FACET

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Attachment B

Gap Analysis

Critical Areas Ordinance Update

CITY OF BELLEVUE

JUNE 18, 2025

Prepared for:

City of Bellevue
450 110th Ave, NE
Bellevue, WA 98004

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Prepared by:

Nell Lund - Senior Ecologist & Principal of Natural Resources
B.S. in Biology at Arizona State University,
P.C. in Wetland Science & Management at the University of Washington
SWS certified professional wetland scientist

Dan Nickel – Principal of Planning
B.S. in Biology at Pacific Lutheran University
M.S. in Environmental Science at the University of Washington

Sam Payne - Ecologist
B.S. in Environmental Science at Western Washington University
P.S.M. in Fish and Wildlife Administration at Oregon State University
P.C. Wetland Science & Management at University of Washington
SWS certified professional wetland scientist and ISA certified arborist

Katy Crandall – Ecologist
B.S. in Environmental Science at Western Washington University
P.C. Wetland Science & Management at University of Washington
SWS certified professional wetland scientist and ISA certified arborist

Michael Place – Senior Geotechnical Engineer
B.S. Geological Engineering, Colorado School of Mines
HWA GeoSciences, Inc.

JoLyn Gillie – Geotechnical Engineer, Principal
M.S. and B.S. Civil Engineering, Washington State University
Professional Engineer (Civil), Washington State
HWA GeoSciences, Inc.

Kirkland Office
750 6th Street S
Kirkland, WA 98033
425.822.5242

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1. INTRODUCTION

With passage of the Growth Management Act (GMA), local jurisdictions throughout Washington State, including City of Bellevue, 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.

The City of Bellevue last completed a comprehensive update of its critical areas policies and regulations in 2016. Adjustments were made to support the BelRed rezone and related land use changes. Refinements were also made in 2018 related to the Shoreline Master Program and Critical Areas Overlay and to flood regulations in 2020 A periodic update is now required. According to the Washington Administrative Code (WAC) 365-195-915, critical area regulations are required to incorporate best available science (BAS), and any deviations from science-based recommendations must be identified, assessed, and explained. In addition, jurisdictions must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries. A BAS review for this code update has been prepared as a separate document (Facet 2025).

The City of Bellevue's critical areas policies are contained in the Climate and Environment element of the City of Bellevue Comprehensive Plan (Comprehensive Plan). Critical areas regulations are currently codified in Part 20.25H – *Critical Areas Overlay District*, in the City of Bellevue Land Use Code (LUC).

This gap analysis is a review of the current critical areas regulations with an evaluation of gaps in consistency between the existing regulations and BAS or the GMA. This analysis also includes recommendations for improvements to general aspects of the critical areas ordinance (CAO) such as clarity, consistency, and ease of use. The primary intention of this gap analysis is to help guide the update of the City's critical areas policies and regulations.

Scope and Purpose which are applicable to the entire CAO are evaluated in Section 2. The following sections provide information for specific critical areas. Each section contains a summary table followed by a detailed analysis of the existing code, potential gaps, and recommendations.

2. SCOPE AND PURPOSE: LUC 20.25H.005–20.25H.020

This section addresses code applicable to Scope and Purpose as described in LUC 20.25H.005–20.25H.020. A summary of recommended updates is provided in Table 1.

Table 1. Scope and Purpose review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.005	Scope.	No comments or recommendations	
LUC 20.25H.010	Purpose.	No comments or recommendations	
LUC 20.25H.015	Applicable procedure.	1. 1. Add provision noting other agency requirements. 2. Add language to clarify setback purpose and intent	1. BAS 2. Clarity
LUC 20.25H.020	Submittal requirements.	Consider relocating to LUC 20.30P.	Clarity

2.1 Applicable procedure (LUC 20.25H.015)

Recommend adding a provision noting other federal, state, and local agency permitting may be required. Compliance with this chapter does not constitute compliance with other federal, state and local permit requirements.

Recommend updating to clarity purpose and intent of the buffer and setback. This may include allowed uses within a setback. The City may also add section to allow for amendment or land use exemption to approved Critical Areas Land Use Permit (CALUP) to allow flexibility similar to other Land Use (LU) applications.

2.2 Submittal Requirements (LUC 20.25H.020)

City may consider relocating this section to LUC 20.30P – Critical Areas Land Use Permit.

3. DESIGNATION OF CRITICAL AREAS AND DIMENSIONAL STANDARDS: LUC 20.25H.025–20.25H.045

This section addresses code applicable to designation of critical areas and dimensional standards as described in LUC 20.25H.025–20.25H.045. A summary of recommended updates is provided in Table 2.

Table 2. Designation of Critical Areas and Dimensional Standards review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.025	Designation of critical areas.	1. 1. Evaluate the inclusion for all applicable FWHCAs in Bellevue, discussed in Section 7. 2. The table may need to be amended per other amendments in the CAO.	1. Consistency with state critical areas definitions and regulations 2. Internal CAO consistency
LUC 20.25H.030	Identification of critical area.	1. Consider removing this section and adding to each critical area article. 2. Consider updating for better long-term protection; consider relocating to LUC 20.30P.	1. Clarity 2. Clarity, long-term protection
LUC 20.25H.035	Critical area buffers and structure setbacks.	Revisions may be needed to match other section updates.	Consistency.
LUC 20.25H.040	Standards for modifying non-critical area setbacks.	No comments or recommendations	
LUC 20.25H.045	Development density/intensity.	Review approach for improved CAO administration	Clarity.

3.1 Designation of critical areas (LUC 20.25H.025)

Designated critical areas include all categories other *fish and wildlife habitat areas* (FWHCAs). Instead of FWHCAs, Bellevue has designated streams and *habitat associated with species of local importance*, which are included in the definition of FWHCAs. However, certain types of FWHCAs are not designated as critical areas. These are discussed further in Section 8.

This section provides a summary table of buffers and structure setbacks for all critical area types. Revisions to these may be necessary based on other gap analysis in other report sections.

3.2 Identification of critical area (LUC 20.25H.030)

3.2.1 Determining Presence of Critical Area (LUC 20.25H.030.A)

Consider removing and adding determination criteria for each critical area type in those code articles.

3.2.2 Recording Required (LUC 20.25H.030.B)

Consider updates to include covenant (tree code) or maintenance agreement so that assurance devices transfer with changes in land ownership. Apply these requirements to all projects including single-family. Change NGPE to be an NGPA tract or easement. Provide for alternatives to NGPAs such as site plan or notice on title to show critical area and/or mitigation area requirement. Consider moving this section to LUC 20.30P for clarity.

3.3 Critical area buffers and structure setbacks (LUC 20.25H.035)

Update table after critical area code sections are updated to ensure classifications, buffers, and setback match code amendments.

3.4 Development density/intensity (LUC 20.25H.045)

Recommend reviewing the current dwelling units per acre and development factor calculation requirements as part of this CAO update. Determine if this approach works well for administration of the critical area regulations. This may be redundant given existing zoning.

4. USE AND DEVELOPMENT IN THE CRITICAL AREAS OVERLAY DISTRICT (LUC 20.25H.050–20.25H.065)

This section addresses code applicable to use and development in the critical areas overlay district as described in LUC 20.25H.050–20.25H.065. A summary of recommended updates is provided in Table 3.

Table 3. Use and Development in the Critical Areas Overlay District review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.050	Uses and development in the Critical Areas Overlay District.	No comments or recommendations	
LUC 20.25H.055	Uses and development allowed within critical areas – Performance standards.	1. Recommend updating to clarify mitigation sequencing requirements for all projects. 2. Consider reformatting table and clarifying allowed activity vs. allowed use. 2. Evaluate hazard tree removal requirements	1. BAS / clarity 2. Clarity 2. Compliance with industry/professional standards
LUC 20.25H.065	Uses and development within critical area buffer or critical area structure setback not allowed pursuant to LUC 20.25H.055.	Update uses and development to align with code administration	Clarity / administration

4.1 Uses and development allowed within critical areas – Performance standards (LUC 20.25H.055)

4.1.1 Uses and Development Allowed within Critical Areas (LUC 20.25H.055.B)

Mitigation Sequencing

Recommend update to note a feasibility assessment is required for all proposals, not just allowed uses. All projects must demonstrate impact avoidance and minimization ahead of proposing any required mitigation.

Consider reformatting table for better use and clarity. Clarify allowed activities versus allowed uses. Consider redesigning this section to move away from table, update list of activities, update to allow replacement of accessory structures similar to shoreline code allowances, include restoration activity, allow for programmatic vegetation management for utilities, and city departments as outright uses versus CALUP.

4.1.2 Performance Standards (LUC 20.25H.055.C)

Hazard Trees (LUC 20.25H.055.C.3.i.ii)

We recommend that tree risk assessment forms be provided by a certified arborist with Tree Risk Assessment Qualification (TRAQ). Other listed professionals such as landscape architects and foresters may also be knowledgeable about tree health but such professions do not routinely engage in determinations of tree risk. Consider adding a clause to subsection B indicating that tree removal is only allowed if tree risk mitigation measures which allow for retention are infeasible. Tree replacements of 1:1 result in a net loss of ecological function due to temporal loss and risk of failure. We recommend that Bellevue requires a greater ratio of tree replacement such as 3:1. Code modifications relating to trees and vegetation may need to be consistent with other tree and landscaping code sections.

4.1.3 Uses and development within critical area buffer or critical area structure setback not allowed pursuant to LUC 20.25H.055 (LUC 20.25H.065)

Update to clarify city review process for retention of existing legally established structures, both primary and nonprimary. Provide limits for abandoned structures. Clarify requirements for sites where previous structures have been demolished. Review nonconforming sites provision for alignment with current code administration with a focus on retaining equivalent or greater critical area functions.

5. STREAMS (LUC 20.25H.075–20.25H.090)

This section addresses code applicable to Streams as described in LUC 20.25H.075–20.25H.090. A summary of recommended updates is provided in Table 4.

Table 4. Streams review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.075	Designation of critical areas and buffers.	1. Review stream designations, buffers, and setbacks. 2. Review top-of-bank vs. ordinary high water mark approach 3. Review the use of undeveloped and developed site. 4. Consider addressing buffer conditions	1. BAS 2. BAS 3. BAS 4. BAS

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.080	Performance standards.	Consider including stream daylighting incentives	Improving restoration incentives
LUC 20.25H.085	Mitigation and monitoring – Additional provisions.	1. Consider revising buffer mitigation ratios if applied to wetlands. 2. Consider adding third-party sponsored mitigation options	1. BAS 2. BAS
LUC 20.25H.090	Critical areas report – Additional provisions.	Consider adding criteria to address functional assessments	BAS/clarity

5.1 Designation of critical area and buffers (LUC 20.25H.075)

5.1.1 Designation of Streams (LUC 20.25H.075.B)

Review WDFW BAS synthesis (Rentz et al. 2020) and recommendations for riparian protections summarized in the *Draft Best Available Science Review, Critical Areas Ordinance Update, City of Bellevue,* Section 2.4 (Facet 2025) and consider updates to stream classifications.

Current WDFW riparian protection recommendations are based on soil type and dominant site potential tree height (SPTH) after 200 years of growth (see Section 5.1.2 below for more details). Under this SPTH approach, WDFW no longer recommends using a stream classification system based on fish use. All streams are recognized as performing important functions and SPTH model seeks to achieve full ecological function.

The water typing system under WAC 222-16-030 and 031 is currently used by DNR for forest practices. Several jurisdictions in our region have retained this classification system in recent CAO updates. The City should review and consider these different approaches to stream and riparian protections.

Note, the current classification system in city code differs slightly from the water typing system in WAC 222-16-030. However, the use of a Type O designation is a more inclusive approach that is in use in other local jurisdictions, including King and Pierce counties.

5.1.2 Designation of Stream Critical Area Buffers (LUC 20.25H.075.C)

Site Potential Tree Height

In 2020, the WDFW published new guidance for the protection of riparian areas (Quinn et al. 2020). The guidance emphasizes a shift in terminology from the concept of "*stream buffers*" to "*riparian management zones*" (RMZs). An 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, an RMZ is recommended to be regulated as a fish and wildlife habitat conservation area itself to protect its inherent value, rather than as just a buffer for rivers and streams (Rentz et al. 2020). Stream buffers are established in local critical areas ordinances based on the best available science and are intended to protect streams but may or may not provide full riparian function. To achieve full riparian function, the WDFW 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.

WDFW's current recommendations for establishing RMZ widths are based primarily on a site potential tree height framework, which does not use the DNR water typing system. 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.*" WDFW refers to this as $SPTH_{200}$. Exceptions may occur where the site potential tree height is less than 100 feet, in which case the agency recommends assigning an 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% removal of surface nitrogen (Rentz et al. 2020). A 100-foot buffer minimum is recommended by WDFW to protect water quality.

Riparian management zones or buffers that vary by location may present practical challenges for implementation and have considerations in equity.

SPTH distribution in Bellevue is shown in Figure 1, based on data provided by the WDFW and NRCS (2024). Large swaths of the city are in locations which no model data is provided. Throughout areas where data is available, SPTH generally exceeds Bellevue's regulatory buffer widths by a wide margin.

The modeled SPTH values in Bellevue in range between 100-231 feet in areas which overlap mapped streams, excluding designated shoreline waterbodies and have an average of value 180 feet. This distribution is shown as a box plot in Figure 2, with a with a minimum value of 100 feet, a first quartile of 187 feet, a median of 196 feet, a third quartile of 196 feet, and a maximum of 231 feet. This represents a skewed distribution with a large proportion of the SPTH values between a narrow interquartile range of 187-196 feet. WDFW recognizes that this increases existing non-conformity and recommends addressing that through non-confirming use regulations.

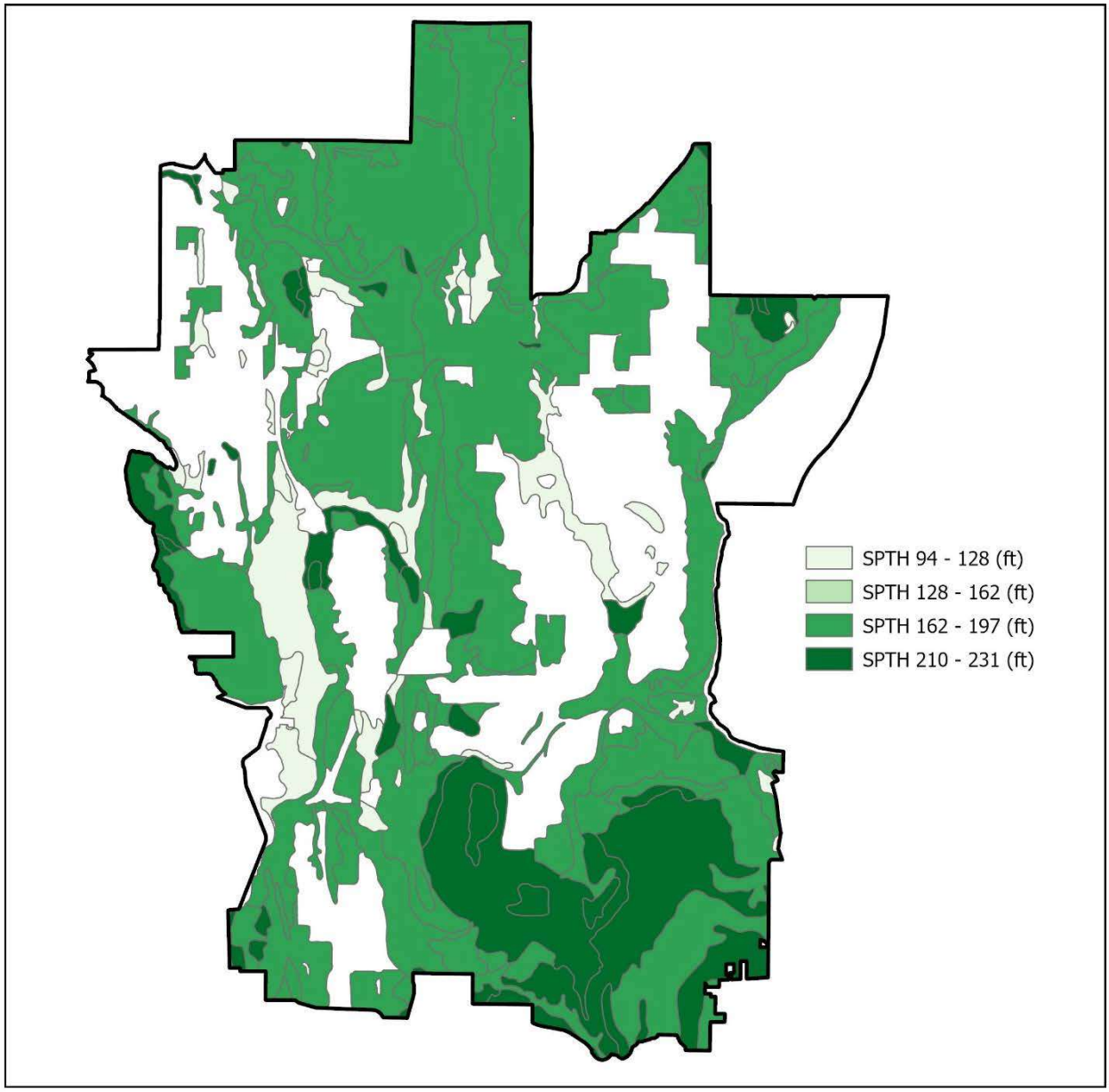

Figure 1. $SPTH_{200}$ distribution in Bellevue, white indicates no data. Map produced from data obtained from WDFW & NRCS (2024).

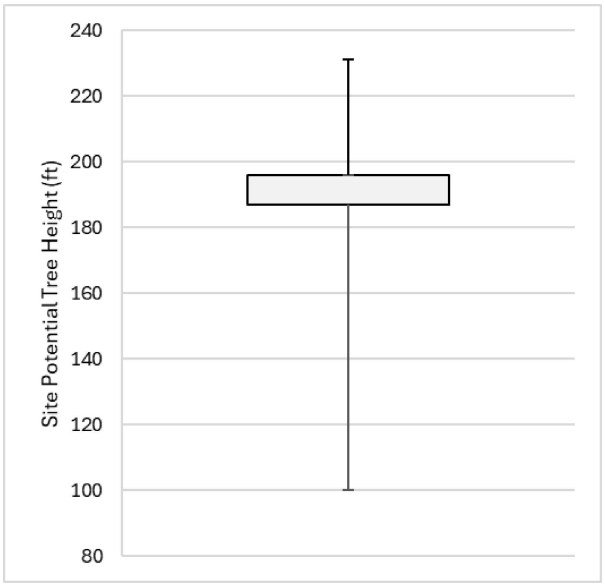

Figure 2. Box plot of $SPTH_{200}$ distribution in Bellevue from data obtained from WDFW & NRCS (2024). The review area is limited to mapped streams, excluding designated shorelines.

As a part of the CAO update, we recommend that Bellevue consider whether 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 ordinary high water mark (OHWM) or channel migration zone, whichever is greater, to align with the RMZ buffer recommendations in Rentz et al. (2020). Current BAS on water quality buffer functions must also be considered. We recommend reviewing water quality buffer functions along with stormwater management regulations. In general, urban settings are limited by surrounding land uses; review of buffer widths should be paired with consideration of requirements to enhance ecological functions. The City must review the BAS-based recommendations and determine the best regulatory approach for Bellevue.

Top-of-bank Rule

Bellevue has a unique standard of measuring buffer dimensions from the top-of-bank rather than the ordinary high-water mark. This provides additional protection to streams, and aligns with the intent of state agency guidance by increasing the widths of sloped buffers. One consequence is that the ways buffers are measured doesn't match other state and federal agencies, which could lead to a mismatch when overlapping permits apply. Non-standard approaches, like top-of-bank, are less familiar to professionals doing the work, and are subject to interpretation differences. Ordinary high watermark (OHWM) is the best practice supported by regional training and state and federal guidance.

WDFW 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.

Where buffers end within a steep slope, a buffer escalator may be applied. Commonly buffers within steep slopes or other geologically hazardous areas are extended to the top of the hazard area.

Open/Closed Streams

Stream regulations in our region do not commonly contain separate requirements for open and closed stream segments. If the intent is to maintain a setback over piped stream segments to maintain space for potential stream daylighting in the future, the regulations could be simplified.

Undeveloped/Developed Sites

The way the code assigns buffers and setbacks for developed sites is atypical and could be simplified for clarity. Review and consider applying protective buffer widths to all streams and standardizing setbacks. The lower buffer widths for developed sites gives the impression protections are significantly lower than those for undeveloped sites. However, in practice, the city protects setbacks like buffers.

5.1.3 Structure Setbacks (LUC 20.25H.075.D)

Recommend reviewing structure setbacks in parallel with stream/riparian buffer widths. Consider simplifying and clarifying setback requirements to align with the intended setback function. Setbacks are typically measured from the outer buffer edge. Setback purpose is routinely to allow adjacent structure maintenance without buffer encroachment.

Bellevue currently requires setbacks over piped stream segments. Recommend reviewing those setbacks for consistency with incentives to daylight streams.

5.2 Performance standards (LUC 20.25H.080)

It is recommended that the performance standards in this code section apply to all streams, not just those which are Type F and S.

Since stormwater treatment is not 100% effective, it would better protect water quality if discharge in the buffer was required to be as far from the critical area as feasible in LUC 20.25H.080.A.4. It is also recommended that treated water must meet the minimum standards of the applicable stormwater design manual.

Consider adding stream daylighting performance standards to the stream modification section of LUC 20.25H.080.B – Closed Stream Segments. This may include demonstrating the daylighting plan achieves natural meanders, gentle slopes, improved stream flow/fish access, and riparian vegetation.

Bellevue may consider adding provisions which provide incentives for daylighting streams as a strategy to promote instream habitat restoration.

5.3 Mitigation and monitoring – Additional provisions (LUC 20.25H.085)

The buffer mitigation ratio policy is discussed in Section 6 in the context of wetlands. If Bellevue decides to adopt any changes to buffer mitigation requirements, then the stream section may be revised to incorporate buffer condition criteria and other shared priorities.

Consider adding mitigation banking and in-lieu fee mitigation options similar to the wetland mitigation section, and re-evaluate the order of prioritization since state agency guidance recommends prioritizing programmatic approaches such as mitigation banks and in-lieu fee programs. These off-site options are typically only applied when on-site opportunities are insufficient and cannot meet no net loss.

6. WETLANDS (LUC 20.25H.095–20.25H.110)

This section addresses code applicable to Wetlands as described in LUC 20.25H.095–20.25H.110. A summary of recommended updates is provided in Table 5.

Table 5. Wetlands review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.095	Designation of critical areas and buffers.	1. Update wetland rating publication reference. 2. Update habitat score ranges. Review and update buffer criteria. 3. Review small wetland exclusions and incorporate habitat corridors	1. BAS 2. BAS 3. Consistency with state agency recommendations
LUC 20.25H.100	Performance standards.	No comments or recommendations	
LUC 20.25H.105	Mitigation and monitoring – Additional provisions.	Consider matching Department of Ecology mitigation ratios and reevaluate buffer mitigation ratios and adding mitigation bank and in-lieu fee program option	Consistency with state agency recommendations and ensure no net loss of ecological function
LUC 20.25H.110	Critical areas report – Additional provisions.	No comments or recommendations	

6.1 Designation of critical area and buffers (LUC 20.25H.095)

6.1.1 Designation of Critical Area (LUC 20.25H.095.C)

The current version of the wetland rating system is the Ecology *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.

Bellevue designates all wetlands as critical areas except Category IV wetlands less than 2,500 square feet in area. This deviates from current Ecology recommendations. Below in italics is an excerpt of Ecology's recommended wetland exemption regulations (Ecology 2022). The provisions below require compensatory mitigation.

1. All Category IV wetlands less than 4,000 square feet that:

a. Are located in the areas covered by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and

Coast Region (U.S. Army Corps of Engineers, 2010)

b. Are not associated with riparian areas or their buffers

c. Are not associated with shorelines of the state or their associated buffers

d. Are not part of a wetland mosaic

e. Do not score 6 or more points for habitat function based on the Washington State Wetland Rating System for [Western or Eastern] Washington: 2014 Update (Ecology Publication #14-06-029), or as revised by Ecology)

f. Do not contain a Priority Habitat or a Priority Area for a Priority Species identified by the Washington Department of Fish and Wildlife and do not contain state or federally listed species or their critical habitat or species of local importance identified in the City code

2. Wetlands less than 1,000 square feet that meet the above criteria are exempt from the buffer provisions contained in this Chapter.

These wetlands are also regulated by state and federal agencies so such an exemption may not provide significant relief to applicants, other than for buffers.

6.1.2 Designation of Critical Area Buffer (LUC 20.25H.095.D)

Habitat score ranking in City code does not align with current Ecology guidance. The high, medium, low point ranges were updated by Ecology in 2018 (Ecology Publication 16-06-001). They are currently:

High 8-9
Medium 6-7
Low 3-5

Current wetland buffer widths are generally consistent with the standard buffers of Option 1 in Ecology's Buffer Approaches for Western Washington (ECY 2022), except for differing mechanisms on minimization measure incentives and that a habitat corridor is not required. According to the Option 1 guidelines, buffers should increase if minimization measures are not applied and require the establishment of habitat corridors. This is generally addressed in the performance standards of LUC 20.25H.100 which require similar minimization measures. Bellevue should consider the requirement of the habitat corridor and inclusion of impact minimization measures in Option 1 for consistency with Ecology guidelines (see Appendix A). Minimization measures are currently under LUC 20.25H.100.

Bellevue has adopted a structure setback approach which utilizes variable setbacks depending on wetland classification. Greater structure setbacks apply to Category I and II wetlands, and Category IV wetlands have no setback. Bellevue also protects vegetation in buffer setbacks which provides additional protection compared to standard approaches. Although these deviate from state guidelines, they may provide better protection to overall wetland functions – though review of policy effectiveness is not provided in this gap analysis. Recommend reviewing and updating setbacks for consistency with the intended setback function. Setback regulations can be simplified by applying one setback width to all critical areas.

6.2 Performance Standards (LUC 20.25H.100)

Review and update this code section against the impact minimization measures table Ecology provides in their buffer approaches summary (Ecology 2022, Appendix C). Current performance standards generally align with BAS and Ecology recommendations. More specific examples could be provided.

6.3 Mitigation and Monitoring (LUC 20.25H.105)

6.3.1 Preference of Mitigation Actions (LUC 20.25H.105.A)

Off-site mitigation options may also prioritize third-party sponsored options, including mitigation banks and in-lieu fee programs. Third-party sponsored mitigation is generally more successful than applicant-responsible mitigation.

6.3.2 Mitigation Ratios (LUC 20.25H.105.C)

The required mitigation ratios are similar to state guidelines but generalize some restoration categories into a single ratio. Bellevue may consider revising the ratios to match the Department of Ecology (ECY 2022). This will also promote interagency consistency in wetland regulations.

Buffer mitigation ratios of one-to-one meet Ecology requirements in some but not all circumstances and can lead to loss of wetland and buffer function when applied uniformly. State agencies recommend that buffer mitigation rations be at least one-to-one (ECY 2022). This is primarily applicable for optimal sites with sufficient enhancement opportunity and impacts located in areas of previous disturbance. Alternatives models exist which utilize variable ratios depending on the type of buffer impacts, such as the type of vegetation removed. We recommend that Bellevue consider alternatives when deciding on buffer mitigation ratios to ensure no net loss of critical area function.

7. GEOLOGIC HAZARD AREAS (LUC 20.25H.120–20.25H.145)

This section addresses code applicable to geologically hazardous areas as described in LUC 20.25H.120 –20.25H.145. A summary of recommended updates is provided in Table 6.

Table 6. Geologic hazard areas review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.120	Designation of critical area and buffers.	Add language to specifically address potential erosion hazards	BAS
LUC 20.25H.125	Performance standards – Landslide hazards and steep slopes.	Provide updated language to permit additional construction methods on man-made slopes that meet certain requirements.	BAS/clarity
LUC 20.25H.130	Performance standards – Coal mine hazard area.	No comments or recommendations	
LUC 20.25H.135	Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes.	Apply more specific standards to to monitoring requirements.	Clarity

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.140	Critical areas report – Additional provisions for landslide hazards and steep slopes.	Consider adding additional detail to CAR requirements	BAS/clarity
LUC 20.25H.145	Critical areas report – Approval of modification.	Section should include minimum Factors of Safety for slope stability.	BAS

7.1 Designation of critical area and buffers (LUC 20.25H.120)

Erosion hazards are not specifically regulated in the current code. Recommend adding language to address potential erosion hazards.

7.2 Performance standards – Landslide hazards and steep slopes (LUC 20.25H.125)

Recommend providing additional performance standards specific to human-made steep slopes, including best practices and construction methods. Human-made steep slopes may have marginal stability; a site-specific review by a geotechnical engineer is still recommended.

7.3 Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes (LUC 20.25H.135)

Current standards under LUC 20.25H.135.C are vaguely written and do not clearly state when monitoring is required. Recommend updating this section for clarity.

7.4 Critical areas report – Additional provisions for landslide hazards and steep slopes (LUC 20.25H.140)

Consider adding more specific criteria to the additional critical areas report requirements. This may include descriptions of vegetation, surface and groundwater conditions, drainage analysis, and an evaluation of slope stability.

Joint review for proposed alteration or modification of landslide hazard areas by a geotechnical engineer with a professional civil engineering license and a licensed geologist, licensed by the state of Washington is recommended.

7.5 Critical areas report – Approval of modification (LUC 20.25H.145)

Recommend updating this section to include minimum Factors of Safety for slope stability. Current code does not include a minimum factor of safety required to prove proposed improvements are stable. Minimum factors of safety of 1.5 and 1.1 for static and seismic conditions are most commonly used in the state and would be recommended here.

8. HABITAT ASSOCIATED WITH SPECIES OF LOCAL IMPORTANCE (LUC 20.25H.150-20.25H.170)

This section addresses code applicable to Habitat Associated with Species Of Local Importance as described in LUC 20.25H.150-20.25H.170. A summary of recommended updates is provided in Table 7.

Table 6. Habitat Associated with Species of Local Importance review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.150	Designation of critical area.	Include state and federally listed species, and reevaluate species of concern	Consistency with stage agency critical areas definitions and evaluating species status
LUC 20.25H.155	Uses in habitat for species of local importance.	No comments or recommendations	
LUC 20.25H.160	Performance standards.	Reevaluate performance standards	To provide consistent and enforceable regulations
LUC 20.25H.165	Critical areas report – Additional provisions.	Review and update to address FEMA BiOp, and general assessment requirements.	Clarity

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.170	Process to identify additional species of local importance.	No comments or recommendations	

8.1 Designation of Critical Areas (LUC 20.25H.150)

8.1.1 Designation of Species of Local Importance (LUC 20.25H.150.A)

The code does not currently designate habitat for state and federally listed species as critical areas except for species which overlap with species of local importance. We recommend that such habitats be included as critical areas for consistency with state critical area definitions. Bellevue may also reevaluate designated species of local importance to determine if the status is still warranted. Several species of local importance have been removed or are not otherwise listed on WDFW's priority species list such as pileated woodpecker, bald eagle, red-tailed hawk, and purple martin, etc. As noted in the 2016 BAS Review by The Watershed Company, the City could consider adopting the state's Priority Habitats and Species List as species of local importance to ensure the City's list stays up-to-date.

8.1.2 Naturally Occurring Ponds (LUC 20.25H.150.C&D)

Naturally occurring ponds are regulated as a habitat for species of local importance and have a standard regulatory buffer of 35 feet. From an organizational perspective, ponds may be better suited to being included in the "Streams" critical areas regulations due to their similarity in functions and regulations. Based on the definitions provided in the LUC we recommend that the distinction between regulated streams and ponds needs to be clarified. For instance, streams include only channelized waters and a strict text interpretation may exclude impoundments of water in a valley. It appears that the intent of the code is for ponds to regulate areas that are generally disconnected from stream networks. Additionally, BAS would support ponds with connectivity to downstream waters have similar protections to streams, especially if they contain fish habitat. We would recommend that Bellevue reevaluate pond regulations and buffers to ensure consistency with state agency guidelines and ensure protection for fish habitat.

8.2 Performance Standards (LUC 20.25H.160)

This code requires a proposal to implement a wildlife management plan developed by the Department of Fish and Wildlife (WDFW). However, WDFW has not developed wildlife management plans that can be utilized as a uniform approach for project-specific management. Rather, WDFW produces management recommendations for certain wildlife species. These are only available for certain species and the content is highly variable. Many do not contain guidance for project-by-project management, and those which do typically must be adapted to site-specific conditions. This ambiguity may make it

challenging for applicants and administrative staff to interpret and regulate this code section. The complexity of variability of habitats for wildlife species is a challenge for all jurisdictions because each has specific needs and management requirements. However, we recommend that Bellevue revaluates this section to provide consistent and enforceable standards.

8.3 Critical area report – Additional provisions (LUC 20.25H.165)

Review and update to improve administration. Consider including FEMA Biological Opinion / Habitat Assessment requirements, clearly state when additional analysis is required. Consider including reference to the Bellevue Urban Wildlife Habitat Functional Assessment Model (FAM)(The Watershed Company 2010).

9. FREQUENTLY FLOODED AREAS (LUC 20.25H.175–20.25H.180)

This section addresses code applicable to Frequently Flooded Areas as described in LUC 20.25H.175–20.25H.180. A summary of recommended updates is provided in Table 8.

Table 7. Frequently Flooded Areas review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.175	Designation of critical area.	No comments or recommendations	
LUC 20.25H.177	Definitions.	No comments or recommendations	
LUC 20.25H.178	Administration.	No comments or recommendations	
LUC 20.25H.179	Development in the area of special flood hazard – Additional submittal requirements.	No comments or recommendations	
LUC 20.25H.180	Development in the area of special flood hazard.	Address compliance with NFIP ESA compliance	Endangered species act compliance

9.1 Development in the area of special flood hazard (LUC 20.25H.180)

Since no FEMA habitat assessments and mitigation area required, the frequently flooded areas code does not address compliance with the 2008 NMFS biological opinion regarding the National Flood Insurance Program (NFIP) compliance with the Endangered Species Act. We recommend Bellevue closely examine flood plain regulations to ensure it meets all NFIP requirements.

10. REASONABLE USE EXCEPTION (LUC 20.25H.190–20.25H.205)

This section addresses code applicable to Reasonable Use Exception as described in LUC 20.25H.190–20.25H.205. A summary of recommended updates is provided in Table 9.

Table 8. Reasonable Use Exception review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.190	Reasonable use exception – Purpose.	No comments or recommendations	
LUC 20.25H.195	Reasonable use exception – Process.	No comments or recommendations	
LUC 20.25H.200	Reasonable use exception – Applicability.	Review and consider simplifying code criteria.	Clarity, administration
LUC 20.25H.205	Reasonable use exception – Performance standards.	Consider off-site mitigation when no alternative exists	Consistency with state mitigation guidelines

10.1 Reasonable use exception – Applicability (LUC 20.25H.200)

Review criteria and details provided for large lots, small lots, non-residential uses, and other land use districts. Consider simplifying criteria to improve use and administration.

10.2 Reasonable Use Exception - Performance Standards (LUC 20.25H.205)

Mitigation is required on-site to the extent feasible. For sites which have insufficient opportunity for mitigation, we recommend that off-site mitigation, in-lieu fee programs, or mitigation banks be considered as an alternative. All projects must adhere to mitigation sequencing requirements.

11. GENERAL MITIGATION AND RESTORATION REQUIREMENTS (LUC 20.25H.210–20.25H.225)

This section addresses code applicable to General Mitigation and Restoration Requirements as described in LUC 20.25H.210–20.25H.225. No recommendations for this section (Table 10).

Table 9. General Mitigation and Restoration Requirements review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.210	Applicability.	No comments or recommendations	
LUC 20.25H.215	Mitigation sequencing.	No comments or recommendations	
LUC 20.25H.220	Mitigation and restoration plan requirements.	Review assurance devices for successful oversight.	BAS
LUC 20.25H.225	Innovative mitigation.	No comments or recommendations	

11.1 Restoration and Mitigation Project Details (LUC 20.25H.220)

LUC 20.25H.220.F, review assurance devices to ensure adequate incentives and oversight support successful implementation of mitigation requirements.

12. CRITICAL AREAS REPORT (LUC 20.25H.230–20.25H.270)

This section addresses code applicable to Critical Areas Report as described in LUC 20.25H.230–20.25H.270. A summary of recommended updates is provided in Table 11.

Table 10. Critical Areas Report review summary.

Code Section	Title	Review Comment & Recommendations	Reason for Recommendation
LUC 20.25H.230	Critical areas report – Purpose.	Consider limitations on administrative flexibility to align with state agency recommendations	Consistency with state agency recommendations
LUC 20.25H.235	Critical areas report – Review process.	No comments or recommendations	
LUC 20.25H.240	Critical areas report – Limitation on modifications.	No comments or recommendations	
LUC 20.25H.245	Incorporation of best available science.	No comments or recommendations	
LUC 20.25H.250	Critical areas report – Submittal requirements.	No comments or recommendations	
LUC 20.25H.255	Critical areas report – Decision criteria.	No comments or recommendations	
LUC 20.25H.260	Critical areas report – Assurance devices.	No comments or recommendations	
LUC 20.25H.265	Critical areas report – City technical review.	No comments or recommendations	
LUC 20.25H.270	Critical areas report – Independent third-party review.	No comments or recommendations	

12.1 Critical Areas Report - Purpose (LUC 20.25H.230)

This code section gives Bellevue authority to administratively allow broad flexibility in modifying the standards in the critical areas code. However, state guidelines indicate that buffer reductions should not be allowed with the Option 1 buffer approach which Bellevue has modeled for wetlands (ECY 2022).

We recommend that Bellevue consider the Department of Ecology recommendations and whether further limitations should be added to this policy. Since these limitations for flexibility are applied administratively, this may not necessitate a code revision and could also be considered as a matter of administrative policy. As an alternative to limitations, increased mitigation ratios may be considered for projects which present increased risk.

13. CRITICAL AQUIFER RECHARGE AREAS

The Bellevue Land Use Code – Critical Areas Overlay (LUC 20.25H does not contain a critical aquifer recharge areas (CARA) section. Recommend adding a CARA regulations section to Chapter 20.25H to regulate aquifer areas in the City. Ecology's recommended CARA code content and BAS-based examples from their 2021 publication are provided in Appendix B of this report (Ecology 2021b). Additionally, King County CARA regulations under KCC 21A.24.311-314 can be referenced. CARA regulations typically cover intent, designations, prohibited activities, and clear reporting requirements.

14. REFERENCES

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Quinn, T., G.F. Wilhere, and K.L. Krueger, technical editors. 2020. Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications. Habitat Program, Washington Department of Fish and Wildlife, Olympia, Washington.

Rentz, R., A. Windrope, K. Folkerts, and J. Azerrad. 2020. Riparian Ecosystems, Volume 2: Management Recommendations. Habitat Program, Washington Department of Fish and Wildlife, Olympia.

The Watershed Company. 2016. City of Bellevue Critical Areas Regulations Technical Report. Reference number 160349.

Washington Department of Ecology (ECY). (2022). Wetland guidance for critical areas ordinance (CAO) updates, Western and Eastern Washington (Publication No. 22-06-014). Olympia, WA: Washington State Department of Ecology.

Washington Department of Wildlife and Natural Resources Conservation Service. 2024. PHS Riparian Site Potential Tree Height (SPTH) Downloads. https://geo.wa.gov/documents/073e8eb38a3949dfa43bc555b914df04/explore

APPENDIX A. Wetland Buffer Approaches for Western Washington

(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

APPENDIX B. Critical Aquifer Recharge Areas – Code Examples

(Ecology Publication 05-10-028, Revised March 2021)

Appendix C: Code Examples

Integrated programs

The City of Vancouver deserves special mention because the City's Water Resource Protection Program[198] is an outstanding example of program integration to protect rivers, lakes, streams, and groundwater.

The City of Issaquah is an outstanding example of gaining efficiencies and good outcomes by integrating programs - See Appendix A.

Authority to Act and to Inspect

- Benton County has given themselves authority to prevent contamination of critical aquifer recharge areas. Benton County's critical aquifer recharge area ordinance Chapter 15.06[199] requires that:

  (a) The applicant shows that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely affect the recharging of the aquifer;

  (b) The applicant provides evidence that the proposed water source is physically and legally available and meets drinking water standards.

  (c) Groundwater uses, withdrawals, and recharge must be consistent with RCW 90.44.050[200] (permit to withdraw groundwater) and with applicable rules adopted pursuant to RCW 90.22[201] (minimum instream flows) and RCW 90.54[202] (Water Resources Act of 1971) when making decisions under RCW 19.27.097[203] (evidence of adequate water supply) and RCW 58.17.110[204] (Approval or disapproval of subdivision).

- The City of Vancouver explicitly prohibits polluting discharges into the water resources of the city (Chapter 14.6 Water Resources Protection[205], Section 14.26.117). Section 14.26.145 on Enforcement gives the City authority to enforce, and explicitly lays out what the City may do in case of violations.

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[198] https://www.cityofvancouver.us/publicworks/page/water-resources-protection-program
[199] https://www.co.benton.wa.us/files/documents/CH1506BCC148013709092718PM.pdf
[200] https://apps.leg.wa.gov/RCW/default.aspx?cite=90.44.050
[201] https://apps.leg.wa.gov/RCW/default.aspx?cite=90.22
[202] https://apps.leg.wa.gov/RCW/default.aspx?cite=90.54
[203] https://apps.leg.wa.gov/RCW/default.aspx?cite=19.27.097
[204] https://app.leg.wa.gov/rcw/default.aspx?cite=58.17.110
[205] http://www.cityofvancouver.us/sites/default/files/fileattachments/public_works/page/1033/finalwrpordinancerevised2016.pdf

Having the authority to enforce in case of a polluting discharge to water resources allows the City to stop a pollution event, or prevent an imminent discharge. This goes beyond requiring pollution prevention at the permitting stage, and allows the City to respond after a permit has been issued.

The City of Vancouver Water Resources Protection ordinance also has code for owner/operators to inspect their facilities to prevent contaminated discharges, and for the city to inspect.

Allowed, permitted with conditions, and prohibited uses

Table 24.10-1 in Chapter 24.10.020[206] of the Thurston County code lists land use activities that are allowed without a permit, permitted with conditions, or are prohibited, depending on the category of Critical Aquifer Recharge Areas. The table links to applicable standards for land use activities. Here is a partial excerpt (see the ordinance[207] for the full table):

RESTRICTED USES AND ACTIVITIES	AQUIFER RECHARGE AREA CATEGORY				
	I			II	III
	Wellhead Protection Areas		Other CARA I		
	1-year time of travel zone	5- and 10-year time of travel zones			
Abandoned wells (decommissioning of wells) (TCC 24.10.040)	A	A	A	A	A
Asphalt plants/cement and concrete plants (TCC 24.10.070)	X	X	X	P	P
Boat refinishing	P	P	P	P	P
Cemeteries (TCC 24.10.090)	X	P	P	P	P
Chemical manufacturing/processing, mixing and remanufacturing (TCC 24.10.100)	X	X	X	P	P
Chemical storage facilities (not including fuel) (TCC 24.10.100)	X	P	P	P	P

Figure 14: Image of Table 24.10-1. Prohibited and Restricted Uses and Activities Within Critical Aquifer Recharge Areas

LEGEND:

A = Allowed without a critical area permit, subject to requirements of this title

206 https://library.municode.com/wa/thurston_county/codes/code_of_ordinances?nodeId=TIT24CRAR_CH24.10CRAQREAR_24.10.020STREPRUS

207 https://library.municode.com/wa/thurston_county/codes/code_of_ordinances?nodeId=TIT24CRAR_CH24.10CRAQREAR_24.10.020STREPRUS

P = Permitted, subject to critical area permit and requirements of this title

X = Prohibited

X/P = As determined by the approval authority, small scale uses or those using nonhazardous materials may be permitted when the quantity, nature of materials processed and mitigation methods are determined to contain no significant risk to groundwater.

Section 11.20.075 of Spokane County's critical aquifer recharge area ordinance[208] includes a similar type of table.

[208] https://library.municode.com/wa/spokane_county/codes/code_of_ordinances?nodeId=TIT11EN_CH11.20CRAR_11.20.075CRAQREAR

Critical Materials

City of Spokane Critical and Hazardous Materials List Information[209] guide sheet.

City of Spokane Business & Development Resources[210] – The Critical and Hazardous Materials topic includes the following resources:

- Critical and Hazardous Materials List Application[211] (PDF 25 KB)
- Critical and Hazardous Materials List Information[212] (PDF 22 KB)
- Critical Materials Handbook[213] (PDF 908 KB)
- Critical Materials List[214] (PDF 29 KB)
- Hazardous Materials Inventory[215] (PDF 32 KB)

Nonpoint Ordinance

- Article VI – Rules and regulations of the Thurston County Board of Health governing nonpoint source pollution[216].

Reports

- Spokane County Section 11.20.075 – Critical aquifer recharge areas[217], has a section on procedures for when a hydrogeologic report or study is required. This section is quite good, and provides for an important alternative:

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[209] https://static.spokanecity.org/documents/business/resources/guidesheets/hazardousmaterials/critical-hazardous-materials-list-information.pdf
[210] https://my.spokanecity.org/business/resources/
[211] https://static.spokanecity.org/documents/business/resources/guidesheets/hazardousmaterials/critical-hazardous-materials-list-application.pdf
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[215] https://static.spokanecity.org/documents/business/resources/guidesheets/hazardousmaterials/hazardous-materials-inventory.pdf
[216] https://www.co.thurston.wa.us/health/ehadm/pdf/Article_VI.pdf
[217] https://library.municode.com/wa/spokane_county/codes/code_of_ordinances?nodeId=TIT11EN_CH11.20CRAR_11.20.075CRAQREAR

> An applicant may elect to meet the appropriate performance standards in lieu of preparing a hydrogeologic report if the environmental services director or hearing examiner finds the performance standards provide adequate aquifer protection.

- City of Redmond (King County), Zoning Code (RMC title 21), Appendix 1. – Critical Areas Reporting Requirements[218] details critical aquifer recharge areas reporting. The following paragraph provides a good example of an objectives statement:

> A critical aquifer recharge area report must be submitted to the City. The purpose of the report is to evaluate the actual presence of geologic conditions giving rise to the critical aquifer recharge area; determine the appropriate wellhead protection zone; evaluate the safety and appropriateness of proposed activities; and recommend appropriate construction practices, monitoring programs, and other mitigation measures required to ensure achievement of the purpose and intent of these regulations. The information required by this report should be coordinated with the study and reporting requirements for any other critical areas located on the site.

Incentives

The Clark County Critical Aquifer Recharge Areas Ordinance, Title 40.410[219], includes incentives for using best management practices to avoid having to provide additional geologic and hydrologic characteristics of the property:

> Incentives
>
> Best Management Practices (BMPs). Individuals who implement BMPs to safeguard groundwater may not be required to provide additional geologic and hydrologic characteristics of the subject property, pursuant to Sections 40.410.030(B) and (C). Individuals shall implement the Washington Department of Ecology's Stormwater, Water Quality, Hazardous Waste, Wetland, and Solid Waste Programs BMPs; Chapter 13.26A; and BMPs from the Washington Departments of Health, Agriculture, Transportation, and State Conservation District Office.

[218] http://online.encodeplus.com/regs/redmond-wa/doc-viewer.aspx?secid=2017#secid-4221
[219] https://www.codepublishing.com/WA/ClarkCounty/?comp-ClarkCounty40/ClarkCounty40410/ClarkCounty40410.html