 through LCC 17.38.930 and Chapter 15.35 *Flood Damage Prevention*. A summary of recommended updates is provided in Table 6.

Table 6. Frequently flooded areas review summary

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.900	Purpose	No changes required.	
17.38.910	Classification	No changes required.	
17.38.920	Designation	No changes required.	
17.38.930	Standards for permit decisions	No changes required.	

No changes are recommended for the frequently flooded areas Critical Areas chapter.

8. Miscellaneous provisions

This section addresses code sections that are applicable to miscellaneous provisions areas as located in LCC 17.38.1000 through LCC 17.38.1040. A summary of recommended updates is provided in Table 7.

Table 7. Miscellaneous provisions review summary

Code Section	Title	Review Comment / Recommendations	Reason for Recommendation
17.38.1000	Nonconforming activities	Consider code language more inclusive of other development types.	Provide consistency in code among development types.
17.38.1000	Reasonable use and variances	Review and consider updates to limit uses and improve administration.	BAS and Clarity.
17.38.1020	Land division	Consider requiring fences and signage.	BAS.
17.38.1030	Building setbacks	No changes required.	
17.38.1040	Notice of proximity to critical areas	No changes required.	

8.1 Nonconforming activities (LCC 17.38.1000)

The code recognizes nonconforming uses and structures but does not address other development types that could be covered by this section. Non-structural developments such as roads and trails, utilities, or other infrastructure may be covered in the umbrella of nonconforming activities.

8.2 Reasonable use and variances (LCC 17.38.1010)

Review and update to ensure current language adequately supports administrative procedures and limitations for applicants.

8.3 Land division (LCC 17.38.1020)

We recommend that the edge of critical area buffers for wetlands and streams be fenced and signed when necessary to minimize further disturbance and intrusion. Signage and fencing requirements should be at Director's discretion and flexible depending on site conditions. Sub-divisions, small lots or urban areas may require fencing and signage, whereas very rural or forested areas may require only an online inventory and minimal signage.

9. Definitions

This section addresses code sections that are applicable to the definitions of critical areas as located in LCC 17.10. A summary of recommended updates is provided in Table 8. No comments follow the review summary provided in the table. This list may be expanded as code amendments are finalized.

Table 8. Definitions review summary.

Definition	Review Comment / Recommendations	Reason for Recommendation
Wetlands	Wetland definitions match WAC 365-190-030(24).	
Fish and wildlife habitat conservation areas	No definition is provided, update definitions section.	Consistency with GMA.
Geologically hazardous areas	No definition is provided, update definitions section.	Consistency with GMA.
Frequently flooded areas	A definition is provided in LCC 17.38.910, that does not match WAC 365-190-030(8), we recommend that this is updated for consistency and provided in the definitions section.	Consistency with GMA.
Critical aquifer recharge areas	No definition is provided, update definitions section.	Consistency with GMA.

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Appendix A. July 2018 Modifications for Habitat Score Ranges.

(Wetland Guidance for Critical Areas Ordinance (CAO) Updates, Ecology Publication #16-06-001)

Section XX.040 Exemptions and Allowed Uses in Wetlands

A.1.d
Do not score 6 or more points for habitat function based on the 2014 update to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029, or as revised and approved by Ecology)

B.9.a
The wetland is classified as a Category IV or a Category III wetland with a habitat score of 3-5 points, and

XX.050 Wetland Buffers

A. Buffer Requirements**.** The following buffer widths have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029, or as revised and approved by Ecology). The adjacent land use intensity is assumed to be high.

1. For wetlands that score 6 points or more for habitat function, the buffers in Table XX.1 can be used if both of the following criteria are met:

    - A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW web site at: http://wdfw.wa.gov/hab/phshabs.htm)

      The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.

      Presence or absence of a nearby habitat must be confirmed by a qualified biologist. If no option for providing a corridor is available, Table XX.1 may be used with the required measures in Table XX.2 alone.[1]

[1] See discussion in the Introduction, page 12 as to whether this applies in small urban jurisdictions.

- All of the measures in Table XX.2 are implemented, where applicable, to minimize the impacts of the adjacent land uses.

2. For wetlands that score 3-5 habitat points, only the measures in Table XX.2 are required for the use of Table XX.1

3. If an applicant chooses **not** to apply the mitigation measures in Table XX.2, or is unable to provide a protected corridor where available, then Table XX.3 **must** be used.

4. The buffer widths in Table XX.1 and XX.3 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

Table XX.1 Wetland Buffer Requirements for Western Washington if Table XX.2 is Implemented and Corridor Provided

	Buffer width (in feet) based on habitat score		
Wetland Category	**3-5**	**6-7**	**8-9**
Category I: Based on total score	75	110	225
Category I: Bogs and Wetlands of High Conservation Value	190		225
Category I: Interdunal	225 (buffer width not based on habitat scores)		
Category I: Forested	75	110	225
Category I: Estuarine and Coastal Lagoons	150 (buffer width not based on habitat scores)		
Category II: Based on score	75	110	225
Category II: Interdunal Wetlands	110 (buffer width not based on habitat scores)		
Category II: Estuarine and Coastal Lagoons	110 (buffer width not based on habitat scores)		
Category III (all)	60	110	225
Category IV (all)	40		

Table XX.2 Required measures to minimize impacts to wetlands

(All measures are required if applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• 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 disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
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
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing 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	• Use best management practices to control dust

Table XX.3 Wetland Buffer Requirements for Western Washington if Table XX.2 is NOT Implemented or Corridor NOT provided

	Buffer width (in feet) based on habitat score		
Wetland Category	**3-5**	**6-7**	**8-9**
Category I: Based on total score	100	150	300
Category I: Bogs and Wetlands of High Conservation Value	250		300
Category I: Interdunal	300 (buffer width not based on habitat scores)		
Category I: Forested	100	150	300
Category I: Estuarine and Coastal Lagoons	200 (buffer width not based on habitat scores)		
Category II: Based on score	100	150	300
Category II: Interdunal Wetlands	150 (buffer width not based on habitat scores)		
Category II: Estuarine and Coastal Lagoons	150 (buffer width not based on habitat scores)		
Category III (all)	80	150	300
Category IV (all)	50		

Appendix B. Wetland Buffer Approaches for Western Washington.

(Wetland Guidance for Critical Areas Ordinance (CAO) Updates, Ecology Publication #22-06-014, Appendix C)

Appendix C. Buffer Approaches for Western Washington

Option 1

Table 1. Wetland buffer width requirements, in feet, if Table 2 is implemented and a habitat corridor is provided

Category of wetland	Habitat score 3-5 points (corridor not required)	Habitat score 6-7 points	Habitat score 8-9 points	Buffer width based on special characteristics
Category I or II: Based on rating of wetland functions (and not listed below)	75	110	225	NA
Category I: Bogs and Wetlands of High Conservation Value	NA	NA	225	190
Category I: Interdunal	NA	NA	225	NA
Category I: Forested	75	110	225	NA
Category I: Estuarine and wetlands in coastal lagoons	NA	NA	NA	150
Category II: Interdunal	NA	NA	NA	110
Category II: Estuarine and wetlands in coastal lagoons	NA	NA	NA	110
Category III: All types except interdunal	60	110	225	NA
Category III: Interdunal	NA	NA	NA	60
Category IV: All types	40	40	40	NA

Impact minimization measures

Developments that produce the listed disturbances and are requesting a buffer reduction are required to address the disturbance through the use of applicable minimization measures.

This is not a complete list of measures, nor is every example measure required. Though not every measure is required, all effort should be made to implement as many measures as possible. Regulatory staff should determine, in coordination with the applicant, which measures are applicable and practicable.

Table 2. Impact minimization measures

Examples of disturbance	Activities and uses that cause disturbances	Examples of measures to minimize impacts
Lights	• Parking lots • Commercial/Industrial • Residential • Recreation (e.g., athletic fields) • Agricultural buildings	• Direct lights away from wetland • Only use lighting where necessary for public safety and keep lights off when not needed • Use motion-activated lights • Use full cut-off filters to cover light bulbs and direct light only where needed • Limit use of blue-white colored lights in favor of red-amber hues • Use lower-intensity LED lighting • Dim light to the lowest acceptable intensity
Noise	• Commercial • Industrial • Recreation (e.g., athletic fields, bleachers, etc.) • Residential • Agriculture	• Locate activity that generates noise away from wetland • Construct a fence to reduce noise impacts on adjacent wetland and buffer • Plant a strip of dense shrub vegetation adjacent to wetland buffer
Toxic runoff	• Parking lots • Roads • Commercial/industrial • Residential areas • Application of pesticides • Landscaping • Agriculture	• 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 (These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.)

Examples of disturbance	Activities and uses that cause disturbances	Examples of measures to minimize impacts
Stormwater runoff	• Parking lots • Roads • Residential areas • Commercial/industrial • Recreation • Landscaping/lawns • Other impermeable surfaces, compacted soil, etc.	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized or sheet flow from lawns that directly enters the buffer • Infiltrate or treat, detain, and disperse new runoff from impervious surfaces and lawns
Pets and human disturbance	• Residential areas • Recreation	• Use privacy fencing • Plant dense native vegetation to delineate buffer edge and to discourage disturbance • Place wetland and its buffer in a separate tract • Place signs around the wetland buffer every 50-200 ft., and for subdivisions place signs at the back of each residential lot • When platting new subdivisions, locate greenbelts, stormwater facilities, and other lower-intensity uses adjacent to wetland buffers
Dust	• Tilled fields • Roads	• Use best management practices to control dust

Table 3. Wetland buffer width requirements, in feet, for applicants not providing a habitat corridor or implementing measures in Table 2

Category of wetland	Habitat score 3-5 points	Habitat score 6-7 points	Habitat score 8-9 points	Buffer width based on special characteristics
Category I & II: Based on rating of wetland functions (and not listed below)	100	150	300	NA
Category I: Bogs and Wetlands of High Conservation Value	NA	NA	300	250
Category I: Interdunal	NA	NA	300	NA
Category I: Forested	100	150	300	NA
Category I: Estuarine and wetlands in coastal lagoons	NA	NA	NA	200
Category II: Interdunal	NA	NA	NA	150
Category II: Estuarine and wetlands in coastal lagoons	NA	NA	NA	150
Category III: All types except interdunal	80	150	300	NA
Category III: Interdunal	NA	NA	NA	80
Category IV	NA	NA	NA	50

Conditions for implementing Tables 1, 2, and 3

1. Wetlands that score 6 points or more for habitat function: the buffers in Table 1 can be used only if all of the following criteria are met:

a. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and:

i. A legally protected, relatively undisturbed and vegetated area (e.g., Priority Habitats, compensatory mitigation sites, wildlife areas/refuges, national, county, and state parks where they have management plans with identified areas designated as Natural, Natural Forest, or Natural Area Preserve, or

ii. An area that is the site of a Watershed Project identified within, and fully consistent with, a Watershed Plan as defined by RCW 89-08-460, or

iii. An area where development is prohibited according to the provisions of the local shoreline master program, or

iv. An area with equivalent habitat quality that has conservation status in perpetuity, in consultation with WDFW.

b. The corridor is permanently protected for the entire distance between the wetland and the shoreline or legally protected area by a conservation easement, deed restriction, or other legal site protection mechanisms.

c. Presence or absence of the shoreline or Priority Habitat must be confirmed by a qualified biologist or shoreline Administrator.

d. The measures in Table 2 are implemented, as applicable, to minimize the impacts of the adjacent land uses.

2. For wetlands that score 5 or fewer habitat points, only the measures in Table 2 are required for the use of the buffers in Table 1.

3. If an applicant does not apply the mitigation measures in Table 2 or is unable to provide a protected corridor, then the buffers in Table 3 shall be used.

4. The buffer widths in Tables 1 and 3 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer must either be planted to create the appropriate native plant community or be widened to ensure that the buffer provides adequate functions to protect the wetland.

Note: An expanded table with graduated buffer widths based on habitat score is also outlined in the July 2018 Appendix 8-C[76] of *Wetlands in Washington State, Volume 2*. This is an approach that assigns unique buffer widths to each habitat score in seven increments. It is a gradual increase in buffer width with each point. Compared to Option 1, this avoids a marked increase in buffer width resulting from an increase of one point in the habitat score.

Option 2

Table 1. Width of buffers, in feet, needed to protect wetlands from impacts of proposed land uses (used with Table 2)

Category of wetland	Land use with low impact*	Land use with moderate impact*	Land use with high impact*
I	150	225	300
II	150	225	300
III	75	110	150
IV	25	40	50

*See Table 2 below for types of land uses that can result in low, moderate, and high levels of impacts to wetlands

Table 2. Levels of impacts from proposed land use types

[Local governments are encouraged to ensure the uses in this table match the uses specified in their development and land use regulations and are consistent with the principles in this example.]

Level of impact from proposed land use	Types of land use
High	• Commercial • Urban • Industrial • Institutional • Mixed-use developments • Residential (more than 1 unit/acre) • Roads: federal and state highways, including on-ramps and exits, state routes, and other roads associated with high-impact land uses • Railroads • Agriculture with high-intensity activities (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling, raising and maintaining animals, etc.)

[76] https://apps.ecology.wa.gov/publications/parts/0506008part3.pdf

Level of impact from proposed land use	Types of land use
	• Open/recreational space with high-intensity uses (golf courses, ball fields, etc.) • Solar farms (utility scale)
Moderate	• Residential (1 unit/acre or less) • Roads: Forest Service roads and roads associated with moderate-impact land uses • Open/recreational space with moderate-intensity uses (parks with paved trails or playgrounds, biking, jogging, etc.) • Agriculture with moderate-intensity uses (orchards, hay fields, light or rotational grazing, etc.) • Utility corridor or right-of-way used by one or more utilities and including access/maintenance road • Wind farm
Low	• Natural resource lands (forestry/silviculture–cutting of trees only, not land clearing and removing stumps) • Open/recreational space with low-intensity uses (unpaved trails, hiking, birdwatching, etc.) • Utility corridor without a maintenance road and little or no vegetation management • Cell tower

Option 3

Table 1. Wetland buffer width requirements, in feet, based solely on wetland category

Category of wetland	Buffer width
I	300
II	300
III	150
IV	50

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Appendix C. Wetland Mitigation Ratio Tables

(Wetland Guidance for Critical Areas Ordinance (CAO) Updates, Ecology Publication #22-06-014, Appendix E)

Appendix E. Mitigation Ratio Tables

Compensation ratios for permanent impacts (western and eastern Washington)

Table 1

Category of impacted wetland (based on score for function)	Re-establishment or creation	Rehabilitation	Preservation	Enhancement
Category I	4:1	8:1	16:1	16:1
Category II	3:1	6:1	12:1	12:1
Category III	2:1	4:1	8:1	8:1
Category IV	1.5:1	3:1	6:1	6:1

Notes:

- Ratios for rehabilitation, preservation, and enhancement may be reduced when combined with 1:1 replacement through re-establishment or creation. See Table 6B-2 in *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance –Version 2* (Ecology et al., 2021 or as revised).
- All proposed preservation sites need to meet the preservation criteria listed in Chapter 070.3.E of Appendix A, Sample Wetland Regulations.
- The ratios provide in Table 1 are for permanent, direct impacts to wetlands. For recommended ratios for other types of impacts (e.g., long-term temporary, conversions), see Chapters 6B4.4 through 6B4.8 of *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance –Version 2* (Ecology et al., 2021 or as revised).
- The category of impacted wetland is based on scores for functions. Compensation ratios in this table generally do not apply when impacts involve a wetland whose category is based on special characteristics. Compensation ratios for impacts to wetlands with special characteristics are provided in Table 2 below. Specific tables are provided for western and eastern Washington.

Compensation ratios for unavoidable permanent impacts to wetlands with special characteristics (western Washington)

Table 2. Western

Category of impacted wetland (based on special characteristics)	Re-establishment or creation	Rehabilitation	Preservation	Enhancement
Category I forested	6:1	12:1	24:1	24:1
Bogs	NA	NA	24:1	NA
Wetlands of High Conservation Value	Consult with WA DNR	Consult with WA DNR	24:1	Consult with WA DNR
Category I Estuarine wetlands	3:1 (re-establishment only)	6:1	12:1	Limited circumstances (case by case)
Category II Estuarine wetlands	4:1 (re-establishment only)	8:1	16:1	Limited circumstances (case by case)
Category I Interdunal wetlands	4:1	8:1 (limited circumstances)	16:1	Not considered an option
Category II Interdunal wetlands	2:1	4:1 (limited circumstances)	8:1	Not considered an option
Category III and IV Interdunal wetlands	1.5:1	3:1 (limited circumstances)	6:1	Not considered an option
Category I Wetlands in coastal lagoons	4:1 (re-establishment only)	8:1	16:1	Not considered an option
Category II Wetlands in coastal lagoons	3:1 (re-establishment only)	6:1	12:1	Not considered an option

Note: Methods of compensation are limited for certain wetlands with special characteristics. Some of these wetland types only occur naturally and have never been successfully created or rehabilitated. Some may take more than a lifetime to re-establish. Thus, avoidance is the best regulatory approach when addressing these wetlands. Refer to Chapter 6B.5 of Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance –Version 2 (Ecology et al., 2021 or as revised) for more information on methods of compensation and ratios for wetlands with special characteristics.