CITY OF BELLEVUE CRITICAL AREAS REGULATIONS TECHNICAL REPORT- PART 2

Gap Analysis

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1 INTRODUCTION

1.1 Overview and Purpose

With passage of the Growth Management Act (GMA), local jurisdictions throughout Washington State, including the City of Bellevue (City), were required to develop policies and regulations to designate and protect critical areas. Critical areas, as defined by the GMA (Revised Code of Washington [RCW] 36.70A.030(5)), include wetlands, areas with a critical recharging effect on aquifers used for potable water (commonly referred to as critical aquifer recharge areas), fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.

An ongoing requirement of the GMA is for local jurisdictions to periodically review and evaluate their adopted critical areas policies and regulations. The City last completed an update of its critical areas ordinance in 2006 (Ordinance No. 5680). The City's critical areas regulations are currently codified in Part 20.25H LUC (Land Use Code), Critical Areas Overlay District.

When updating critical areas policies and regulations, jurisdictions must include the best available science (BAS). Any deviations from science-based recommendations should be identified, assessed and explained (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.

This document is the second part of a two-part technical report. Part 1, City of Bellevue Critical Areas Regulations: Update to Best Available Science and Existing Conditions (BAS Update), provides an overview of the changes in science relevant to the functions and values of critical areas since the previous critical areas ordinance update in 2006.

The purpose of this document is to provide a review of the City's current critical areas regulations, noting gaps where existing regulations may not be consistent with current BAS, the GMA, and/or its implementing rules or guidance. This document does not attempt to identify every instance where existing critical areas regulations might be amended, but instead focuses on identifying the most significant potential amendments stemming from updates to BAS, changes in agency guidance applicable to regulation of a specific resource, or changes in existing conditions since the last review. The primary intention of this gap analysis is to help guide the update of the City's critical areas regulations.

1.2 Document Organization

This document mirrors the organization of Part 20.25H LUC, Critical Areas Overlay District. Each subpart of Part 20.25H LUC, Critical Areas Overlay District, is reviewed in a corresponding section of this report.

Each section of this report features a review summary table that lists all the LUC sections in the subpart under review. For each LUC section, the review summary table then identifies any potential gaps where the existing critical areas regulations may not fully meet current BAS, the GMA, and/or its implementing rules or guidance. If any potential gaps are identified, more detailed discussion follows the review summary table.

2 Scope and Purpose (Part 20.25H, I)

This subpart includes basic introductory content. No updates are recommended.

Table 2-1. Review summary: Scope and Purpose

LUC Section	Title	Review Comment / Recommendations
20.25H.005	Scope	None.
20.25H.010	Purpose	None.
20.25H.015	Applicable procedure	None.
20.25H.020	Submittal requirements	None.

3 Designation of Critical Areas and Dimensional Standards (Part 20.25H, II)

This subpart provides information on the designation of critical areas and dimensional standards. Key information includes a table in LUC 20.25H.025 that directs code users to additional information for identifying critical areas, as well as a table in LUC 20.25H.035.A that summarizes buffer widths and structure setbacks by critical area type. Recommendations for this subpart primarily concern clarifying how the City's critical areas regulations address some of the GMA critical area types.

Table 3-1. Review summary: Designation of Critical Areas and Dimensional Standards

LUC Section	Title	Review Comment / Recommendations
20.25H.025	Designation of critical areas	• Clarify applicability of fish and wildlife habitat conservation areas. • Clarify applicability of frequently flooded areas. • Clarify applicability of critical aquifer recharge areas.
20.25H.030	Identification of critical area	None.
20.25H.035	Critical area buffers and structure setbacks	• Update table to reflect recommendations specified in other sections of this document.
20.25H.040	Standards for modifying non-critical area setbacks	None.
20.25H.045	Development density/intensity	None.

LUC 20.25H.025, Designation of critical areas

Fish and wildlife habitat conservation areas
As mentioned in the introduction, one of the five types of critical areas under GMA is "fish and wildlife habitat conservation areas" (FWHCAs). This term is not found in Part 20.25H LUC, Critical Areas Overlay District, and is not defined in Chapter 20.50 LUC, Definitions. However, the Environment Element of the Bellevue Comprehensive Plan (City of Bellevue 2015) states that "Designated fish and wildlife habitat conservation areas in Bellevue include riparian corridors, wetlands, naturally occurring ponds, lakes and shorelines, and steep slopes over 40 percent. Other lands may be given special consideration for fish and wildlife habitat if there is a primary association with an endangered, threatened or sensitive species."

The City should consider specifically addressing the term "fish and wildlife habitat conservation areas" in the City's critical areas regulations, in this LUC section or elsewhere. Per WAC 365-196-500(3), development regulations must be consistent with and implement the comprehensive plan. Currently, the relationship of the FWHCAs discussed in the City's comprehensive plan to the City's critical areas regulations is unclear. Additionally, WAC 365-195-915(1)(a) states that cities should address the specific policies and development regulations adopted to protect the functions and values of the critical areas on the record. Without a clear definition of FWHCAs, the specific critical areas regulations intended to designate and protect FWHCAs are not explicit.

Frequently flooded areas
Another GMA critical area type is "frequently flood areas." This term is not found in Part 20.25H LUC, Critical Areas Overlay District, and is not defined in Chapter 20.50 LUC, Definitions. However, the Environment Element of the City's comprehensive plan uses the term.

Frequently flooded areas are addressed by subpart IX, Areas of Special Flood Hazard. Specifically addressing the term "frequently flooded areas" in the City's critical areas regulations, in this LUC section or elsewhere, is recommended to improve consistency with the comprehensive plan and to better help the City demonstrate compliance with WAC 365-195-915(1)(a).

Critical aquifer recharge areas
Regarding another GMA critical area type, "critical aquifer recharge areas," (CARAs) the Environment Element of the City's comprehensive plan states that "The city regulates land use and development activities to protect public health, safety, and welfare as well as certain critical areas – such as … aquifer recharge areas… – that are especially susceptible to the negative impacts of development." CARAs were addressed in BAS documents prepared prior to adoption of the critical areas regulations currently in effect, but are not addressed in Part 20.25H LUC, Critical Areas Overlay District. If the City intends to continue without a CARA designation, a statement in the critical areas regulations indicating that CARAs are not

designated would increase clarity on this issue and better help the City demonstrate compliance with WAC 365-195-915(1)(a).

LUC 20.25H.035, Critical area buffers and structure setbacks

Critical areas buffer table
The table in this section provides a summary of other sections in the code. As these other sections are amended per the recommendations specified in other sections of this document, this table will need to be updated.

4 USE AND DEVELOPMENT IN THE CRITICAL AREAS OVERLAY DISTRICT (PART 20.25H, III)

This subpart identifies uses and development allowed within critical areas, their buffers, and associated setbacks. Performance standards are also provided. Minor updates to regulations in this subpart are recommended.

Table 4-1. Review summary: Use and Development in the Critical Areas Overlay District

LUC Section	Title	Review Comment / Recommendations
20.25H.050	Uses and development in the Critical Areas Overlay District	None.
20.25H.055	Uses and development allowed within critical areas – Performance standards	• Update culvert design guidance document referenced in LUC 20.25H.055.C.3.e. • Revise language for trails on single-family lots in LUC 20.25H.055.C.3.f.
20.25H.065	Uses and development within critical area buffer or critical area structure setback not allowed pursuant to 20.25H.055	None.

Part 20.25H.055, Uses and development allowed within critical areas – Performance standards

Culvert design
LUC 20.25H.055.C.3.e currently indicates that, "new culverts shall be designed in accordance with the Washington State Department of Fish and Wildlife document 'Design of Road Culverts for Fish Passage' now or hereafter amended." The most recent version of this document (2013) is titled Water Crossings Design Guidelines. This regulation should reference the updated document.

Private non-motorized trails
LUC 20.25H.055.C.3.f states that in stream and wetland buffers on single-family lots, trails shall not be generally parallel to the stream or wetland edge closer than a distance of 25 feet. Guidance from the Washington State Department of Ecology (Ecology) currently indicates that walkways and trails should be located in the outer 25 percent of a wetland buffer area. This

guidance should also apply to streams. This language should be revised to limit trails parallel to wetlands and streams to the outer 25 percent of the buffer, and in no case closer than 25 feet. The City could also consider extending this provision to apply to other non-motorized trails on multi-family lots or public lands.

5 STREAMS (PART 20.25H, IV)

This subpart includes a variety of regulations related to the designation and protection of streams. Key updates to BAS related to streams identify the significant impacts of untreated stormwater runoff and the value of treatment, such as low impact development; recognize the importance of protecting all streams, including non-fish bearing streams; support the importance of a densely vegetated buffer; and recognize the significance of culvert replacement standards that support the passage of sediment and wood. The BAS update does not change the range of recommended buffer widths. Several recommendations are provided to better align City stream regulations with current BAS and common statewide practices, such as using the Permanent Water Typing System and measuring buffers from the ordinary high water mark.

Table 5-1. Review summary: Streams

LUC Section	Title	Review Comment / Recommendations
20.25H.075	Designation of critical area and buffers	• Consider using the Permanent Water Typing System and applying standards from the Interim Water Typing System for additional clarification. • Consider typically measuring stream buffers from the ordinary high water mark, with the possible exception of streams located in ravines. • For buffers on eroding stream banks, require recent documentation of top-of-bank (or ordinary high water mark).
20.25H.080	Performance standards	• Apply performance standards to all streams. • Reference stormwater treatment requirements.
20.25H.085	Mitigation and monitoring – Additional provisions	None.
20.25H.090	Critical areas report – Additional provisions	• If the City elects to measure stream buffers from the ordinary high water mark, increase minimum stream buffers to 25 feet in all cases.

LUC 20.25H.075, Designation of critical area and buffers

Designation of streams

LUC 20.25H.075.B sets forth a system for designating four types of streams. This system is different from the Permanent Water Typing System provided in WAC 222-16-030. Use of the Permanent Water Typing System is not required; however, the City could consider using the Permanent Water Typing System to align with state methodology. The Permanent Water Typing System was intended to be used where stream type mapping is available. Water typing has been mapped by the Washington State Department of Natural Resources for most streams

in Bellevue; however, some streams are mapped as "unknown" and other streams may not be mapped at all. The City could also consider applying standards from the Interim Water Typing System (WAC 222-16-031) to provide additional physical criteria that describe fish-bearing, perennial, and seasonal stream characteristics.

Measurement of stream buffers
Under LUC 20.25H.075.C.1, stream buffers are typically measured from top of bank. Measuring stream buffers from the ordinary high water mark (OHWM) is a more common approach. Measuring stream buffers from the OHWM rather than top of bank could be beneficial in several respects. For one, measuring stream buffers from the OHWM would provide for an approach consistent with the City's Shoreline Master Program (SMP). Under the SMP, buffers from shoreline water bodies are measured from the OHWM. Additionally, measuring buffers from the OHWM would better align with the regulatory provisions of other agencies. For example, the U.S. Army Corps of Engineers' limit of jurisdiction for streams is the OHWM. Last, due to the widespread use of the OHWM in the regulatory setting, extensive guidance is available for making accurate and repeatable delineations of the OHWM. Accordingly, we recommend the City consider typically measuring stream buffers from the OHWM. An exception might be where a stream is located in a ravine. In such cases, the City might consider requiring a buffer measured from the top of the ravine slope.

Buffers on eroding stream bank
LUC 20.25H.075.C.1.e allows stream buffers and setbacks to be measured from "a fixed location representing the historic location of the top-of-bank" if an applicant demonstrates that the location of the top-of-bank has changed over time as a result of natural stream processes. Streams are dynamic natural features that should be expected change over time. As discussed in the 2005 BAS and supported in the BAS Update, stream buffers are intended to allow for this dynamic condition and to protect other functions and processes related to water quality, habitat, and flow processes and functions. Where erosion results in changes to the stream location, new development should be based on recent, rather than historic, conditions. Therefore, we recommend revising this regulation to require that the applicant provide a delineation of the top-of-bank (or OHWM, as discussed above) that was prepared in the preceding five years.

<u>LUC 20.25H.080, Performance standards</u>

Additional performance standards
LUC 20.25H.080.A includes six performance standards for development on sites with a Type S or F stream or associated buffer. Because updated BAS emphasizes the significance of non-fish-bearing streams on downstream habitat and water quality conditions, the stream performance standards should be expanded to apply to all stream types, not just Type S or Type F. These standards are essentially the same as those for development on sites with a wetland or wetland buffer in LUC 20.25H.100. As discussed below in Section 6, Wetlands, recent Ecology guidance includes additional impact minimization measures that address stormwater treatment. The significant effects of untreated stormwater and the benefits of stormwater treatment are

recognized in the BAS Update. LUC 24.06, Storm and Surface Water Utility Code, and code requirements associated with the proposed Low Impact Development Principles Project could be referenced here.

LUC 20.25H.090, Critical areas report – Additional provisions

Limitation on modifications
LUC 20.25H.090.A includes minimum stream buffers ranging from 10 to 25 feet. If the City elects to measure stream buffers from the OHWM rather than top of bank, we would recommend that the City also increase the minimum stream buffers in LUC 20.25H.090 to a minimum of 25 feet in all cases to conform to a minimum functional buffer width.

6 WETLANDS (PART 20.25H, V)

Since the City's previous critical areas update in 2006, Ecology has comprehensively updated its guidance for local wetland regulations. Consequently, a number of updates to the City's wetland critical area regulations are recommended. Notable recommendations for the regulations of wetlands include updating the wetland rating system and providing more detailed mitigation regulations.

Table 6-1. Review summary: Wetlands

LUC Section	Title	Review Comment / Recommendations
20.25H.095	Designation of critical area and buffers	• Require wetlands be delineated using the approved federal wetlands delineation manual and applicable regional supplements. • Update this section to classify wetlands based on the most recent version of the Washington State Wetland Rating System for Western Washington. • Update the standard wetland buffers to work with the most recent version of the Washington State Wetland Rating System for Western Washington.
20.25H.100	Performance standards	• Update performance standards to reference applicable city-wide stormwater standards.
20.25H.105	Mitigation and monitoring – Additional provisions	• Consider providing more explicit mitigation ratios. • City should clearly establish if and when the use of third-party mitigation programs is permitted. • Consider allowing mitigation based on the credit/debit method.
20.25H.110	Critical area report – Additional provisions	• For critical area reports, require wetland classification based on the most recent version of the Washington State Wetland Rating System for Western Washington.

LUC 20.25H.095, Designation of critical area and buffers

Delineation methodology

The City's critical areas regulations currently do not address the methodology for delineating wetlands. This section would be an appropriate location for the City to require that wetlands be delineated using the approved federal wetlands delineation manual and applicable regional supplements. Specifically, the Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0 (U.S. Army Corps of Engineers 2010) should be the applied methodology.

Wetland rating system

This section currently requires the classification of wetlands based on the Washington State Wetland Rating System for Western Washington, Ecology Publication Number 04-06-025, published August 2004. Ecology updated this publication in 2014. Accordingly, this section should now require the classification of wetlands based on the Washington State Wetland Rating System for Western Washington: 2014 Update, Ecology Publication Number #14-06-029. This will include amending the wetland category descriptions in LUC 20.25H.095.B.1 through LUC 20.25H.095.B.4.

Standard wetland buffer widths

The updated wetland rating system described in the previous paragraph included revised wetland scoring scales. The City's standard wetland buffer widths in LUC 20.25H.095.C.1.a.i should be updated to work with the updated wetland rating system (Table 6-2). Standard wetland buffer widths in the existing code are generally consistent with those proposed by Ecology. It should be noted that use of the standard buffer assumes "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." The City currently addresses the quality of vegetation within the buffer through its Critical Areas Report evaluation process (LUC 20.25H.230).

Table 6-2. Standard buffer widths based on Ecology guidance (Ecology 2015)

Wetland Category and Type	Buffer width (in feet) based on habitat score (3-9)			
	3-4	5	6-7	8-9
I: Bogs and wetlands of high conservation value	190			225
I: All others	75	105	165	225
II	75	105	165	225
III	60	105	165	225
IV	40			

LUC 20.25H.100, Performance standards

Additional performance standards

LUC 20.25H.100 includes six performance standards for development on sites with a wetland or wetland critical area buffer. Ecology guidance in Wetland Guidance for CAO Updates, Western Washington Version (Ecology 2016) includes additional impact minimization measures associated with low impact development and stormwater control and treatment (see Appendix A; Section XX.050, Wetland Buffers; Table XX.2 in Ecology 2016). Given the updated understanding of the significance of stormwater treatment to the health of aquatic species including salmonids, LUC 24.06, Storm and Surface Water Utility Code, and code requirements associated with the proposed Low Impact Development Principles Project could be referenced here.

LUC 20.25H.105, Mitigation and monitoring – Additional provisions

Mitigation ratios

LUC 20.25H.095.C sets forth mitigation ratios for wetland creation or restoration. The current ratios are in-line with Ecology guidance. However, Ecology guidance also now includes mitigation ratios for both wetland rehabilitation and enhancement, as well as ratios for a combination of approaches. The City's current code provides opportunities for the Director to use discretion to adjust mitigation ratios for rehabilitation or enhancement activities. The City should consider providing more explicit mitigation ratios for rehabilitation and enhancement, as provided in Ecology guidance (Table 6-3).

Table 6-3. Recommended compensatory wetland mitigation ratios

Category and Type of Wetland Impacts	Re-establishment or Creation	Re-habilitation Only	Re-establishment or Creation (R/C) and Rehabilitation (RH)	Re-establishment or Creation (R/C) and Enhancement (E)	Enhancement Only
Category I Bog or Natural Heritage Site	Not allowed	6:1 Rehabilitation of a bog	Not allowed	Not allowed	Case by case
Category I – based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1

Third-party mitigation
The existing code does not explicitly allow or prohibit the use of third-party mitigation, such as mitigation banks or in-lieu fee programs. Mitigation banks and in-lieu fee programs provide flexibility for compensatory mitigation. The potential advantages and disadvantages to allowing for the use of mitigation bank and in-lieu fee credits are discussed in the BAS Update. Certified wetland mitigation banks and in-lieu fee programs available for use by City residents are also discussed in the BAS Update. The current code includes a provision in Part 20.25H.XI that allows for "innovative mitigation," but given the state and federal preference for the use of mitigation banks and in-lieu fee programs, as well as the recent development of these mitigation opportunities in the Cedar-Sammamish watershed, the City should clearly establish if and when the use of these programs is permitted.

Credit/Debit method
The Wetlands subpart does not currently explicitly allow use of the credit/debit method, a functions-based alternative to set mitigation ratios (Hruby 2012). While other local jurisdictions still use set mitigation ratios, many also allow the use of the credit/debit method to enable use of mitigation banks and in-lieu fee programs. In the Ecology publication Wetland Guidance for CAO Updates, Western Washington Version (Ecology 2016), the example wetlands code includes the following regulation that allows the use of the credit/debit method. The City could include a similar regulation in this LUC section.

> I. Credit/Debit Method. To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance Wetland Mitigation in Washington State Parts I and II (Ecology Publication #06-06-011a-b, Olympia, WA, March 2006), the administrator may allow mitigation based on the "credit/debit" method developed by the Department of Ecology in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report, (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised).

Ecology issued the credit/debit tool in 2012 before the current 2014 wetland rating system was completed. As a result, use of the credit/debit method effectively requires two separate wetland ratings: one for buffer determination, with the 2014 rating system; and one for credit-debit calculation, with the credit/debit method rating system. While the option to use the credit/debit method is based on a wetland functions analysis and provides more flexibility for applicants, the method is inherently more complex than use of mitigation ratios.

<u>LUC 20.25H.110, Critical area report – Additional provisions</u>

Functional evaluation
LUC 20.25H.110.B.3 requires a functional evaluation for the wetland and adjacent buffer using a local or state agency staff-recognized method. This provision should be revised to require the classification of wetlands based on the Washington State Wetland Rating System for Western Washington: 2014 Update, Ecology Publication Number #14-06-029.

7 SHORELINES (PART 20.25H, VI)

The City's comprehensive update of its SMP is currently in progress. An SMP must include regulations for the protection of shoreline critical areas, and pursuant to RCW 90.58.090, those regulations must provide a level of protection to shoreline critical areas "at least equal" to a jurisdiction's general critical areas regulations. The City's most recent draft SMP incorporates the City's general critical areas regulations by reference. Conformance amendments associated with the draft SMP will modify Part 20.25H LUC, Critical Areas Overlay District, as necessary to ensure alignment between the SMP and Part 20.25H LUC.

Table 7-1. Review summary: Shorelines

LUC Section	Title	Review Comment / Recommendations
20.25H.115	Designation of Critical Area and Buffers.	None.
20.25H.118	Mitigation and Monitoring – Additional Provisions.	None.
20.25H.119	Critical Areas Report – Additional Provisions.	None.

8 GEOLOGIC HAZARD AREAS (PART 20.25H, VII)

Geologic hazard areas regulations should be updated to incorporate current BAS. Specific considerations are discussed below.

Table 8-1. Review summary: Geologic Hazard Areas

LUC Section	Title	Review Comment / Recommendations
20.25H.120	Designation of critical area and buffers	• Include seismic hazard areas in critical areas designation for purposes of disclosure only. • Consider revising the minimum toe-of-slope setback verbiage, currently a minimum of 75 feet, to site-specific geotechnical studies to reflect uniqueness of individual landslide hazard sites and that adjustments in the toe-of-slope setback may be required depending on site topography and conditions that may be conducive to fast moving, shallow debris slides and flows.
20.25H.125	Performance standards – Landslide hazards and steep slopes	• Consider adjusting performance standards to further address measures that protect habitat.
20.25H.130	Performance standards – Coal mine hazard area	None.
20.25H.135	Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes	None.

LUC Section	Title	Review Comment / Recommendations
20.25H.140	Critical areas report – Additional provisions for landslide hazards and steep slopes	None.
20.25H.145	Critical areas report – Approval of modification	None.

LUC 20.25H.120, Designation of critical area and buffers

Seismic hazard areas
According to WAC 365-190-120, "Seismic hazard areas must include areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement or subsidence, soil liquefaction, surface faulting, or tsunamis." The City should designate areas of known faults and Holocene displacement, as well as mapped areas of liquefaction susceptibility as seismic hazard areas. 64.06 RCW addresses information required in a seller's real estate disclosure form. This form requires disclosure of any shorelines, wetlands, floodplains, or critical areas on the property. By designating seismic hazards as critical areas, known seismic hazards would be disclosed to potential buyers.

Because more information is likely to be gained on the limits of the Seattle fault zone and the potential for surface fault rupture, the City should consider referencing these updated studies that may better delineate limits of the Seattle fault zone, as well as the recurrence intervals of earthquake events.

Toe-of-slope setback
Recent landslide events, such as the March 2014 Oso Landslide, have reinforced the uncertainties of runout distances associated with fast-moving debris slides or flows. This in no way suggests an Oso-type landslide is likely in the Bellevue area, but the concept of the distance a fluid, debris filled soil mass may travel does apply. This concern is related to the setback distances from the toes of slopes of landslide hazard areas. The determination of setback distances from the toe of landslide hazard areas should be based on individual site characteristics that would include topography and geomorphology that occur at each site. Of particular concern are slopes with incised drainages or ravines that are sources of accumulated alluvium and slope debris and provide a source area for a debris flow or slide under specific circumstances.

LUC 20.25H.125, Performance standards –Landslide hazards and steep slopes

Protection of habitat on steep slopes

The City currently regulates steep slopes for habitat, and the City's recently updated comprehensive plan includes slopes over 40 percent in the definition of Fish and Wildlife

Habitat Conservation Areas. The City should consider adjusting the performance standards in LUC 20.25H.125 to better clarify the regulation of steep slopes for the conservation of habitat.

9 Habitat Associated with Species of Local Importance (Part 20.25H, VIII)

This subpart designates 23 species of local importance and features associated regulations, including requirements for a habitat assessment. Recommendations for this subpart are minor, and include clarifying when use of the Functional Assessment Model is required.

Table 9-1. Review summary: Habitat Associated with Species of Local Importance

LUC Section	Title	Review Comment / Recommendations
20.25H.150	Designation of critical area	• Consider referencing the state's priority habitats and species list for species of local importance.
20.25H.155	Uses in habitat for species of local importance	None.
20.25H.160	Performance standards	None.
20.25H.165	Critical areas report – Additional provisions	• Consider adding language that clarifies when use of the Functional Assessment Model is required.
20.25H.170	Process to identify additional species of local importance	None.

LUC 20.25H.150, Designation of critical area

Species of local importance

The existing provisions in this LUC section identify 23 species of local importance. Several of these are not designated as priority species by Washington State, and specific conservation measures for the species may not be necessary. In order to ensure that the designation of species of local importance remains current with the most recent scientific understanding over time, the City should consider listing those species that occur in Bellevue based on the state's list of priority species, as updated.

LUC 20.25H.165, Critical areas report – Additional provisions

Habitat assessment

Per the existing provisions of this LUC section, a critical area report to modify the performance standards for habitat for species of local importance must include a habitat assessment. The required elements of a habitat assessment are specified in the code, and do not include the City of Bellevue Functional Assessment Model (COB FAM), a tool developed in 2009 to provide a standardized, reproducible means of evaluating habitat in an urban or urbanizing setting. The model allows users to rate habitat on a property based on its potential to support species of local importance and other wildlife. Although the use of the COB FAM is not specified in the code, it has been common practice to include the COB FAM in habitat assessments. The City

should modify LUC 20.25H.165.A to clarify if and when use of the COB FAM is required as part of a habitat assessment.

10 Areas of Special Flood Hazard (Part 20.25H, IX)

This subpart includes a suite of regulations related to development in the 100-year floodplain. Most of these regulations are intended to protect human health and safety. Recommendations are related to forthcoming updates to flood publications and to habitat assessments prepared to comply with the National Marine Fisheries Service biological opinion.

Table 10-1. Review summary: Areas of Special Flood Hazard

LUC Section	Title	Review Comment / Recommendations
20.25H.175	Designation of critical area	• Consider revising the language in LUC 20.25H.175.A.2, as well as other language in this LUC section, to ensure a clear transition to new flood publications.
20.25H.180	Development in the area of special flood hazard	• Highlight that the City will require floodplain developments to meet National Flood Insurance Program requirements related to the protection of floodplain ecological functions.

LUC 20.25H.175, Designation of critical area

Areas identified on the flood insurance rate map(s)
LUC 20.25H.175.A.2 indicates that areas of special flood hazard are "areas identified by the Federal Insurance Administration in a scientific and engineering report entitled The Flood Insurance Study for Bellevue dated December 1978, with accompanying flood insurance maps(s) and any revisions thereto." These publications are in the process of being updated. To avoid confusion about what publications will apply once the updates have been finalized, we recommend revising the language in this regulation, as well as other language in this LUC section, to ensure a clear transition to the new flood publications.

LUC 20.25H.180, Development in the area of special flood hazard

Habitat assessment
In order to comply with the 2008 National Marine Fisheries Service biological opinion related to the implementation of the National Flood Insurance Program, it is required to either amend regulations to protect floodplain functions or require habitat assessments for development in the floodway or floodplain. Through either approach, the City must ensure that development within the Special Flood Hazard Area (100-year floodplain) and riparian buffer zone, which extends 250 feet from the ordinary high water mark where a flood feature is present, does not adversely affect water quality, water quantity, flood volumes, flood velocities, spawning substrate, or floodplain refugia for listed salmonids. The City currently requires floodplain habitat assessments, but this requirement is not codified. The City should highlight in this LUC

section that the City will require floodplain developments to meet National Flood Insurance Program requirements related to the protection of floodplain ecological functions.

11 Reasonable Use (Part 20.25H, X)

State guidance indicates that critical areas regulations must include provisions that allow for "reasonable use" of properties constrained by the presence of critical areas. LUC 20.25H.190 through LUC 20.25H.205 provide such provisions. No updates are recommended.

Table 11-1. Review summary: Reasonable Use

LUC Section	Title	Review Comment / Recommendations
20.25H.190	Reasonable use exception – Purpose	None.
20.25H.195	Reasonable use exception – Process	None.
20.25H.200	Reasonable use exception – Applicability	None.
20.25H.205	Reasonable use exception – Performance standards	None.

12 General Mitigation and Restoration Requirements (Part 20.25H, XI)

This subpart sets forth general requirements for mitigation and restoration, with the majority of the content addressing the required content for mitigation and restoration plans. No updates to this subpart are recommended.

Table 12-1. Review summary: General Mitigation and Restoration Requirements

LUC Section	Title	Review Comment / Recommendations
20.25H.210	Applicability	None.
20.25H.215	Mitigation sequencing	None.
20.25H.220	Mitigation and restoration plan requirements	None.
20.25H.225	Innovative mitigation	None.

13 Critical Areas Report (Part 20.25H, XII)

This subpart features regulations associated with critical areas reports, such as required content. No updates to this subpart are recommended.

Table 13-1. Review summary: Critical Areas Report

LUC Section	Title	Review Comment / Recommendations
20.25H.230	Critical areas report – Purpose	None.
20.25H.235	Critical areas report – Review process	None.
20.25H.240	Critical areas report – Limitation on modifications	None.
20.25H.245	Incorporation of best available science	None.
20.25H.250	Critical areas report – Submittal requirements	None.
20.25H.255	Critical areas report – Decision criteria	None.
20.25H.260	Critical areas report – Assurance devices	None.
20.25H.265	Critical areas report – City technical review	None.
20.25H.270	Critical areas report – Independent third-party review	None.

14 References

City of Bellevue. 2015. City of Bellevue Comprehensive Plan.

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Hruby, T. 2012. Calculating Credits and Debits for Compensatory Mitigation in Wetlands in Western Washington. Publication #10-06-011.

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15 Acronyms and Abbreviations

BAS..... Best available science
BAS Update..... City of Bellevue Critical Areas Regulations: Update to Best Available Science and Existing Conditions
CARA..... Critical aquifer recharge area
City..... City of Bellevue
Ecology ..... Washington State Department of Ecology
FWHCA ..... Fish and wildlife habitat conservation area
GMA..... Growth Management Act
LUC ..... Land Use Code
OHWM ..... Ordinary high water mark
RCW ..... Revised Code of Washington
SMP ..... Shoreline Master Program
WAC Washington Administrative Code