City of Bellevue

MEMORANDUM

DATE: October 18, 2013

TO: Chair Tebelius and Members of the Planning Commission

FROM: Carol Helland, Land Use Director, 425-452-2724
Mike Bergstrom, Principal Planner, 425-452-2970
Shoreline Update Team
Development Services Department

SUBJECT: Shoreline Master Program Conformance Amendments – Critical Areas Overlay (Part 20.25H LUC)

INTRODUCTION

At your October 9 meeting, staff presented an initial set of Shoreline Master Program Update "conformance amendments" to the Planning Commission for review and discussion. These are amendments to the Land Use Code (LUC) that will bring various sections into conformance with the Shoreline Master Program (SMP) as recommended by the Commission to Council. The proposed amendments presented to the Commission on October 9 did not include amendments to Part 20.25H of the Land Use Code (Critical Areas Overlay), which will be the subject of your October 23 study session.

The October 23 study session will continue the Commission's review of the conformance amendments necessary to ensure that the Land Use Code will be internally consistent with the Planning Commission-recommended Shoreline Master Program. This review is in keeping with direction received from Council in July 2013, which emphasized the desire to share information broadly, move forward expeditiously, and to limit the amount of rework or work duplication. Specifically, Council directed staff to engage the Department of Ecology, the Planning Commission, consultants, and Council leading up to the final submittal of the SMP Update to Ecology.

Following your October 23 study session, staff will combine the Critical Areas Overlay amendments with the Land Use Code conformance amendments reviewed on October 9 into a single draft ordinance for a December public hearing. The overall SMP Update Completion Timeline (Attachment 1) depicts the procedural relationship of these conformance amendments with the finalization of the SMP Update.

CONFORMANCE AMENDMENTS

The purpose of conformance amendments is to ensure that the adoption of one piece of legislation (in this case the Planning Commission-recommended Part 20.25E LUC) does not create conflicts or inconsistencies with other existing legislation (in this case the rest of the Land Use Code). The existing code provisions are amended to bring them into conformance with the new legislation in order to allow that legislation to operate as intended.

The conformance amendments reviewed by the Commission on October 9 were fairly mechanical in nature, essentially creating cross-references, correcting internal references and citations, clarifying which parts of the LUC are not applicable to the Shoreline Overlay District, and proposing similar clarity amendments.

Amendments to Part 20.25H (Critical Areas Overlay) were not included with the October 9 materials. Due to the unique interrelationship between the Critical Areas Overlay and the Shoreline Overlay District, staff wanted to make sure that any conformance amendments that were proposed did not result in unintended conflicts or regulatory gaps. While most of the amendments shown in Attachment 2 are similar in nature to those reviewed on October 9, one provision (LUC 20.25H.055.C.3.f) required somewhat more extensive revision to ensure that an unintended result was not created. Specifically, this edit provides an avenue for homeowners to cross an intervening wetland to access a use (moorage) that is permitted in the shoreline jurisdiction. It is intended to balance the need for shoreline access on the one hand under the Shoreline Overlay District while protecting wetland functions and values under the Critical Areas Overlay.

Although there was interest expressed in reviewing some of the Areas of Special Flood Hazard regulations as part of these conformance amendments, doing so entails a broader discussion of policy and program implications that is beyond the scope of these conformance amendments. As recognized by the Commission in your transmittal of the SMP Update to Council, there are several issues related to shorelines or critical areas that need further examination as part of a future work program effort. At the upcoming Planning Commission retreat, staff will be seeking Commission input on work program priorities for feedback to Council, and that would be an appropriate venue to begin prioritizing commission-desired amendments to the flood hazard regulations vis-à-vis other important code amendment demands.

For the purpose of the October 23 meeting, Part 20.25H LUC is included in its entirety in Attachment 2 to make it easier to understand the context in which the amendments to this Part are proposed. For the upcoming public hearing, all proposed conformance amendments will be merged into a single draft ordinance which will include only the specific code sections being amended.

Staff will be available on October 23 to review this item and respond to any questions you might have.

NEXT STEPS

Staff will return to the Planning Commission in December for a public hearing and recommendation on a combined amendment ordinance, tentatively scheduled for December 11, 2013. If the Commission desires an additional study session on this subject, one can be scheduled and the public hearing date adjusted accordingly.

ATTACHMENTS

1. SMP Update Completion Timeline
2. Draft Land Use Code conformance amendments – Critical Areas Overlay

	2013				2014									
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
City Council		• Evaluate SMP Update adoption risk		• Review conformance amendments • Direction on Cumulative Impact Analysis				• Public Hearing on final SMP package • Review/Approve final packet		• Final packaging (staff) • Submit to Ecology				
		• Council Study Session Briefings on Substantive SMP Update topics and engagement with PC, as necessary												
Plng Comm		• Conformance amendments review, public hearing, and recommendation												
Ecology	• Narrowing of issues • Input on CIA scope												• Review of complete package • Public hearing	
Consultant		• Support staff on guideline compliance issues		• Cumulative Impact Analysis										
Staff	• Preparation for Stakeholder Engagements • Code Drafting • SEPA review *													
Public	• Website updates, public meetings and hearings													

**SEPA timeline will vary depending on form of SEPA review required on final package (i.e., DNS or MDNS vs. Supplemental EIS).*

SMP Update Completion Timeline

Attachment 1

Attachment 1

Part 20.25H Critical Areas Overlay District Amended Ord. 6102

I. SCOPE AND PURPOSE

20.25H.005 Scope.

This part establishes standards and procedures that apply to development within the "Critical Areas Overlay District," which includes any site that is in whole or in part designated as a critical area or critical area buffer. All development within the Critical Areas Overlay District must be reviewed and approved pursuant to this part in addition to being subject to all other relevant standards of the Bellevue City Code. The Critical Areas Overlay District does not apply to the Downtown.

20.25H.010 Purpose.

The Critical Areas Overlay District is a mechanism by which the City recognizes the existence of natural conditions which affect the use and development of property. Through this part, the City designates and classifies ecologically sensitive and hazard areas and imposes regulations on the use and development of affected property in order to protect the functions and values of these areas and the public health, safety and welfare, and to allow the reasonable use of private property.

20.25H.015 Applicable procedure.

The Critical Areas Overlay District consists of two parts: that part of a site that is not contained within a critical area, critical area buffer, or critical area structure setback, and that part of a site that is within a critical area, critical area buffer, or critical area structure setback.

A. If a proposal avoids all disturbance or modification of the critical area, critical area buffer, and critical area structure setback, the proposal is subject to the provisions of this part through the review process for the underlying permit or approval required for the development, and a decision on such application may be appealed according to the appeal process for the underlying permit or approval.

B. If a proposal involves disturbance to or modification of the critical area, critical area buffer, or critical area structure setback, then in addition to the review process for the underlying permit or approval required for the development, the proposal shall require a Critical Areas Land Use Permit, Part 20.30P LUC, except where otherwise indicated in this part.

20.25H.020 Submittal requirements.

A. The Director shall specify the submittal requirements, including type, detail and number of copies, for a use or development application to be deemed complete and accepted for filing.

B. The Director may waive specific submittal requirements determined to be unnecessary for review of an application.

II. DESIGNATION OF CRITICAL AREAS AND DIMENSIONAL STANDARDS

20.25H.025 Designation of critical areas.

The following areas are hereby designated as critical areas. For additional information about identifying each critical area, see the specific sections noted.

Critical Area Category or Type	Additional Information Identifying Critical Area
Streams	
Type S water	LUC 20.25H.075
Type F water	LUC 20.25H.075
Type N water	LUC 20.25H.075
Type O water	LUC 20.25H.075
Closed segment, regardless of type; Kelsey Creek drainage basin	LUC 20.25H.075
Closed segment, regardless of type; all other drainage basins	LUC 20.25H.075
Wetlands	
Category I	LUC 20.25H.095
Category II	LUC 20.25H.095
Category III	LUC 20.25H.095
Category IV over 2,500 square feet	LUC 20.25H.095
~~**Shorelines**~~	
~~Shorelines~~	~~LUC 20.25E.017.D~~
Geologic Hazard Areas	
Landslide hazards	LUC 20.25H.120
Steep slopes	LUC 20.25H.120
Coal mine hazard areas	LUC 20.25H.120
Habitat Associated with Species of Local Importance	
Habitat associated with species of local importance	LUC 20.25H.150
Areas of Special Flood Hazard	
Areas of special flood hazard	LUC 20.25H.175

Comment [CoB1]: Shorelines are not regulated as critical areas.

(Ord. 5680, 6-26-06, § 3)

20.25H.030 Identification of critical area.

A. Determining Presence of Critical Area.

A determination of whether a site contains a critical area, critical area buffer, or critical area structure setback shall be made as part of the review process for the proposal, based on information provided by the applicant. The Director may specify the information required to determine the presence and extent of such areas, including, but not limited to: site surveys, topographic maps, technical environmental analysis, peer

reviews, or other information the Director deems necessary. The location and extent of critical areas, critical area buffers, and critical area structure setbacks may be required to be surveyed, marked in the field with permanent signage, and fenced to separate such areas from development.

B. Recording Required.

1. Site Plan. The property owner receiving approval of a use or development within the Critical Areas Overlay District pursuant to this part shall record a site plan or other instrument clearly delineating the critical area, critical area buffer, and critical area structure setback with the King County Division of Records and Elections. The site plans must include a statement that the provisions of this part as now or hereafter amended control use and development of the subject property. Single lot residential development in single-family residential land use districts is exempt from this recording requirement, except where explicitly required in this part or where required as part of a voluntary compliance agreement or corrective action for a violation of this part, pursuant to Chapter 1.18 BCC.

2. Native Growth Protection Area/Easement. The Director may also require recording of the delineation of, and restrictions of, Native Growth Protection Areas (NGPA) or Native Growth Protection Easements (NGPE) designated as part of an approval of a subdivision, short subdivision or Planned Unit Development within the Critical Areas Overlay District, and as part of any approval to modify a critical area or critical area buffer. The NGPA or NGPE shall contain at minimum:

a. An assurance that the NGPA or NGPE will be kept free from all development and disturbance except where allowed or required for habitat improvement projects, vegetation management, and new or expanded City parks pursuant to LUC 20.25H.055; and that native vegetation, existing topography, and other natural features will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering and protecting plants and animal habitat;

b. The right of the City of Bellevue to enter the property to investigate the condition of the NGPA or NGPE upon reasonable notice;

c. The right of the City of Bellevue to enforce the terms of the restriction; and

d. A management plan for the NGPA or NGPE designating future management responsibility.

20.25H.035 Critical area buffers and structure setbacks.

A. Critical Area Buffer.

The following critical area buffers and structure setbacks are established for each critical area set forth below. For information about modifying required critical area buffers and structure setbacks, see the referenced sections noted in the table.

Critical Area Category or Type	Critical Area Buffer Width		Structure Setback		Modification of Buffer or Setback
Streams					
	Undeveloped Site[1]	**Developed Site**[1]	**Undeveloped Site**[1]	**Developed Site**[1]	
Type S water	100 ft	50 ft	20 ft	50 ft	LUC 20.25H.075 LUC 20.25H.230
Type F water	100 ft	50 ft	20 ft	50 ft	LUC 20.25H.075 LUC 20.25H.230
Type N water	50 ft	25 ft	15 ft	25 ft	LUC 20.25H.075 LUC 20.25H.230
Type O water	25 ft	25 ft	10 ft	None	LUC 20.25H.075 LUC 20.25H.230
Closed segment, regardless of type; Kelsey Creek drainage basin	None	None	50 ft or combined buffer and structure setback required for stream type, whichever is less	50 ft or combined buffer and structure setback required for stream type, whichever is less	LUC 20.25H.075 LUC 20.25H.230
Closed segment, regardless of type; all other drainage basins	None	None	10 ft	10 ft	LUC 20.25H.075 LUC 20.25H.230
Wetlands					
	Undeveloped Site[2]	**Developed Site**[2]	**Undeveloped Site**[2]	**Developed Site**[2]	
Category I		As established through previously approved and recorded NGPA or NGPE for wetland	20 ft	20 ft from edge of previously approved and recorded NGPA or NGPE	LUC 20.25H.095 LUC 20.25H.230
Natural heritage wetland	190 ft				
Bogs	190 ft				
Forested wetland	Based on score for habitat or water quality				
Habitat score of 29 to 36	225 ft				
Habitat score of 20 to 28	110 ft				
Water quality score of 24 to 32 and habitat	75 ft				

score of less than 20					
All others	75 ft				
Category II		As established through previously approved and recorded NGPA or NGPE for wetland	20 ft	20 ft from edge of previously approved and recorded NGPA or NGPE	LUC 20.25H.095 LUC 20.25H.230
Habitat score of 29 to 36	225 ft				
Habitat score of 20 to 28	110 ft				
Water quality score of 24 to 32 and habitat score of less than 20	75 ft				
All others	75 ft				
Category III		As established through previously approved and recorded NGPA or NGPE for wetland	15 ft	15 ft from edge of previously approved and recorded NGPA or NGPE	LUC 20.25H.095 LUC 20.25H.230
Habitat score of 20 to 28	110 ft				
All others	60 ft				
Category IV over 2,500 square feet		As established through previously approved and recorded NGPA or NGPE for wetland	None	None	LUC 20.25H.095 LUC 20.25H.230
All	40 ft				
~~Shorelines~~					
	~~Undeveloped Site[3]~~	~~Developed Site[3]~~	~~Undeveloped Site[3]~~	~~Developed Site[3]~~	
~~All shorelines~~	~~50 ft~~	~~25 ft~~	~~None~~	~~25 ft~~	~~LUC 20.25H.115~~ ~~LUC 20.25H.230~~
Geologic Hazard Areas					
Landslide hazards	Toe-of-slope: None		Toe-of-slope: 75 ft		LUC 20.25H.120 LUC 20.25H.230
	Top-of-slope: 50 ft		Top-of-slope: None		
Steep slopes	Toe-of-slope: None		Toe-of-slope: 75 ft		LUC 20.25H.120 LUC 20.25H.230
	Top-of-slope: 50 ft		Top-of-slope: None		
Coal mine hazard areas	See LUC 20.25H.130		See LUC 20.25.130		LUC 20.25H.120 LUC 20.25H.230

Comment [CoB2]: Shorelines not regulated as critical area.

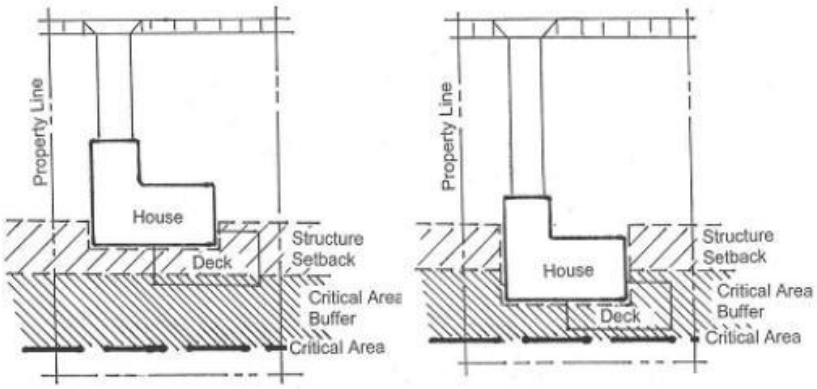
Habitat Associated with Species of Local Importance			
Habitat associated with species of local importance	Only if required for known species on site	None	N/A
Naturally occurring ponds with no other critical area designation	35 ft	None	LUC 20.25H.230
Areas of Special Flood Hazard			
Areas of special flood hazard	None	None	N/A

1 For a definition of "undeveloped site" and "developed site" for sites with streams, see LUC 20.25H.075.C.1.a.
2 For a definition of "undeveloped site" and "developed site" for sites with wetlands, see LUC 20.25H.095.C.1.a.
~~3 For a definition of "undeveloped site" and "developed site" for sites with shorelines, see LUC 20.25H.115.B.1.a.~~

Comment [CoB3]: Footnote no longer needed.

B. Buffer and Setback on Sites with Existing Primary Structure(s).

Where a primary structure legally established on a site prior to August 1, 2006, encroaches into the critical area buffer or structure setback established in subsection A, the critical area buffer and/or structure setback shall be modified to exclude the footprint of the existing primary structure. Expansion of any existing structure into the critical area buffer or critical area structure setback shall be allowed only pursuant to the provisions of LUC 20.25H.055 (single-family primary structures) or LUC 20.25H.230 (all other primary structures).



20.25H.040 Standards for modifying non-critical area setbacks.

A. When Applicable.

Certain provisions of this part allow disturbance within a critical area or critical area buffer. This section applies when, pursuant to another section of this part, the applicant must demonstrate that non-critical area setbacks have been modified to the maximum extent allowed under this section. The provisions of this section may not be modified through a critical areas report.

B. Allowed Modifications to General Dimensional Chart.

The required dimensions of LUC 20.20.010 for non-critical area setbacks may be reduced to no less than the minimums set forth in this subsection; provided, that the modification shall be the minimum necessary to allow avoidance of the critical area and critical area buffer. All other provisions of LUC 20.20.010 shall apply, including the applicable footnotes from the general dimensional chart.

Land Use District	R-1	R-1.8	R-2.5	R-3.5 R-4 R-5 R-7.5*	R-10 R-15 R-20	R-30
Front Yard (ft) (1)	25	20	10	10	10	10

Rear Yard (ft)	20	20	20	15	20	20
Side Yard (ft)	5	5	5	5	5	5 (2)
2 Side Yards (ft)	15	10	10	10	10	10

*Not effective within the jurisdiction of the East Bellevue Community Council.

Notes:

1. Any garage or other structure shall be set back the minimum necessary to allow on-site parking on any driveway without blocking a sidewalk. For proposals without garages, there shall be sufficient area on the site to allow for required on-site parking without blocking a sidewalk.

2. A side yard setback in R-30 Districts increases to 20 feet on any side yard where the structure exceeds 30 feet above average finished grade.

C. Allowed Modifications to Transition Area Requirements.

The minimum structure setback established in subsection B.1 of this section may not be modified under this section. The minimum separation between structures established in subsection B.2 of this section may be reduced to no less than six feet between structures; provided, that the modification shall be the minimum necessary to allow avoidance of the critical area and critical area buffer.

20.25H.045 Development density/intensity.

A. General.

For development in the Critical Areas Overlay District, the number of dwelling units per acre and the maximum floor area ratio for office space is determined pursuant to this section. The provisions of this section may not be modified through a critical areas report.

B. Dwelling Units per Acre.

The maximum density allowed for a site in the Critical Areas Overlay District is equal to the number of dwelling units per acre as specified in LUC 20.20.010, times the buildable area in acres, plus the dwelling units per acre times the total area of critical area and critical area buffer in acres times the development factor derived from subsection D of this section:

[(DU/acre)(Buildable area in acres) + (DU/acre)(Total critical area and critical area buffer in acres)(Development factor)] = Maximum dwelling unit potential

The dwelling unit per acre calculation contained in this subsection does not apply in the Bel-Red Land Use Districts.

C. Floor Area Ratio.

1. Office floor area outside the Bel-Red Land Use Districts.

a. The maximum allowable office floor area for a site which contains a critical area or critical area buffer is equal to 0.5 times the buildable area in square feet plus 0.5 times the total area in critical area and critical area buffer in square feet times the development factor derived from subsection D of this section:

[(0.5)(Buildable area in square feet) + (0.5)(Total critical area and critical area buffer in square feet)(Development factor)] = Maximum office development potential

b. A property within the Critical Areas Overlay District is exempt from the sliding scale FAR requirement of LUC 20.20.010, Note (8). The applicable maximum floor area ratio to the buildable area is 0.5 regardless of building square footage.

2. Floor area within the Bel-Red Land Use Districts.

The maximum allowable floor area for a site which contains a critical area or critical area buffer is equal to the maximum FAR for the applicable Bel-Red Land Use District (refer to dimensional requirements of LUC 20.25D.080) times the buildable area in square feet plus the maximum FAR for the applicable Bel-Red Land Use District times the total area in critical area and critical area buffer in square feet times the development factor derived from subsection D of this section:

[(Maximum FAR for the applicable Bel-Red Land Use District)(Buildable area in square feet) + (Maximum FAR for the applicable Bel-Red Land Use District)(Total critical area and critical area buffer in square feet)(Development factor)] = Maximum development potential within the Bel-Red Land Use Districts.

D. Development Factor.

The development factor is a percent credit to be used in computing the number of allowed dwelling units or the maximum allowed office floor area for a site within the Critical Areas Overlay District. The development factor is determined by figuring the percentage of the total site that is buildable area, divided by 100. The result should be rounded to the nearest hundredth. The following table illustrates the development factor:

Total site (as %)	Critical area and critical area buffer total (as % of total site)	Buildable area (as % of total site)	Development factor (% BA/100)
100	10	90	.9
100	35	65	.65
100	50	50	.5
100	75	25	.25
100	90	10	.1

III. USE AND DEVELOPMENT IN THE CRITICAL AREAS OVERLAY DISTRICT

20.25H.050 Uses and development in the Critical Areas Overlay District.

A. Uses.

1. General. The uses established by LUC 20.10.440 for the applicable land use district may be undertaken in the Critical Areas Overlay District as allowed for in the underlying land use district. All development associated with the use shall comply with the provisions of this part.

2. Shorelines. Where the Critical Areas Overlay District and Shoreline Overlay District apply to the same site, the uses established by LUC 20.10.440 for the underlying land use district may be undertaken. Additional uses in the Shoreline Overlay District are set forth in LUC 20.25E.~~080~~020 and .030. The applicable permitting process to establish the allowed uses within the Shoreline Overlay District is set forth in LUC

Comment [CoB4]: Reference citation update.

20.25E.~~070~~100-.190. All development associated with the use shall comply with the provisions of this part and Part 20.25E LUC.

B. Development.

1. Coal Mine Hazard Areas and Habitat Associated with Species of Local Importance. The coal mine hazard areas and habitat associated with species of local importance designated as critical areas by this part do not include absolute restrictions on development or activity. Instead, uses allowed under subsection A of this section may be undertaken in such critical areas, so long as the performance standards of LUC 20.25H.130 (coal mine hazard areas) or LUC 20.25H.160 (habitat associated with species of local importance) are satisfied.

2. Other Critical Areas. Except as set forth in subsection B.1 of this section, all development, use, land alteration or other activity within the Critical Areas Overlay District shall be located outside of the critical area and the critical area buffer, unless such use or development is allowed pursuant to the following:

a. Uses and development allowed within critical area or critical area buffer, see LUC 20.25H.055;

b. Critical area buffer modifications for the following critical areas:

i. Streams, see LUC 20.25H.075;

ii. Wetlands, see LUC 20.25H.095;

iii. ~~Shorelines, see LUC 20.25H.115;~~

~~iv.~~ Geologic hazards, see LUC 20.25H.120.

c. Uses and development in the area of special flood hazard, see LUC 20.25H.180;

d. Modifications where allowed through a critical areas report, see LUC 20.25H.230;

e. Reasonable use exceptions, see LUC 20.25H.190;

f. Variances, see Part 20.30G and 20.30H LUC; or

~~g. Shoreline-specific uses and development, where allowed within the shorelines critical area or critical area buffer, see Part 20.25E LUC;~~

C. No Modification.

The critical areas report may not be used to modify the uses allowed in the Critical Areas Overlay District as set forth in LUC 20.10.440~~ or in the Shoreline Overlay District as set forth in Part 20.25E LUC~~; nor the provisions of this section.

20.25H.055 Uses and development allowed within critical areas – Performance standards. Amended Ord. 6102

The uses and/or development described in subsection B of this section may be undertaken in a critical area or critical area buffer if all of the requirements of the referenced sections are met. A Critical Areas Land Use Permit shall be required unless otherwise noted.

A. Hierarchy of Alteration.

Where a use or development is proposed on a site with more than one type of critical area, preference shall be given to disturbing those critical areas with the least sensitivity to human disturbance, based on a consideration of both existing functions and values, and future functions and values if left undisturbed.

B. Uses and Development Allowed within Critical Areas.

Comment [CoB5]: Reference citation update.

Comment [CoB6]: Shorelines not regulated as critical area.

Comment [CoB7]: Shorelines not regulated as critical area.

Comment [CoB8]: Shorelines not regulated as critical area.

The following chart lists uses and development that may be allowed in a critical area, critical area buffer, or critical area structure setback. The sections noted in the chart for each use or activity and critical area refer to the applicable performance standards that must be met.

		Type of Critical Area				
		Streams	**Wetlands**	**~~Shorelines~~**	**Geologic Hazard Areas[7]**	**Areas of Special Flood Hazard**
Allowed Use or Development	Repair and maintenance of parks and parks facilities, including trails[1, 2]	20.25H.055.C.1 20.25H.080.A	20.25H.055.C.1 20.25H.100	~~20.25H.055.C.1~~ ~~20.25E.080.B~~ ~~20.25E.080.P~~	20.25H.055.C.1 20.25H.125	20.25H.055.C.1 20.25H.180.C 20.25H.180.D.2
	Repair and maintenance of utility facilities, utility systems, stormwater facilities and essential public facilities[1, 2]	20.25H.055.C.1 20.25H.080.A	20.25H.055.C.1 20.25H.100	~~20.25H.055.C.1~~ ~~20.25E.080.B~~ ~~20.25E.080.U~~	20.25H.055.C.1 20.25H.125	20.25H.055.C.1 20.25H.180.C
	Repair and maintenance of public rights-of-way, private roads, access easements, surface parking areas, and driveways[1, 2]	20.25H.055.C.1 20.25H.080.A	20.25H.055.C.1 20.25H.100	~~20.25H.055.C.1~~ ~~20.25E.080.B~~ ~~20.25E.080.H~~ ~~20.25E.080.R~~	20.25H.055.C.1 20.25H.125	20.25H.055.C.1 20.25H.180.C
	Repair and maintenance of bridges and culverts[1, 2]	20.25H.055.C.1 20.25H.080.A	20.25H.055.C.1 20.25H.100	~~20.25H.055.C.1~~ ~~20.25E.080.B~~ ~~20.25E.080.R~~	20.25H.055.C.1 20.25H.125	20.25H.055.C.1 20.25H.180.C
	Construction staging[1, 2, 11]	20.25H.055.C.1 20.25H.080.A	20.25H.055.C.1 20.25H.100	~~20.25H.055.C.1~~ ~~20.25E.080.B~~ ~~20.25E.080.H~~	20.25H.055.C.1 20.25H.125	20.25H.055.C.1 20.25H.180.C
	Existing agricultural activities[2]	20.25H.055.C.1 20.25H.055.C.3.a 20.25H.080.A	20.25H.055.C.1 20.25H.055.C.3.a 20.25H.100	~~20.25H.055.C.1~~ ~~20.25H.055.C.3.a~~ ~~20.25E.080.B~~	20.25H.055.C.1 20.25H.055.C.3.a 20.25H.125	20.25H.055.C.1 20.25H.055.C.3.a 20.25H.180.C

Comment [CoB9]: Shorelines not regulated as critical area.

				~~20.25E.080.C~~		
	Emergency actions	20.25H.055.C.3.b	20.25H.055.C.3.b	~~20.25H.055.C.3.b~~	20.25H.055.C.3.b	20.25H.055.C.3.b
	New or expanded utility facilities, utility systems, stormwater facilities[3]	20.25H.055.C.2 20.25H.080.A 20.25H.080.B	20.25H.055.C.2 20.25H.100	~~20.25H.055.C.2~~ ~~20.25E.080.B~~ ~~20.25E.080.U~~	20.25H.055.C.2 20.25H.125	20.25H.055.C.2 20.25H.180.C
	New or expanded essential public facilities (12)	20.25H.055.C.2 20.25H.080.A 20.25H.080.B	20.25H.055.C.2 20.25H.100	~~20.25H.055.C.2~~ ~~20.25E.080.B~~	20.25H.055.C.2 20.25H.125	20.25H.055.C.2 20.25H.180.C 20.25H.180.D.3
Allowed Use or Development	Public flood protection measures[4]	20.25H.055.C.2 20.25H.055.C.3.c 20.25H.080.A 20.25H.080.B	20.25H.055.C.2 20.25H.055.C.3.c 20.25H.100	~~20.25H.055.C.2~~ ~~20.25H.055.C.3.c~~ ~~20.25E.080.B~~	20.25H.055.C.2 20.25H.055.C.3.c 20.25H.125	20.25H.055.C.2 20.25H.055.C.3.c 20.25H.180.C 20.25H.180.D.5
	Instream structures[5]	20.25H.055.C.2 20.25H.055.C.3.d 20.25H.080.A 20.25H.080.B	20.25H.055.C.2 20.25H.055.C.3.d 20.25H.100	~~20.25H.055.C.2~~ ~~20.25H.055.C.3.d~~ ~~20.25E.080.B~~	20.25H.055.C.2 20.25H.055.C.3.d	20.25H.055.C.2 20.25H.055.C.3.d 20.25H.180.C
	New or expanded public rights-of-way, private roads, access easements and driveways	20.25H.055.C.2 20.25H.080.A 20.25H.080.B	20.25H.055.C.2 20.25H.100	~~20.25H.055.C.2~~ ~~20.25E.080.B~~ ~~20.25E.080.R~~	20.25H.055.C.2 20.25H.125	20.25H.055.C.2 20.25H.180.C 20.25H.180.D.4
	New or expanded bridges and culverts	20.25H.055.C.2 20.25H.055.C.3.e 20.25H.080.A	20.25H.055.C.2 20.25H.055.C.3.e 20.25H.100	~~20.25H.055.C.2~~ ~~20.25H.055.C.3.e~~ ~~20.25E.080.B~~ ~~20.25E.080.R~~	20.25H.055.C.2 20.25H.055.C.3.e 20.25H.125	20.25H.055.C.2 20.25H.055.C.3.e 20.25H.180.C
	New or expanded private nonmotorized trails	20.25H.055.C.2 20.25H.055.C.3.f 20.25H.080.A	20.25H.055.C.2 20.25H.055.C.3.f 20.25H.100	~~20.25H.055.C.2~~ ~~20.25H.055.C.3.f~~ ~~20.25E.080.B~~ ~~20.25E.080.G~~	20.25H.055.C.2 20.25H.055.C.3.f 20.25H.125	20.25H.055.C.2 20.25H.055.C.3.f 20.25H.180.C

	New or expanded City and public parks	20.25H.055.C.3.g 20.25H.080.A	20.25H.055.C.3.g 20.25H.100	~~20.25H.055.C.3.g~~ ~~20.25E.080.B~~ ~~20.25E.080.P~~	20.25H.055.C.3.g 20.25H.125	20.25H.055.C.3.g 20.25H.180.C 20.25H.180.D.2
	Existing landscape maintenance[2]	20.25H.055.C.3.h 20.25H.080.A	20.25H.055.C.3.h 20.25H.100	~~20.25H.055.C.3.h~~ ~~20.25E.080.B~~ ~~20.25E.080.G~~	20.25H.055.C.3.h 20.25H.125	20.25H.055.C.3.h 20.25H.180.C
	Vegetation management[6]	20.25H.055.C.3.i 20.25H.080.A	20.25H.055.C.3.i 20.25H.100	~~20.25H.055.C.3.i~~ ~~20.25E.080.B~~ ~~20.25E.080.G~~	20.25H.055.C.3.i 20.25H.125	20.25H.055.C.3.i 20.25H.180.C
	Habitat improvement projects	20.25H.055.C.3.j 20.25H.080.A	20.25H.055.C.3.j 20.25H.100	~~20.25H.055.C.3.j~~ ~~20.25E.080.B~~ ~~20.25E.080.G~~	20.25H.055.C.3.j 20.25H.125	20.25H.055.C.3.j 20.25H.180.C
	Forest practices	20.25H.055.C.3.k 20.25H.080.A	20.25H.055.C.3.k 20.25H.100	~~20.25H.055.C.3.k~~ ~~20.25E.080.B~~	20.25H.055.C.3.k 20.25H.125	20.25H.055.C.3.k 20.25H.180.C
	Aquaculture	20.25H.055.C.3.l 20.25H.080.A	20.25H.055.C.3.l 20.25H.100	~~20.25H.055.C.3.l~~ ~~20.25E.080.B~~ ~~20.25E.080.D~~	20.25H.055.C.3.l	20.25H.055.C.3.l 20.25H.180.C
	Stabilization measures	20.25H.055.C.3.m 20.25H.080.A	20.25H.055.C.3.m 20.25H.100	~~20.25E.080.B~~ ~~20.25E.080.E~~	20.25H.055.C.3.m 20.25H.125	20.25H.055.C.3.m 20.25H.180.C
	Expansion of existing single-family primary structures	20.25H.055.C.3.n 20.25H.080.A	20.25H.055.C.3.n 20.25H.100	~~20.25H.055.C.3.n~~ ~~20.25E.080.B~~ ~~20.25E.080.Q~~	20.25H.055.C.3.n 20.25H.125	20.25H.055.C.3.n 20.25H.180.C[9] 20.25H.180.D.1 20.25H.180.D.7
	Reasonable use exception[8]	20.25H.080.A	20.25H.100	~~20.25E.080.B~~	20.25H.125	20.25H.180.C 20.25H.180.D.7
	Recreational vehicle storage[10]					20.25H.180.C 20.25H.180.D.6
	~~Additional shoreline-specific uses or development~~			~~Part 20.25E~~		

Notes:

1. For purposes of this section, repair and maintenance includes replacement of facilities and systems, or expansion so long as the area of permanent disturbance of the critical area or critical area buffer is not expanded. As applicable to public rights-of-way, private roads, access easements, parking areas and driveways, repair and maintenance also includes removing and replacing improvements within the area of permanent disturbance, and expansion of paved areas, so long as the area of permanent disturbance within the critical area or critical area buffer is not expanded.

2. These uses do not require a Critical Areas Land Use Permit. The requirements of this part shall be applied through the review process applicable to the underlying use or activity.

3. In the event of a conflict between this section and the utilities code, the utilities code shall prevail.

4. Examples of public flood protection measures include, but are not limited to: flood control projects, flood damage reduction facilities such as levees, revetments, and pumping stations, streambank stabilization structures and surface water conveyance facilities, bridge piers and abutments.

5. Examples of instream structures include, but are not limited to: sediment ponds, instream ponds, dams, and weirs.

6. Permit requirements may vary. See subsection C.3.i of this section.

7. For geologic hazards other than coal mine hazard areas. Uses and performance standards for coal mine hazard areas set forth in LUC 20.25H.050.

8. Development authorized pursuant to a reasonable use exception, LUC 20.25H.190, shall incorporate the required performance standards to the maximum extent feasible.

9. Authorized only pursuant to a reasonable use exception, LUC 20.25H.190.

10. Such storage is not allowed in critical areas or critical area buffers except within the area of special flood hazard in compliance with applicable performance standards.

11. Authorized only in areas of the critical area buffer within areas of existing permanent disturbance, including, for example: paved or gravel surface parking areas, access drives, and other similar disturbed areas.

12. Refer to Part 20.25M LUC, Light Rail Overlay District, for specific requirements applicable to EPF defined as a Regional Light Rail Transit Facility or Regional Light Rail Transit System pursuant to LUC 20.25M.020. A conditional use permit is not required when the City Council has approved a Regional Light Rail Transit Facility or Regional Light Rail Transit System by resolution or ordinance, or by a development agreement authorized by Chapter 36.70B RCW and consistent with LUC 20.25M.030.B.1.

C. Performance Standards.

The following performance standards apply as noted in the table in subsection B of this section. The critical areas report may not be used to modify the performance standards set forth in this subsection C:

1. Repair and Maintenance and/or Construction Staging.

a. Work shall be consistent with all applicable City of Bellevue codes and standards;

b. Removal of significant trees is prohibited; and

c. Areas of temporary disturbance associated with the work shall be restored to pre-project conditions, pursuant to a restoration plan meeting the requirements of LUC 20.25H.210.

2. New and Expanded Uses or Development. As used in this section, “facilities and systems” is a general term that encompasses all structures and improvements associated with the allowed uses and development described in the table in subsection B of this section:

a. New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

i. The location of existing infrastructure;

ii. The function or objective of the proposed new or expanded facility or system;

iii. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;

iv. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

v. The ability of both permanent and temporary disturbance to be mitigated.

b. If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

i. Location and design shall result in the least impacts on the critical area or critical area buffer;

ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;

v. All work shall be consistent with applicable City of Bellevue codes and standards;

vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

viii. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

3. Performance Standards for Specific Uses or Development. In the event of a conflict between the generally applicable performance standards and specific standards, those more protective of critical area functions and values shall prevail.

a. Existing Agricultural Uses.

i. Erosion control measures, such as crop rotation, mulching, strip cropping and contour cultivation, must be used in conformance with guidelines and standards established by the Natural Resources Conservation Service, U.S. Department of Agriculture;

ii. Wetland areas must be protected from significant impacts of agricultural chemicals and pesticides as required by the Storm and Surface Water Utility Code, BCC 24.06.195, now or as hereafter amended, and must meet the water quality standards of BCC 24.06.060.K, now or as hereafter amended;

iii. All development shall be consistent with the City of Bellevue's "Environmental Best Management Practices Manual" now or as hereafter amended.

b. Emergency Actions. Emergency actions are those that must be undertaken immediately or within a time too short to allow full compliance with this part, to avoid an imminent threat to public health or safety, to prevent an imminent danger to public or private property, or to prevent an imminent threat of serious environmental degradation. The Director, or the designee thereof, shall designate when such an action constitutes an emergency action.

Emergency actions within the critical area or critical area buffer shall use reasonable methods to address the emergency; in addition, they must have the least possible impact to the critical area or critical area buffer. The person or agency undertaking such action shall notify the Director of the existence of the emergency and emergency actions within one working day following commencement of the emergency activity. Within 10 working days following completion of the emergency activity, the person or agency undertaking such action shall provide a written description of the work undertaken, site plan, description of pre-emergency site conditions and such other information required by the Director to make the determination required under this subsection.

Within 30 days, the Director shall determine if the action taken was within the scope of the emergency actions allowed in this subsection. If the Director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then the applicant shall be subject to penalties and enforcement pursuant to Chapter 1.18 BCC. If the Director determines that the action taken was within the scope of an allowed emergency action, the applicant shall submit a restoration and/or mitigation plan pursuant to LUC 20.25H.210 based on the impacts of the emergency action to the critical area or critical area buffer within 60 days following the Director's determination.

c. Public Flood Protection Measures. New public flood protection measures and expansion of existing ones may be permitted only in accordance with a design prepared by a qualified professional.

d. Instream Structures. Instream structures may be permitted only in accordance with a design prepared by a qualified professional and where the applicant demonstrates measurable benefits, such as decreased erosion, peak flow reduction, improved water quality, stream stabilization or improved habitat from the proposal. The applicant shall obtain any required state or federal permits prior to undertaking development.

e. New or Expanded Bridges and Culverts. New culverts shall be designed in accordance with the Washington State Department of Fish and Wildlife "Design of Road Culverts for Fish Passage" now or as hereafter amended. Culvert expansions shall be considered new culverts and be required to be designed in accordance with "Design of Road Culverts for Fish Passage" now or as hereafter amended when the expansion is associated with a project increasing vehicular capacity and (i) there are fish present downstream; (ii) there is potential fish habitat upstream; and (iii) the benefits of so designing the culvert are substantial when compared to expanding the culvert based on its then-existing design.

f. Private Nonmotorized Trails. New nonmotorized trails within the critical area or critical area buffer are limited to those accessing single-family residential moorage or serving nonresidential uses, multifamily residential uses and more than one single-family lot. Private nonmotorized trails shall comply with the performance standards for trails in subsection C.3.g of this section. Nothing in this section prohibits the creation of a soft surface nonmotorized trail in a critical area buffer on a single-family lot for use of the residents of that lot. Such trail shall not exceed four feet in width, and shall not involve the removal of any significant trees or bank-stabilizing roots. In stream and wetland buffers, trails shall not be generally parallel to the stream or wetland edge closer than a distance of 25 feet. Any clearing of brush or vegetation shall be the minimum necessary, and shall be with hand tools only.

Comment [CoB10]: Addresses the "gap" in our regulations.

g. New and Expanded City and Public Parks.

i. Trails. New nonmotorized trails within the critical area or critical area buffer must meet following standards:

(A) Trail location and design shall result in the least impacts on the critical area or critical area buffer;

(B) Trails shall be designed to complement and enhance the environmental, educational, and social functions and values of the critical area with trail design and construction focused on managing and controlling public access and limiting uncontrolled access;

(C) Trails shall be designed to avoid disturbance of significant trees and to limit disturbance of native understory vegetation;

(D) Trails shall be designed to avoid disturbance of habitat used for salmonid rearing or spawning or by any species of local importance;

(E) The trail shall be the minimum width necessary to accommodate the intended function or objective;

(F) All work shall be consistent with the City of Bellevue's "Environmental Best Management Practices" and all applicable City of Bellevue codes and standards, now or as hereafter amended;

(G) The facility shall not significantly change or diminish overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

(H) Where feasible and consistent with any accessibility requirements, any trail shall be constructed of pervious materials;

(I) Crossings over and penetrations into wetlands and streams shall be generally perpendicular to the critical area, and shall be accomplished by bridging or other technique designed to minimize critical area disturbance considering the entire trail segment and function; and

(J) Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

ii. Public Use Structures.

(A) New or expanded permanent public use structures, including interpretative centers, community centers, and other structures designed for public use and access are allowed in the critical area or critical area buffer only if no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

(1) The location of existing infrastructure;

(2) The function or objective of the proposed new or expanded structure;

(3) Demonstration that no alternative achieves the stated function or objective;

(4) Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

(5) The ability of both permanent and temporary disturbance to be mitigated.

(B) If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the generally applicable performance standards of subsection C.2.b of this section.

iii. Other Parks Uses. Other parks uses proposed within the critical area or critical area buffer, including public access drives, public loading areas, and public boat launches and ramps, shall meet the generally applicable performance standards of subsection C.2.b of this section; provided, that active use playfields shall not be allowed in critical area or critical area buffers; and provided, that parking supporting parks uses shall be allowed in a critical area buffer only if no technically feasible alternative, as demonstrated through application of the criteria of subsection C.2.a of this section, exists.

h. Existing Landscape Maintenance. Routine maintenance of existing legally established landscaping and landscape features developed prior to August 1, 2006, in the critical area or critical area buffer may be continued in accordance with this section. For purposes of this section, "routine maintenance" includes mowing, pruning, weeding, planting annuals, perennials, fruits and vegetables, and other activities associated with maintaining a legally established ornamental or garden landscape and landscape features. Also, for purposes of this subsection, "landscape features" refers to fences, trellises, rockeries and retaining walls, pathways, arbors, patios, play areas and

other similar improvements. To be considered routine maintenance, activities shall have been consistently carried out so that the ornamental species predominate over native or invasive species. Maintenance shall be performed with hand tools or light equipment only, and no significant trees may be removed, except in accordance with a Vegetation Management Plan under subsection C.3.i of this section. Use of fertilizers, insecticides and pesticides is prohibited unless performed in accordance with the City of Bellevue's "Environmental Best Management Practices" now or as hereafter amended.

i. Vegetation Management. Modification of vegetation in a critical area or critical area buffer that is not considered routine maintenance under subsection C.3.h of this section may be allowed if it meets the requirements of this section. Except where otherwise noted, a Critical Areas Land Use Permit is required. The following activities may also require a Clearing and Grading Permit, Chapter 23.76 BCC and/or SEPA review and must comply with all other Land Use Code provisions related to tree preservation and landscaping, including but not limited to LUC 20.20.520 and 20.20.900.

i. Noxious Species. The removal of the following vegetation with hand labor and hand-operated equipment from a critical area buffer, or from a geologic hazard critical area, is allowed without requiring a Critical Areas Land Use Permit or a Vegetation Management Plan:

(A) Invasive and noxious weeds;

(B) English Ivy (Hedera helix);

(C) Himalayan blackberry (Rubus discolor, R. procerus); and

(D) Evergreen blackberry (Rubus laciniatus).

ii. Hazard Trees. The removal of trees from the critical area or critical area buffer that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to an existing structure, public or private road or sidewalk, or other permanent improvement, is allowed without requiring a Critical Areas Land Use Permit or a Vegetation Management Plan; provided, that:

(A) The applicant submits a report on a form provided by the Director from a certified arborist, registered landscape architect, or professional forester that documents the hazard and provides a replanting schedule for the replacement trees;

(B) Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified by a qualified professional. Where pruning or crown thinning is not sufficient to address the hazard, trees should be converted to wildlife snags and completely removed only where no other option removes the identified hazard;

(C) All vegetation cut (tree stems, branches, etc.) shall be left within the critical area or buffer unless removal is warranted due to the potential for creating a fire hazard or for disease or pest transmittal to other healthy vegetation;

(D) The landowner shall replace any trees that are removed pursuant to a restoration plan meeting the requirements of LUC 20.25H.210;

(E) If a tree to be removed provides critical habitat, such as an eagle perch, a qualified wildlife biologist shall be consulted to determine timing and methods for removal that will minimize impacts; and

(F) Hazard trees determined to pose an imminent threat or danger to public health or safety, to public or private property, or of serious environmental degradation may be removed or pruned by the landowner on whose property the tree is

located prior to receiving the permits required under this part; provided, that the landowner makes reasonable efforts to notify the City, and within 14 days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this part.

iii. Forest Health. Measures to control a fire or halt the spread of disease or damaging insects; provided, that the removed vegetation shall be replaced pursuant to a restoration plan meeting the requirements of LUC 20.25H.210.

iv. Fire Safety. Where required pursuant to the International Fire Code, Section 304.1.2, as adopted and amended by the City of Bellevue, vegetation may be removed from the critical area or critical area buffer; provided, that the removed vegetation shall be replaced pursuant to a restoration plan meeting the requirements of LUC 20.25H.210.

v. Vegetation Management Plan – Maintenance for Utility, Transportation, Parks and Public Facility Projects. Vegetation may be periodically removed from the critical area or critical area buffer as part of an ongoing routine maintenance plan for utility, transportation, park and other public facility projects allowed pursuant to subsection B of this section. Such removal shall be pursuant to a Vegetation Management Plan meeting the requirements of this subsection.

(A) The Vegetation Management Plan shall be prepared by a qualified professional.

(B) The Vegetation Management Plan shall include:

(1) A description of existing site conditions, including existing critical area functions and values;

(2) A site history;

(3) A discussion of the plan objectives;

(4) A description of all sensitive features;

(5) Identification of soils, existing vegetation, and habitat associated with species of local importance present on the site;

(6) Allowed work windows;

(7) A clear delineation of the area within which clearing and other vegetation management practices are allowed under the plan; and

(8) Short- and long-term management prescriptions, including restoration and revegetation requirements. Cleared areas shall be restored and revegetated with native species to the extent such vegetation does not interfere with the function of the allowed structure, trail, facility or system.

vi. Vegetation Management Plan – Other Uses. The Director may approve proposals for vegetation replacement in a critical area buffer, or within a geologic hazard critical area, pursuant to a Vegetation Management Plan. The Vegetation Management Plan may also include a description of proposed vegetation pruning, including pruning techniques and timing and extent of proposed pruning; provided, that proposals to prune vegetation within geologic hazard areas and geologic hazard area buffers may be undertaken without a Critical Areas Land Use Permit or a Vegetation Management Plan in accordance with subsection C.3.i.vii of this section. The Vegetation Management Plan shall satisfy the requirements of subsection C.3.i.v.(B) of this section, except that the following replaces subsection C.3.i.v.(B)(8):

(8) Short- and long-term management prescriptions, including characterization of trees and vegetation to be removed, and restoration and revegetation plans with native species, including native species with a lower growth habit. Such restoration and revegetation plans shall demonstrate that the proposed Vegetation Management Plan will not significantly diminish the functions and values of the critical area or alter the forest and habitat characteristics of the site over time.

Trees and vegetation may not be removed pursuant to this subsection if removal would result in a significant impact to habitat associated with species of local importance, unless the impacted function can be replaced elsewhere within the management area subject to the plan. In no event may a tree or vegetation which is an active nest site for a species of local importance be removed pursuant to this subsection.

In determining whether the vegetation management plan should be approved, the Director shall take into consideration any applicable neighborhood restrictive covenants that address view preservation or vegetation management if so requested in writing. The existence of and provisions of neighborhood restrictive covenants shall not be entitled to any more or less weight than other reports and materials in the record.

vii. Select Vegetation Pruning. Pruning of existing trees and vegetation within a geologic hazard critical area or geologic hazard critical area buffer, with hand labor and hand-operated equipment in accordance with this subsection is allowed without requiring a Critical Areas Land Use Permit or a Vegetation Management Plan, so long as the area is not included within a Native Growth Protection Area (NGPA) or Native Growth Protection Area Easement (NGPE). A Clearing and Grading Permit, Chapter 23.76 BCC, and SEPA review may still be required. The pruning allowed by this subsection shall be performed in accordance with guidelines established by the Director for each of the following pruning techniques: canopy reduction; canopy cleaning; canopy thinning; canopy raising or lifting; structural pruning; and canopy restoration. Where vegetation has been consistently managed by topping or other pruning methods, nothing in this part shall preclude the continuation of such practices. Pruning shall be performed in a manner that ensures continued survival of the vegetation.

In no event may a tree or vegetation which is an active nest site for a species of local importance be pruned pursuant to this subsection.

j. Habitat Improvement Projects. Disturbance, clearing and grading are allowed in the critical area or critical area buffer for habitat improvement projects demonstrating an improvement to functions and values of a critical area or critical area buffer. Habitat improvement projects shall be:

i. Sponsored or cosponsored by a public agency or federally recognized tribe and whose primary function is habitat restoration; or

ii. Approved by the Director pursuant to LUC 20.25H.230.

k. Forest Practices. Forest practices may be allowed without requiring a Critical Areas Land Use Permit, where such practice is regulated and conducted in accordance with the provisions of Chapter 76.09 RCW, now or as hereafter amended, and forest practices regulations, WAC Title 222, now or as hereafter amended, and those that are exempt from the City's jurisdiction; provided, that forest practice

conversions are not exempt. The applicant shall demonstrate that all required federal and state permits have been obtained prior to undertaking any work.

l. Aquaculture.

i. Aquaculture development must be conducted in a way which does not adversely affect the aesthetic or environmental quality of the wetland and interrelated stream habitat; and

ii. Aquaculture must to the extent feasible use underwater structures for fish-rearing facilities.

m. Stabilization Measures. ~~See LUC 20.25E.080.E for standards regulating~~ Nothing in this section shall limit or preclude shoreline stabilization measures permitted pursuant to LUC 20.25E.080.F. Proposed stabilization measures within a critical area or critical area buffer to protect against streambank erosion or steep slopes or landslide hazards may be approved in accordance with this subsection.

Comment [CoB11]: Defers to 20.25E for shoreline stabilization measures.

i. When Allowed. New or enlarged stabilization measures shall be allowed only to protect existing primary structures and infrastructure, or in connection with uses and development allowed pursuant to subsection B of this section. Stabilization measures shall be allowed only where avoidance measures are not technically feasible.

ii. Type of Stabilization Measure Used. Where a stabilization measure is allowed, soft stabilization measures shall be used, unless the applicant demonstrates that soft stabilization measures are not technically feasible. An applicant asserting that soft stabilization measures are not technically feasible shall provide the information relating to each of the factors set forth in subsection C.3.m.iii.(D) of this section for a determination of technical feasibility by the Director. Only after a determination that soft stabilization measures are not technically feasible shall hard stabilization measures be permitted.

iii. Definitions.

(A) Hard Stabilization Measures. As used in this part, “hard stabilization measures” include: rock revetments, gabions, concrete groins, retaining walls, bulkheads and similar measures which present a vertical or nearly vertical interface with the water.

(B) Soft Stabilization Measures. As used in this part, “soft stabilization measures” include: biotechnical measures, bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to provide stabilization while mimicking or preserving the functions and values of the critical area.

(C) Avoidance Measures. As used in this part, “avoidance measures” refer to techniques used to minimize or prevent erosion or slope collapse that do not involve modification of the bank or slope. “Avoidance measures” include vegetation enhancement, upland drainage control, and protective walls or embankments placed outside of the critical area and critical area buffer.

(D) Technically Feasible. The determination of whether a technique or stabilization measure is “technically feasible” shall be made by the Director as part of the decision on the underlying permit after consideration of a report prepared by a qualified professional addressing the following factors:

(1) Site conditions, including topography and the location of the primary structure in relation to the critical area;

(2) The location of existing infrastructure necessary to support the proposed measure or technique;

(3) The level of risk to the primary structure or infrastructure presented by erosion or slope failure and ability of the proposed measure to mitigate that risk;

(4) Whether the cost of avoiding disturbance of the critical area or critical area buffer is substantially disproportionate as compared to the environmental impact of proposed disturbance, including any continued impacts on functions and values over time; and

(5) The ability of both permanent and temporary disturbance to be mitigated.

n. Expansion of Existing Single-Family Primary Structures into Critical Area Buffer and Critical Area Structure Setback. Expansion into the critical area buffer and critical area structure setback may be allowed, pursuant to a Critical Areas Land Use Permit, where expansion outside of the critical area buffer and critical area structure setback is not feasible and where the purpose of the expansion is to serve a function that is an essential component of a single-family residence. Expansion into the critical area is prohibited. Any expansion must comply with all other applicable requirements of the code, including LUC 20.20.010.

i. Where allowed, expansions into the critical area buffer and critical areas structure setback shall be limited as follows:

(A) The expansion shall be along the existing building line parallel to the edge of the critical area, unless such expansion is not feasible. Only when such expansion is not feasible may expansion encroach further into the critical area buffer and critical area structure setback.

(B) Expansions shall be the minimum necessary to achieve the intended functions of the expansion, but in no event may the footprint expansion within the critical area buffer and critical area structure setback exceed 500 square feet over the life of the structure. Expansions into stream critical area buffers allowed pursuant to the City's previous critical areas regulations (prior LUC 20.25H.085.B) shall be included in determining the allowed lifetime expansion; and

(C) Areas of new permanent disturbance and all areas of temporary disturbance within the critical area buffer shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

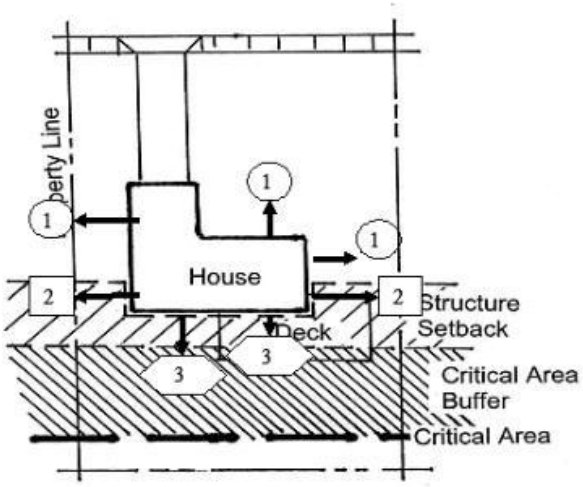
ii. For purposes of this section, expansion outside of the critical area buffer and critical area structure setback shall be considered not feasible only when, considering the function to be served by the expansion and the existing structure's layout and infrastructure (including plumbing, drainage and electrical systems):

(A) Expansion away from the critical area buffer and critical area structure setback within the buildable area of the site will not realize the intended functions of the expansion; and

(B) Expansion away from the critical area buffer and critical area structure setback, including into non-critical area setbacks modified pursuant to LUC 20.25H.040, will not realize the intended functions of the expansion; and

(C) Expansion upwards to the maximum building height of the underlying land use district, within the existing footprint, or together with expansions

permitted under subsections C.3.n.ii.(A) and (B) of this section, will not realize the intended functions of the expansion.



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

This section applies to uses and development legally established within the critical area or critical area buffer prior to August 1, 2006, and which is not included as an allowed use or development in LUC 20.25H.055. ~~LUC 20.25E.055 applies to uses and development within the shoreline critical area and shoreline critical area buffer.~~ See performance standards at LUC 20.25H.180 for provisions relating to the repair, remodeling, expansion or reconstruction of structures located in the area of special flood hazard. Any alterations to existing development allowed under this section shall also comply with provisions for the area of special flood hazard. In the event of conflict, the provisions that result in most protection for the critical area or critical area buffer shall govern.

Comment [CoB12]: Shorelines not regulated as critical area.

A. Existing Primary Structures.

See LUC 20.25H.035.B

B. Existing Nonprimary Structures.

A structure, other than a primary structure, legally established within a critical area, critical area buffer or critical area structure setback prior to August 1, 2006, shall be considered a nonconforming structure. If no modifications to a nonconforming structure are proposed, then the structure may continue without coming into compliance with the regulations of this part. Compliance may in whole or in part be required when changes to a structure are proposed, as follows:

1. Repair and remodeling of a nonconforming structure is limited to minor, nonstructural repairs, and repairs of mechanical systems within or supporting the accessory structure. If repair or remodeling exceeds these limits, the structure shall be

brought into compliance with existing Land Use Code requirements, including requirements of this part.

2. Expansion of existing nonconforming structures, other than as allowed under LUC 20.25H.055, into the critical area or critical area buffer is prohibited.

3. If an existing nonconforming structure is destroyed by fire, explosion or other unforeseen circumstance requiring repairs consistent with those allowed under subsection B.1 of this section, it may be repaired within the footprint existing at the time of destruction; provided, that such repair is commenced within one year of the date of destruction and diligently pursued. Areas of temporary disturbance resulting from the reconstruction shall be restored pursuant to a mitigation plan approved by the Director under LUC 20.25H.210. If such a structure is destroyed and requires structural or other repairs more extensive than those allowed under subsection B.1 of this section, then any reconstruction of such structure shall be in compliance with existing Land Use Code requirements, including requirements of this part.

The critical areas report process may not be used to modify the provisions of this subsection B.

C. Nonconforming Sites.

Nonstructural development legally established within a critical area or critical area buffer prior to August 1, 2006, shall be considered a nonconforming site condition. A nonconforming site condition may not be changed unless the change conforms to the regulations of this code. (Ord. 5680, 6-26-06, § 3)

IV. STREAMS

20.25H.075 Designation of critical area and buffers.

A. Definition of Stream.

An aquatic area where surface water produces a channel, not including a wholly artificial channel, unless the artificial channel is:

1. Used by salmonids; or

2. Used to convey a stream that occurred naturally before construction of the artificial channel.

B. Designation of Streams.

The following streams are hereby designated as critical areas subject to the regulations of this part:

1. "Type S water" means all waters, ~~other than shoreline critical areas designated under LUC 20.25E.017~~, within their bankfull width, as inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

Comment [CoB13]: Shorelines not regulated as critical area.

2. "Type F water" means all segments of waters that are not type S waters, and that contain fish or fish habitat, including waters diverted for use by a federal, state, or tribal fish hatchery from the point of diversion for 1,500 feet or the entire tributary if the tributary is highly significant for protection of downstream water quality.

3. "Type N water" means all segments of waters that are not type S or type F waters and that are physically connected to a type S or F waters by an above ground channel system, stream or wetland.

4. "Type O water" means all segments of waters that are not type S, F or N waters and that are not physically connected to type S, F or N waters by an above ground channel system, stream, or wetland.

C. Designation of Stream Critical Area Buffers.

The following critical areas buffers are established:

1. Stream Critical Area Buffers:

a. General – Open Streams (Except West Tributary in the Kelsey Basin).

i. Undeveloped Site. An undeveloped site is a site that contains no primary structure. Open streams on undeveloped sites shall have the following critical area buffers, measured from the top-of-bank:

Type S	100 feet
Type F	100 feet
Type N	50 feet
Type O	25 feet

ii. Developed Site. A developed site is a site that contains a primary structure or any site where the stream and stream buffer have been included within an approved and recorded NGPE or NGPA prior to August 1, 2006. Lots created through subdivision, short subdivision, or the Planned Unit Development process from a developed site shall be considered undeveloped and subject to the requirements of subsection C.1.a.i of this section, except that the lot containing the existing primary structure shall be considered developed. Open streams on developed sites shall have the following critical area buffers, measured from the top-of-bank:

Type S	50 feet or the buffer established with the existing NGPE/NGPA, whichever is greater
Type F	50 feet or the buffer established with the existing NGPE/NGPA, whichever is greater
Type N	25 feet or the buffer established with the existing NGPE/NGPA, whichever is greater
Type O	25 feet or the buffer established with the existing NGPE/NGPA, whichever is greater

b. General – Closed Stream Segments. Regardless of type, closed stream segments shall have no critical area buffer and shall have the structure setback established in subsection D.2.b of this section.

c. West Tributary, Kelsey Basin – Open Streams. Regardless of type, open stream segments of the West Tributary on developed and undeveloped sites shall have a stream critical area buffer of 50 feet, measured from the top-of-bank.

d. Buffer and Setback on Sites with Existing Primary Structure(s). Where a primary structure legally established on a site prior to August 1, 2006, encroaches into the critical area buffer or structure setback established in this section, the critical area buffer and/or structure setback shall be modified to exclude the footprint of the existing primary structure. Expansion of any existing structure into the critical area buffer or critical area structure setback shall be allowed only pursuant to the provisions of LUC 20.25H.055 (single-family primary structures) or LUC 20.25H.230 (all other primary structures).

e. Measurement of Buffer on Eroding Stream Bank. A stream critical area buffer and any applicable structure setback may be measured from a fixed location representing the historic location of the top-of-bank where an applicant demonstrates that:

i. The location of the top-of-bank has changed over time as a result of natural stream processes; and

ii. The applicant provides existing surveys, maps or other information acceptable to the Director, which accurately determines the historic location of the top-of-bank.

f. Buffers Modified Under Prior LUC 20.25H.070.A.2.d. Where the critical area buffer on a site was modified through an approved reach study and restoration plan pursuant to the City's previous critical areas regulations (prior LUC 20.25H.070.A.2.d), the critical area buffer for that site shall be as determined in that adopted reach study and restoration plan.

2. Buffer Modification. Modifications to the stream critical area buffer may be approved pursuant to this section. Modifications to the stream critical area buffer that do not meet the criteria of this subsection may be considered through a critical areas report, LUC 20.25H.230:

a. Buffer Averaging. Buffer averaging may be allowed if all the following criteria are satisfied. Proposals to average the stream critical area buffer under this subsection shall require a Critical Areas Land Use Permit; provided, that a mitigation or restoration plan is not required for buffer averaging.

i. Buffer averaging may be approved only if the applicant demonstrates that a modification to non-critical area setbacks pursuant to LUC 20.25H.040 would not accommodate the proposed development in a manner consistent with its intended use and function.

ii. Through buffer averaging, the ecological structure and function of the resulting buffer is equivalent to or greater than the structure and function before averaging;

iii. The total buffer area is not reduced;

iv. The buffer area is contiguous;

v. Averaging does not result in any impact to slope stability and does not increase the likelihood of erosion or landslide hazard;

vi. Averaging does not result in a significant adverse impact to habitat associated with species of local importance; and

vii. At no point is the critical area buffer width less than 75 percent of the required buffer dimension.

b. Transportation or Utility Infrastructure. Where a legally established right-of-way, railroad right-of-way or other similar infrastructure of a linear nature crosses a stream critical area buffer, the edge of the improved right-of-way shall be the extent of the buffer, if the part of the critical area buffer on the other side of the right-of-way provides insignificant biological or hydrological function in relation to the portion of the buffer adjacent to the stream.

D. Structure Setbacks.

1. General. The requirements of this section apply along with any other dimensional requirements of the Land Use Code (see LUC 20.20.010, 20.20.130,

20.20.190 and Parts 20.25A – 20.25G LUC). The most restrictive dimension controls. Structure setbacks are required in order to:

a. Minimize long-term impacts of development adjacent to critical areas and critical area buffers; and

b. Protect critical areas and critical area buffers from adverse impacts during construction.

2. Minimum Setback of Structures.

a. General – Open Streams (Except West Tributary in Kelsey Basin).

i. Undeveloped Site. An undeveloped site is a site that contains no primary structure. The following structure setbacks apply on undeveloped sites, measured from the edge of the critical area buffer:

Type S	20 feet
Type F	20 feet
Type N	15 feet
Type O	10 feet

ii. Developed Site. A developed site is a site that contains a primary structure or any site where the stream and stream buffer have been included within an approved and recorded NGPE or NGPA prior to August 1, 2006. Lots created through subdivision, short subdivision, or the Planned Unit Development process from a developed site shall be considered undeveloped and subject to the requirements of subsection D.2.a.i of this section, except that the lot containing the existing primary structure shall be considered developed. The following structure setbacks apply on developed sites, measured from the edge of the critical area buffer or the boundary of the existing NGPE/NGPA, as applicable:

Type S	50 feet
Type F	50 feet
Type N	25 feet
Type O	None

b. General – Closed Stream Segments. Closed stream segments, regardless of type, shall have a structure setback of 10 feet; provided, that closed stream segments in the Kelsey Creek drainage basin shall have a structure setback of 50 feet or a structure setback representing the combined dimension of the critical area buffer and structure setback required for its stream type, whichever is less.

c. West Tributary – Open Stream Segments. Regardless of type, open stream segments of the West Tributary on developed and undeveloped sites shall have a structure setback of 20 feet, measured from the edge of the critical area buffer.

3. Structure Setback Modification – Open Streams on Undeveloped Sites. The Director may waive or modify the structure setback on an undeveloped site as part of the permit or approval for the underlying proposal if the applicant demonstrates that:

a. Water quality, or slope stability as documented in a geotechnical report, will not be adversely affected;

b. Encroachment into the structure setback will not disturb habitat of a species of local importance within a critical area or critical area buffer;

c. Vegetation in the critical area and critical area buffer will not be disturbed by construction, development or maintenance activities and will be maintained in a healthy condition for the anticipated life of the development; and

d. Enhancement planting on the boundary between the structure setback and the critical area buffer will reduce impacts of development within the structure setback.

4. Structure Setback Modification – Open Streams on Developed Sites. Structure setbacks on developed sites may be modified only through an approved critical areas report.

5. Structure Setback Modification – Closed Stream Segments. Structure setbacks associated with closed streams may be modified only through an approved critical areas report.

20.25H.080 Performance standards.

A. General.

Development on sites with a type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. Lights shall be directed away from the stream.

2. Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the stream or any noise shall be minimized through use of design and insulation techniques.

3. Toxic runoff from new impervious area shall be routed away from the stream.

4. Treated water may be allowed to enter the stream critical area buffer.

5. The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use.

6. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

B. Modification of Stream Channel.

1. When Allowed. A stream channel shall not be modified by relocating the open channel, or by closing the channel through pipes or culverts unless in connection with the following uses allowed under LUC 20.25H.055:

a. A new or expanded utility facility or system;

b. A new or expanded essential public facility;

c. Public flood control measures;

d. In-stream structures;

e. New or expanded public right-of-way, private roads, access easements or driveways;

f. Habitat improvement project; or

g. Reasonable use exception; provided, that a modification may be allowed under this section for a reasonable use exception only where the applicant demonstrates that no other alternative exists to achieve the allowed development.

A critical areas report may not be used to modify the uses set forth in this subsection B.1.

2. Critical Areas Report Required. Any proposal to modify a stream channel under this section may be approved only through a critical areas report.

3. Relocation of Closed Stream Channel. Any proposal to relocate an existing closed stream channel may be approved only through a critical areas report.

20.25H.085 Mitigation and monitoring – Additional provisions.

In addition to the provisions of LUC 20.25H.210, mitigation plans designed to mitigate impacts to streams and stream critical area buffers shall meet the requirements of this section.

A. Mitigation Preference.

Mitigation plans for streams and stream critical area buffers shall provide mitigation for impacts to critical area functions and values in the following order of preference:

1. On-site, through replacement of lost critical area buffer;

2. On-site, through enhancement of the functions and values of remaining critical area buffer;

3. Off-site, through replacement or enhancement, in the same sub-drainage basin;

4. Off-site, through replacement or enhancement, out of the sub-drainage basin but in the same drainage basin.

Mitigation off-site and out of the drainage basin shall be permitted only through a critical areas report.

B. Buffer Mitigation Ratio.

Critical area buffer disturbed or impacted under this part shall be replaced at a ratio of one-to-one.

20.25H.090 Critical areas report – Additional provisions.

A. Limitation on Modifications.

A stream critical area buffer shall not be modified below the widths set forth in this section, measured from the top-of-bank:

Type S waters	25 feet
Type F waters	25 feet
Type N waters	10 feet
Type O waters	10 feet

B. Additional Content – Closed Stream Segments.

Any critical areas report proposing a modification to the structure setbacks required for closed stream segments shall be based on a consideration of the impact of the modification on the feasibility of reopening the closed stream segment in the future, when compared with the feasibility of reopening the closed stream segment without the

proposed modification. Where the proposed modification significantly decreases the feasibility of a future reopening, such modification shall be denied, unless the proposal includes mitigation for the functions and values that could have been achieved by reopening the stream segment.

V. WETLANDS

20.25H.095 Designation of critical area and buffers.

A. Definition of Wetland.

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

B. Designation of Critical Area.

The following wetlands are hereby designated as critical areas subject to the requirements of this part. Wetlands are classified into category I, category II, category III and category IV wetlands based on the adopted Washington State Wetland Rating System for Western Washington, Washington State Department of Ecology Publication Number 04-06-025, published August, 2004.

1. Category I Wetlands. Category I wetlands are those that (a) represent a unique or rare wetland type; or (b) are more sensitive to disturbance than most wetlands; or (c) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (d) provide a high level of functions.

2. Category II Wetlands. Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than category I wetlands, but still need a relatively high level of protection. Category II wetlands in western Washington include: wetlands scoring between 51 to 69 points (out of 100) on the questions related to the functions present. Wetlands scoring 51 to 69 points were judged to perform most functions relatively well, or performed one group of functions very well and the other two moderately well.

3. Category III Wetlands. Category III wetlands are wetlands with a moderate level of functions (scores between 30 to 50 points). Wetlands scoring between 30 to 50 points generally have been disturbed in some ways, and are often less diverse or more isolated from other natural resources in the landscape than category II wetlands.

4. Category IV Wetlands Over 2,500 Square Feet. Category IV wetlands have the lowest levels of functions (scores less than 30 points) and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. However, experience has shown that replacement cannot be

guaranteed in any specific case. These wetlands may provide some important functions, and also need to be protected.

C. Designation of Wetland Critical Area Buffer.

The following critical area buffers are hereby established:

1. Wetland Critical Area Buffer.

a. General.

i. Undeveloped Sites. An undeveloped site is any site where the wetland and wetland buffer have not previously been included within a Native Growth Protection Area (NGPA) or Native Growth Protection Easement (NGPE), regardless of whether the site contains a primary structure. Wetlands on undeveloped sites shall have the following critical area buffers, measured from the wetland boundary:

Category	Wetland Characteristic	Buffer
I	Natural heritage wetlands	190 feet
	Bogs	190 feet
	Forested	Based on score for habitat or water quality functions
	Habitat score of 29 to 36	225 feet
	Habitat score of 20 to 28	110 feet
	Water quality score of 24 to 32 and habitat score of less than 20	75 feet
	Not meeting any of the above	75 feet
II	Habitat score of 29 to 36	225 feet
	Habitat score of 20 to 28	110 feet
	Water quality score of 24 to 32 and habitat score of less than 20	75 feet
	Not meeting any of the above	75 feet
III	Habitat score of 20 to 28 points	110 feet
	Not meeting any of the above	60 feet
IV over 2,500 square feet	Score for functions less than 30 points	40

ii. Developed Site. A developed site is any site where the wetland and wetland buffer have been included within an NGPE or NGPA approved and recorded prior to August 1, 2006, or any site abutting an NGPA approved and recorded prior to August 1, 2006, containing the wetland and wetland buffer where such site does not also contain a wetland. Wetlands on developed sites shall be governed by the buffer established within the approved and recorded NGPA or NGPE, no additional wetland buffer shall apply.

b. Buffer and Setback on Sites with Existing Development. Where a primary structure legally established on a site prior to August 1, 2006, encroaches into the critical area buffer or structure setback established in this section, the critical area buffer and/or structure setback shall be modified to exclude the footprint of the existing primary structure. Expansion of any existing primary structure into the critical area buffer or critical area structure setback shall be allowed only pursuant to the provisions of LUC

20.25H.055 (single-family primary structures) or LUC 20.25H.230 (all other primary structures).

2. Buffer Modification. Modifications to the wetland critical area buffer may be approved pursuant to this section. Modifications to the wetland critical area buffer that do not meet the criteria of this subsection may be considered through a critical areas report, LUC 20.25H.230:

a. Buffer Averaging. Buffer averaging may be allowed if all the following criteria are satisfied. Proposals to average the wetland critical area buffer under this subsection shall require a Critical Areas Land Use Permit; provided, that a mitigation or restoration plan is not required for buffer averaging.

i. Buffer averaging may be approved only if the applicant demonstrates that a modification to non-critical area setbacks pursuant to LUC 20.25H.040 would not accommodate the proposed development in a manner consistent with its intended use and function;

ii. Through buffer averaging, the ecological structure and function of the resulting buffer is equivalent to or greater than the structure and function before averaging;

iii. The total buffer area is not reduced;

iv. The buffer area is contiguous;

v. Averaging does not result in any impact to slope stability and does not increase the likelihood of erosion or landslide hazard;

vi. Averaging does not result in a significant adverse impact to habitat associated with species of local importance; and

vii. At no point is the critical area buffer width less than 75 percent of the required buffer dimension.

b. Transportation or Utility Infrastructure. Where a legally established right-of-way, railroad right-of-way or other similar infrastructure of a linear nature crosses a wetland critical area buffer, the edge of the improved right-of-way shall be the extent of the buffer, if the part of the critical area buffer on the other side of the right-of-way provides insignificant biological or hydrological function in relation to the portion of the buffer adjacent to the wetland.

D. Structure Setbacks.

1. General. The requirements of this section apply along with any other dimensional requirements of the Land Use Code (see LUC 20.20.010, 20.20.130, 20.20.190 and Parts 20.25A – 20.25G). The most restrictive dimension controls. Structure setbacks are required in order to:

a. Minimize long-term impacts of development adjacent to critical areas and critical area buffers; and

b. Protect critical areas and critical area buffers from adverse impacts during construction.

2. Minimum Setback of Structures – Undeveloped and Developed Sites. The following structure setbacks apply to both undeveloped and developed sites. Structure setbacks shall be measured from the edge of the critical area buffer on undeveloped sites, or from the edge of the approved and recorded NGPE or NGPA on developed sites:

Category I wetlands	20 feet

Category II wetlands	20 feet
Category III wetlands	15 feet
Category IV wetlands	None required

3. Structure Setback Modification – Undeveloped Sites. The Director may waive or modify the structure setback on an undeveloped site as part of the permit or approval for the underlying proposal if the applicant demonstrates that:

a. Water quality, or slope stability as documented in a geotechnical report, will not be adversely affected;

b. Encroachment into the structure setback will not disturb habitat of a species of local importance within a critical area or critical area buffer;

c. Vegetation in the critical area and critical area buffer will not be disturbed by construction, development, or maintenance activities and will be maintained in a healthy condition for the anticipated life of the development; and

d. Enhancement planting on the boundary between the structure setback and the critical area buffer will reduce impacts of development within the structure setback.

4. Structure Setback Modification – Developed Sites. Structure setbacks on developed sites may be modified only through an approved critical areas report.

20.25H.100 Performance standards.

Development on sites with a wetland or wetland critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

A. Lights shall be directed away from the wetland.

B. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the wetland, or any noise shall be minimized through use of design and insulation techniques.

C. Toxic runoff from new impervious area shall be routed away from the wetlands.

D. Treated water may be allowed to enter the wetland critical area buffer.

E. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use.

F. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

20.25H.105 Mitigation and monitoring – Additional provisions.

In addition to the provisions of LUC 20.25H.210, mitigation plans designed to mitigate impacts to wetlands and wetland critical area buffers shall meet the requirements of this section.

A. Preference of Mitigation Actions.

1. Mitigation for Impacted Wetland Critical Area. Mitigation actions that require compensation of impacted wetland critical area shall occur in the following order of preference, subject to the location requirements of subsection B of this section:

a. Restoring wetlands on upland sites that were formerly wetlands.

b. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of nonnative introduced species. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is being designed.

c. Enhancing significantly degraded wetlands.

2. Mitigation for Impacted Wetland Critical Area Buffer. Mitigation actions that require compensation of impacted critical area buffer shall occur in the following order of preference and in the following locations:

a. On-site, through replacement of lost critical area buffer;

b. On-site, through enhancement of the functions and values of remaining critical area buffer;

c. Off-site, through replacement or enhancement, in the same sub-drainage basin;

d. Off-site, through replacement or enhancement, out of the sub-drainage basin but in the same drainage basin.

B. Type and Location of Mitigation for Wetland Critical Area.

Compensatory mitigation for critical areas functions and values shall be either in-kind and on-site, or in-kind and within the same drainage sub-basin. Mitigation actions may be conducted off-site and outside of the drainage sub-basin when all of the following are demonstrated through a critical areas report:

1. There are no reasonable on-site or in-sub-drainage basin opportunities or on-site and in-sub-drainage basin opportunities do not have a high likelihood of success, after a determination of the natural capacity of the site to mitigate for the impacts. Consideration should include: anticipated wetland mitigation replacement ratios, buffer conditions and proposed widths, hydrogeomorphic classes of on-site wetlands when restored, proposed flood storage capacity, and potential to mitigate stream fish and wildlife impacts (such as connectivity);

2. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and

3. Off-site locations shall be in the same sub-drainage basin unless established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions have been established and strongly justify location of mitigation at another site.

C. Mitigation Ratios.

1. Wetland Acreage Replacement Ratios. The following ratios shall apply to creation or restoration that is in-kind, is on-site, is the same category of wetland, is timed prior to or concurrent with alteration, and has a high probability of success. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered.

Category I	6-to-1
Category II	3-to-1
Category III	2-to-1
Category IV	1.5-to-1

2. Increased Replacement Ratio. The Director may increase the ratios where proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted.

3. Critical Area Buffer Mitigation Ratio. Critical area buffer disturbed or impacted under this part shall be replaced at a ratio of one-to-one.

D. Wetlands Enhancement as Mitigation.

Impacts to wetland critical area functions may be mitigated by enhancement of existing significantly degraded wetlands. Applicants proposing to enhance wetlands must produce a critical areas report meeting the requirements of LUC 20.25H.110 and 20.25H.230 that identifies how enhancement will increase the functions of the degraded wetland and how this increase will adequately mitigate for the loss of wetland area and function at the impact site. An enhancement proposal must also show whether existing wetland functions will be reduced by the enhancement actions.

20.25H.110 Critical areas report – Additional provisions.

A. Limitation on Modification.

A critical areas report may not be used to fill a wetland critical area, except where filling is required to allow a use set forth in LUC 20.25H.055.

B. Additional Content.

In addition to the general requirements of LUC 20.25H.230, a critical areas report for wetlands shall include a written assessment and accompanying maps of the wetlands and buffers within 300 feet of the project area, including the following information at a minimum:

1. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land use activity.

2. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and wetland functions.

3. Functional evaluation for the wetland and adjacent buffer using a local or state agency staff-recognized method and including the reference of the method and all data sheets.

VI. ~~SHORELINES~~(RESERVED)

Comment [CoB14]: Shorelines not regulated as critical area.

~~**20.25H.115 Designation of critical area and buffers.**~~

~~A. Designation of Shoreline Critical Areas.~~

~~See LUC 20.25E.017 for designated shoreline critical areas.~~

~~B. Designation of Shoreline Critical Area Buffers.~~

~~The following critical area buffers are established. The shoreline critical area buffer on Lake Sammamish shall be measured from elevation 31.8 NAVD 88. The shoreline critical area buffer on all other shoreline critical areas shall be measured from the ordinary high water mark.~~

~~1. Shoreline Critical Area Buffers.~~

~~a. General – All Shoreline Critical Areas.~~

~~i. Undeveloped Sites. An undeveloped site is a site that contains no primary structure. All shoreline critical areas on undeveloped sites shall have a 50-foot critical area buffer.~~

~~ii. Developed Sites. A developed site is a site that contains a primary structure. Lots created through subdivision, short subdivision, or the Planned Unit Development process from a developed site shall be considered undeveloped and subject to the requirements of subsection B.1.a.i of this section, except that the lot containing the existing primary structure shall be considered developed. All shoreline critical areas on developed sites shall have a 25-foot critical area buffer.~~

~~b. Buffer and Setback on Sites with Existing Development. Where a primary structure legally established on a site prior to August 1, 2006, encroaches into the critical area buffer or structure setback established in this section, the critical area buffer and/or structure setback shall be modified to exclude the footprint of the existing primary structure. Expansion of any existing primary structure into the critical area buffer or critical area structure setback shall be allowed only pursuant to the provisions of LUC 20.25H.055 (single-family primary structures) or LUC 20.25H.230 (all other primary structures).~~

~~2. Buffer Modification. Modifications to the shoreline critical area buffer may be approved pursuant to this section as part of the permit or approval for the underlying proposal. Modifications to the shoreline critical area buffer that do not meet the criteria of this subsection may be considered through a critical areas report, LUC 20.25H.230:~~

~~a. Adjustment Based on Surrounding Development. Where the shoreline critical area buffer on all developed properties immediately abutting the site is less than the buffer required in subsection B.1 of this section, the required buffer may be modified as set forth in this subsection. Such modification shall allow only a primary structure to encroach into the required buffer. The buffer adjustment shall be determined by connecting the portion of each adjacent primary structure that most encroaches into the required buffer. The line established represents the shoreline critical area buffer for the site; however, in no event may the adjusted shoreline critical area buffer be less than 25 feet.~~

~~b. Transportation or Utility Infrastructure. Where a legally established right-of-way, railroad right-of-way or other similar infrastructure of a linear nature crosses a shoreline critical area buffer, the edge of the improved right-of-way shall be the extent of the buffer, if the part of the critical area buffer on the other side of the right-of-way provides insignificant biological or hydrological function in relation to the portion of the buffer adjacent to the shoreline.~~

~~C. Structure Setbacks.~~

~~1. General. The requirements of this section apply along with any other dimensional requirements of the Land Use Code (see LUC 20.20.010, 20.20.130, 20.20.190 and Parts 20.25A – 20.25G LUC). The most restrictive dimension controls. Structure setbacks are required in order to:~~

~~a. Minimize long-term impacts of development adjacent to critical areas and critical area buffers; and~~

~~b. Protect critical areas and critical area buffers from adverse impacts during construction.~~

~~2. Minimum Setback of Structures.~~

~~a. Undeveloped Site. An undeveloped site is a site that contains no primary structure. Undeveloped sites shall not require a shoreline critical area structure setback.~~

~~b. Developed Site. A developed site is a site that contains a primary structure. Lots created through subdivision, short subdivision, or the Planned Unit Development process from a developed site shall be considered undeveloped and subject to the requirements of subsection C.2.a of this section, except that the lot containing the existing primary structure shall be considered developed. Developed sites shall require a 25-foot shoreline critical area structure setback, measured from the edge of the shoreline critical area buffer.~~

~~3. Structure Setback Modification.~~

~~a. Modification Based on Surrounding Development. Where the shoreline critical area structure setback on all developed properties immediately abutting the site is less than the structure setback required in subsection C.2 of this section, the required structure setback may be modified as set forth in this subsection. Such modification shall allow only a primary structure to encroach into the required structure setback. The modification shall be determined by connecting the portion of each adjacent primary structure that most encroaches into the required structure setback. The line established represents the shoreline critical area structure setback for the site, however, in no event may this subsection modify the required critical area buffer.~~

~~b. Structure Setback Modification – Other (Developed Sites). Structure setbacks on developed sites not meeting the requirements of subsection C.3.a of this section may be modified only through an approved critical areas report. (Ord. 5680, 6-26-06, § 3)~~

~~20.25H.118 Mitigation and monitoring – Additional provisions.~~

~~In addition to the provisions of LUC 20.25H.210, mitigation plans designed to mitigate impacts to shorelines and shoreline critical area buffers shall meet the requirements of this section.~~

~~A. Mitigation Preference.~~

~~Mitigation plans for shorelines and shoreline critical area buffers shall provide mitigation for impacts to critical area functions and values in the following order of preference:~~

~~1. On-site, through replacement of lost critical area buffer;~~

~~2. On-site, through enhancement of the functions and values of remaining critical area buffer;~~

~~3. Off-site, through replacement or enhancement, in the same sub-drainage basin;~~

~~4. Off-site, through replacement or enhancement, out of the sub-drainage basin but in the same drainage basin.~~

~~Mitigation off-site and out of the drainage basin shall be permitted only through a critical areas report.~~

~~B. Buffer Mitigation Ratio.~~

~~Shoreline critical area buffer disturbed or impacted under this part shall be replaced at a ratio of one-to-one.~~

~~**20.25H.119 Critical areas report – Additional provisions.**~~

~~An applicant proposing a modification to the shoreline critical area buffer which would reduce the buffer to less than 25 feet shall establish by survey the site's ordinary high water mark, notwithstanding any other provision of this part or Part 20.25E LUC. (Ord. 5680, 6-26-06, § 3)~~

VII. GEOLOGIC HAZARD AREAS

20.25H.120 Designation of critical area and buffers.

A. Designation of Critical Areas.

The following geologic hazard areas are hereby designated critical areas subject to the regulations of this part.

1. Landslide Hazards. Areas of slopes of 15 percent or more with more than 10 feet of rise, which also display any of the following characteristics:

a. Areas of historic failures, including those areas designated as quaternary slumps, earthflows, mudflows, or landslides.

b. Areas that have shown movement during the Holocene Epoch (past 13,500 years) or that are underlain by landslide deposits.

c. Slopes that are parallel or subparallel to planes of weakness in subsurface materials.

d. Slopes exhibiting geomorphological features indicative of past failures, such as hummocky ground and back-rotated benches on slopes.

e. Areas with seeps indicating a shallow ground water table on or adjacent to the slope face.

f. Areas of potential instability because of rapid stream incision, stream bank erosion, and undercutting by wave action.

2. Steep Slopes. Slopes of 40 percent or more that have a rise of at least 10 feet and exceed 1,000 square feet in area.

3. Coal Mine Hazards. Areas designated on the Coal Mine Area Maps or in the City's coal mine area regulations, LUC 20.25H.130, as potentially affected by abandoned coal mines; provided, that compliance with the coal mine area regulations shall constitute compliance with the requirements of this chapter in regard to coal mines.

B. Geologic Hazard Area Buffers.

The following critical area buffers are established.

1. General Geologic Hazard Critical Area Buffers.

a. Landslide hazards Top-of-slope buffer of 50 feet.

b. Steep slopes Top-of-slope buffer of 50 feet

2. Existing Development. Where a primary structure legally established on a site prior to August 1, 2006, encroaches into the critical area buffer established in subsection B.1 of this section, the critical area buffer and structure setback shall be modified to exclude the footprint of the existing structure. Expansion of an existing structure into the critical area buffer shall be allowed only pursuant to the provisions of LUC 20.25H.065.

3. Buffer Modification. Modifications to the geologic hazard critical area buffer may be considered through a critical areas report, LUC 20.25H.230.

C. Structure Setbacks.

1. General. The requirements of this section apply along with any other dimensional requirements of the Land Use Code (see LUC 20.20.010, 20.20.130, 20.20.190 and Parts 20.25A – 20.25G). The most restrictive dimension controls. Structure setbacks are required in order to:

a. Minimize long-term impacts of development adjacent to critical areas and critical area buffers; and

b. Protect critical areas and critical area buffers from adverse impacts during construction.

2. Minimum Setback of Structures.

a. Landslide hazards Toe-of-slope setback of 75 feet.

b. Steep slopes Toe-of-slope setback of 75 feet.

3. Structure Setback Modification. Structure setbacks may be modified only through an approved critical areas report.

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

In addition to generally applicable performance standards set forth in LUC 20.25H.055 and 20.25H.065, development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

A. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

B. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

C. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

D. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;

E. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;

F. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;

G. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;

H. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

I. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

J. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

20.25H.130 Performance standards – Coal mine hazard area.

The requirements of this section may not be modified through a critical areas report.

A. Application of Regulation and Disclosure on Plats.

1. The subdivision or development of land potentially affected by abandoned coal mines, as described in these regulations or as designated on the Coal Mine Area (CMA) Map, or the Coal Seams Map, maintained by the Development Services Department (DSD), shall be subject to the requirements of this section. Development includes construction of buildings, utilities, and other infrastructure as defined in subsection B of this section. The requirements of this section are in addition to other pertinent City of Bellevue requirements.

Exceptions:

a. Additions to existing single-family residences, in CMS Zone 1, that were not originally subject to this section, are exempted as follows:

i. Additions of 500 square feet or less of new covered floor area are completely exempted.

ii. Additions and replacements which are less than 50 percent of the total proposed floor area are exempted, except for subsections I.1.e, I.4.c, I.4.d, and I.4.e of this section.

b. Detached uninhabited structures less than 500 square feet in CMS Zone 1, which are accessory to single-family residences and on the same property, are completely exempted.

2. Any subdivision or short subdivision that includes property designated as within a CMS Zone shall disclose the designation on the face of the plat and shall include a reference to the requirements of this section.

B. Definitions.

For purposes of this section only, the following defined terms apply:

1. “Angle of draw” (also termed “limit angle”) means the angle of inclination from the vertical of the line connecting the edge of the coal mine workings with the outer limit of the trough subsidence area. For inclined coal seams (such as those in the Coal Creek area), downdip and updip limit angles (which in general will not be identical) are defined at the downdip and updip limits of the coal mine workings, respectively. See Figure 1.

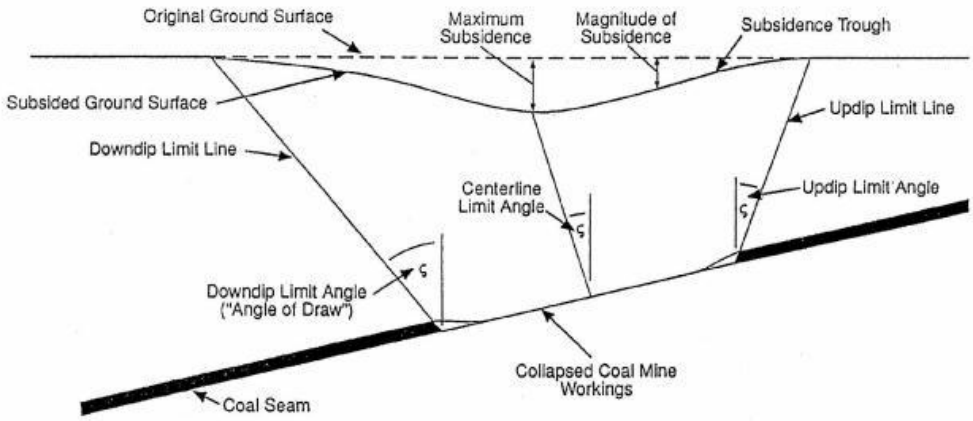


Figure 1

2. "Coal Mine Subsidence (CMS) Zones" means areas where there is a potential for future trough subsidence or sinkhole development due to collapse of abandoned coal mines as delineated on the Coal Mine Area (CMA) Map.

3. "Coal Mine Area (CMA) Map" means a map (Exhibit A attached to the ordinance codified in this chapter) delineating zones of possible mine subsidence and hazards due to abandoned coal mines based on calculated potential surface strains and tilts, and documented possible coal mine hazards.

4. Coal Mine Waste Dump. Also termed "spoil piles," "coal mine waste dumps" are a loose-dumped mix of soil, rock, coal and any other materials that are produced as a waste product during mining.

5. "Development" means any structure, habitable or nonhabitable, or other modification of the natural landscape above and below ground or water.

6. "Extraction ratio" means ratio or percentage of extracted coal relative to total coal in a given area of a seam.

7. "Gas emissions" means explosive, poisonous, or suffocating gases emitted from coal seams.

8. "Lithology" means type of rock, such as sandstone, siltstone, or shale.

9. Limit Angle. See "angle of draw."

10. "Mine hazard" means any hazard associated with abandoned coal mines or prospects including but not limited to trough subsidence, coal mine waste dumps, and public safety mine hazards such as sinkholes and shafts.

11. "Mine subsidence" means lowering of the ground surface, with resulting tilts and strains, due to movement of the underlying soil and/or rock into a void resulting from an underground mine or mine entry.

12. "Outcrop" means the exposure of bedrock or strata projecting through the overlying soil cover.

13. "Panel" means the area of a seam from which coal has been systematically extracted.

14. “Prospect” means an excavation used for exploration or sampling of coal seam.

15. “Public safety mine hazards” means mine hazards that may constitute a danger to public safety, including sinkholes, shafts, mine entries, slope entries, gas emissions, mine fires, and others identified as a public safety hazard by a qualified engineer or geologist.

16. “Qualified engineer or geologist” means a Washington State registered geotechnical (civil branch) or mining engineer, or an engineering geologist, who is experienced in evaluation of coal mine subsidence and coal mine hazards, and who is accepted by the City of Bellevue to undertake such evaluations for projects regulated by the City of Bellevue; engineers or geologists without such experience may not be considered to be qualified.

17. “Remaining mine height” means current true thickness (measured perpendicular to the seam) of cumulative voids in and above mine workings which corresponds approximately to the original coal seam thickness less the subsidence that has already occurred at depth.

18. “Seam” means a stratum or bed of coal or other mineral. Individual coal seams in the Coal Creek area are generally identified by name, such as the Primrose, Jones, and Muldoon seams.

19. “Shaft” means a vertical or inclined tunnel for access to, or ventilation of, mine workings.

20. “Sinkhole” means a type of subsidence consisting of collapse of the ground surface into an underground void in which the surface expression has a characteristic funnel or shaft shape. Also referred to as a “collapse pit.” See Figure 2.

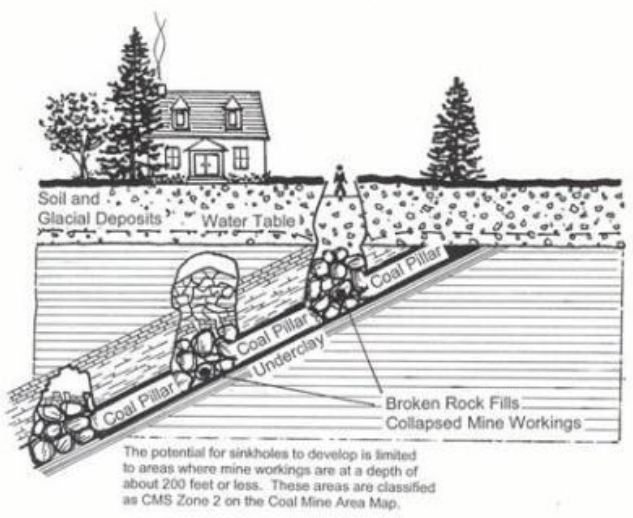


Figure 2

21. “Slope entry” means a mine entry where the mine access tunnel is inclined to horizontal or sloped.

22. “Sphere of influence” means the City of Bellevue’s potential annexation area based on an agreement among the cities of Bellevue, Renton and Issaquah.

23. Spoil Pile. See “coal mine waste dump.”

24. “Strain” means change in length per unit length, e.g., a change in length of 0.1 feet over a 100-foot length corresponds to a strain of 0.001.

25. “Subcrop” means location of strata such as a coal seam beneath an overlying soil cover.

26. “Subsidence factor” means the ratio of maximum surface subsidence to extracted coal seam thickness.

27. “Tilt” means differential settlement per unit length, e.g., a tilt of one in 500 corresponds to a differential settlement of 0.2 feet over a length of 100 feet.

28. “Trough subsidence” (also termed “regional downwarping”) means a surface depression caused by mine subsidence that is generally characterized by a gentle and continuous dish shape that extends beyond the vertical projections of the limits of mining within the seam. See Figure 1.

C. Overview of Coal Mine Subsidence (CMS) Zones.

The Coal Mine Area (CMA) Map delineates areas within the City of Bellevue and associated potential annexation area (sphere of influence) that could be affected by subsidence of abandoned coal mines. The CMA Map defines and identifies Coal Mine Subsidence (CMS) Zones based on potential surface tilts and strains and whether there is a potential for sinkhole development.

The CMS Zones have been developed based on generalized evaluation of available mine maps and records. Direct subsurface information (boring data) on the condition of the mine workings was not available for development of these zones and regulations except for the Newcastle-King Mine. This Newcastle-King Mine information was used to evaluate potential coal mine impacts associated with the existing plat of The Woods. Alternative interpretations of potential subsidence effects could result from site-specific evaluation and analysis based on detailed review of historic data, direct subsurface information, or alternative assumptions.

A surface reconnaissance report and site-specific evaluations are required prior to permitting subdivision or development on any site in a CMS Zone. Methods of analysis shall be described as appropriate. Construction will be permitted in any CMS Zone after elimination of risk to public safety associated with abandoned coal mines, and mitigation of coal mine waste dumps (if any) and potential trough subsidence.

1. CMS Zone 1.

Strain exceeds 0.003.

Tilt exceeds 1:350.

Construction is permitted only after a site-specific evaluation of potential trough subsidence and incorporation of appropriate mitigation measures.

Site-specific structural and civil design is required in all areas per subsections I and J of this section.

2. CMS Zone 2. Areas directly underlain by coal mine workings at a depth of 200 feet or less, documented prospects and areas within 100 feet of such areas.

There is a potential for sinkhole development, or for other public safety mine hazards. Construction is permitted only after potential public safety mine hazards are investigated and eliminated. A direct subsurface investigation program is required to investigate potential sinkhole development. In addition, if any mine workings could potentially cause trough subsidence at the site, construction is permitted only after a site-specific evaluation of potential trough subsidence and incorporation of project-specific mitigation measures as required for CMS Zone 1.

3. Areas of Potential Undocumented Workings. CMS Zones are based on an evaluation of documented workings. There is, however, some potential for undocumented workings to exist in the vicinity of outcropping or subcropping seams. The potential for undocumented workings must be evaluated for any property within 100 feet of the subcrop lines of the Jones and Primrose seams between and beyond known coal mine workings, except for construction of attached additions to, or miscellaneous structures accessory to and within 50 feet of, existing residential buildings. The subcrop lines indicating those areas of potential undocumented workings are shown on the Coal Seams Map.

Note: The Primrose seam subcrop through the plats of Forest Ridge Estates Divisions I and II, The Woods, and Forest Park No. 4 has not been shown on the Coal Seams Map because geotechnical exploration and abandoned mine hazard assessments were completed and accepted by the City at the time these plats were developed. Therefore, as no undocumented workings were found by those investigations and subsequent development, the Primrose seam subcrop through those plats has not been shown on the Coal Seams Map so that it is clear that future building permit applications for lots in those plats are not subject to these regulations.

4. Changing a CMS Zone Designation. The CMS Zone designation for a property in CMS Zone 1 may be removed if it is demonstrated by site-specific evaluation of trough subsidence that magnitudes of potential surface strains and tilts at the property are less than the levels specified above.

The site-specific evaluation of trough subsidence shall be completed by a qualified engineer or geologist and shall be performed in accordance with the requirements of these regulations. The same or similar assumptions as were used in developing these regulations and the CMA Map shall be used when undertaking the site-specific evaluation of trough subsidence. If the evaluation results in a proposed change to the CMS Zone designation based on additional information identified from mine records, or new information available from direct investigation of subsurface conditions by drilling or other means, then the engineer shall be required to demonstrate that the tilts and strains calculated represent the maximum tilts and strains at the site for all possible time sequences of mine collapse.

A CMS Zone 2 designation may be changed to a Zone 1 designation if a direct subsurface investigation demonstrates the absence of coal mine workings or that the coal mine workings, if present, are in a fully collapsed condition.

Any change in a CMS Zone designation must be accepted by the Director of the Development Services Department or his or her designee.

D. Application/Pre-Permit Issuance Requirements.

1. General Requirements. A surface reconnaissance shall be undertaken for the CMS Zones and for areas of potential undocumented workings. All surface

reconnaissance and evaluation of coal mine hazards and potential trough subsidence shall be performed by, or under the direct supervision of, a qualified engineer or geologist.

2. CMS Zone 1. Applicants shall:

a. Conduct a surface reconnaissance and submit at application a report identifying any public safety mine hazards, coal mine waste dumps, or evidence of mine subsidence.

b. If hazards other than trough subsidence are identified in the surface reconnaissance reports, mitigate the hazards after acceptance of an evaluation and remediation plan by DSD.

c. Conduct a site-specific evaluation of potential trough subsidence.

d. Mitigate for trough subsidence including future surface settlements above collapsed mine workings by developing site-specific design that can accommodate calculated potential subsidence effects.

3. OMS Zone 2. Applicants shall:

a. Conduct a surface reconnaissance and submit at application a report identifying all public safety mine hazards, coal mine waste dumps, and evidence of mine subsidence.

b. Conduct site-specific evaluation of potential for sinkhole development, including subsurface investigation. Test pits may be used to investigate coal mine waste dumps and other shallow hazards such as slope entry portals and shaft collar areas. Drilling is required for coal mine workings or other hazards that cannot be adequately investigated by investigations from surface. Drilling may demonstrate that there is no risk of sinkhole development due to the absence or fully collapsed condition of mine workings. Alternatively, drilling may document sinkhole risks, and the applicant must then design a mitigation program to eliminate all such risks.

c. Eliminate risk of sinkhole development and mitigate other public safety mine hazards and/or coal mine waste dumps after acceptance of an evaluation and remediation plan by DSD.

d. If the site could be subject to trough subsidence due to coal mine workings, conduct a site-specific evaluation of potential trough subsidence.

e. Mitigate for trough subsidence including future surface settlements above collapsed mine workings by developing site-specific design that can accommodate calculated potential subsidence effects as required for CMS Zone 1.

4. Areas of Potential Undocumented Workings. If the property lies within 100 feet of a coal seam outcrop or subcrop shown on the Coal Seams Map, but outside any CMS Zones, applicants shall (except as exempted under subsection C.3 of this section):

a. Conduct a surface reconnaissance and submit at application a report identifying any public safety mine hazards, coal mine waste dumps, or evidence of mine subsidence.

b. If hazards other than trough subsidence are identified in the surface reconnaissance report, mitigate the hazards after acceptance of an evaluation and remediation plan by the DCD.

5. Requirements for More Than One Zone. If a property lies within more than one CMS Zone and development will include construction of multiple structures, each structure shall be designed to meet the regulatory requirements for the zone in which

the structure is located. Any structure except roads and utility lines that lies within more than one zone shall be designed in accordance with the requirements for the higher zone number. Roads and utility lines shall be designed in accordance with the requirements for each zone throughout the length of the facility located within that zone.

E. Surface Reconnaissance Reports.

A surface reconnaissance shall be undertaken for all CMS Zones and for areas of potential undocumented workings.

The surface reconnaissance shall be undertaken following review of available geologic hazard maps, mine maps, mine hazard maps, and air photographs to identify any subsidence features or mine hazards including but not limited to surface depressions, sinkholes, mine shafts, mine entries, coal mine waste dumps, and any indication of combustion in underground workings or coal mine waste dumps that are present on or within 100 feet of the property. The surface reconnaissance shall include, but not be limited to, inspection, review, and documentation of any known hazards that have previously been documented by the Office of Surface Mining, Abandoned Mined Land Program (Skelly and Loy, 1985), or that have been identified from review and interpretation of air photographs or other sources.

The surface reconnaissance report shall include:

1. Historical mining data, including available copies of original mine records for mine workings in coal seams.

2. A map showing property boundaries, CMS Zone boundaries, and any potential hazards identified on or within 100 feet of the property.

3. If hazards are identified, a proposed program of detailed site investigation to support engineering design for remediation.

4. For sites in CMS Zone 2, proposed subsurface investigation program, including exploratory test pit and drill hole locations, and mine plans for all seams that lie within 200 feet of the ground surface.

For sites where trough subsidence must be calculated, the surface reconnaissance report may also include proposed site evaluation and trough subsidence calculation methodology; alternatively, that can be submitted in a separate report.

F. Remediation or Mitigation of Hazards Other Than Trough Subsidence.

If hazards are identified in the surface reconnaissance report:

1. Include a separate section in the surface reconnaissance report that proposes a program of detailed site investigation to support engineering for remediation of the hazards.

2. Upon acceptance of the site investigation approach by the DSD, conduct the evaluation. Submit the results to the DSD along with a proposal for remediation design including the following types of mitigation:

a. Mine Entries and Shafts. Mine entries and shafts shall be permanently sealed using controlled backfill and/or grouting, or an approved, engineered seal. Acceptable seal construction consists of a tapered, reinforced concrete plug constructed within a steel form; a below grade reinforced concrete cap constructed over shaft collars; and a reinforced concrete plug for sealing horizontal mine entries.

Site preparation prior to installation of the plug shall include permanently diverting surface drainage away from the shaft or mine entry, and excavating loose rock and soil away from the collar of the shaft or the mine entry portal.

Shaft and slope entry seals shall be designed and installed so that they are bearing on competent bedrock or dense, competent till. The top of the tapered plug or the base of the cap shall extend a minimum of two feet in all directions beyond the shaft or slope entry. The length of any plug used to seal a horizontal mine entry shall not be less than the maximum dimension of the entry. The need for installing additional backfill behind the seal of a horizontal mine entry to prevent potential subsidence over the entry shall be determined on a case-by-case basis.

b. Existing Sinkholes and Shallow Prospect Excavations. Existing sinkholes and shallow prospect excavations shall be backfilled to surface using controlled placement of suitable backfill. Surface drainage shall be permanently diverted away from existing sinkholes and prospect excavations.

c. Potential Sinkholes. Demonstrate by direct subsurface investigation that coal mine workings either do not exist, or that the workings have fully collapsed so that there is no remaining potential for sinkhole development; or show that the hazards associated with any voids that are identified are fully mitigated by backfilling, grouting, or other approved means such that the potential for sinkhole development is eliminated.

A fence may be required to be constructed along the CMS Zone 2 boundary, or around known hazards, to prevent access to the area if the potential for sinkhole development has not been eliminated. If a fence is required, signs shall be posted on it, at intervals of no more than 100 feet, warning of danger due to possible sinkholes.

Any sinkholes that develop shall be promptly backfilled and surface drainage shall be diverted away from the sinkhole.

d. Coal Mine Waste Dumps. Any coal mine waste dump from which springs or seeps are discharging, or which shows evidence of seasonal discharge of springs or seeps, shall be removed or regarded to expose the source of the spring or seep.

Unless the stability of the coal mine waste dump is verified by a slope stability analysis meeting the requirements of the Minimum Standards for Slope Stability Analysis of the City of Bellevue Development Standards, the coal mine-waste dumps shall be removed from the site, or shall be regarded as necessary such that no slope in the coal waste material exceeds 2(H):1(V) and meets City of Bellevue stability criteria.

All coal mine waste material shall be covered with a minimum of two feet of clean soil and shall be revegetated in accordance with Chapter 23.76 BCC.

No construction shall be permitted over coal mine waste material unless a geotechnical investigation is completed by a soils engineer, and specific design and construction criteria are developed to mitigate the potential impacts of the coal mine waste on foundation stability and performance. Construction shall not be permitted within 100 feet of any coal mine waste dump that shows evidence of current or past combustion.

e. Mine Gases. Potential hazards associated with mine gases shall be mitigated by backfilling all mine entries, shafts, and sinkholes in accordance with this section.

f. Mine Fires. Construction shall not be permitted over workings where surface or subsurface investigations indicate the possible presence of combustion in the underlying seam or seams.

3. Once the proposed remediation approach is accepted by DSD, complete the engineering design drawings and specifications for the remediation. Upon acceptance by the DCD, complete the actual remediation.

4. Document the hazard mitigation by submitting as-builds and a remediation construction report. DSD must agree that hazards have been mitigated before any construction is allowed on the site.

5. Any public safety mine hazards shall be eliminated prior to any other development activities on the site. Hazard mitigation shall be performed by or under the direction of a qualified engineer or geologist. Any hazards found during any development activities shall be immediately reported to DSD.

6. No construction shall be allowed within 100 feet of an existing public safety mine hazard, regardless of whether the hazard is located on the property for which the permit application is being submitted or not. The decision on whether to permit construction directly over a public safety mine hazard that has been mitigated will be made on a case-by-case basis based on the type of mitigation and the proposed construction.

G. Site-Specific Evaluation – Potential Trough Subsidence.

1. Review of Available Records. The site-specific evaluation of potential trough subsidence shall include a detailed review of available copies of original mine records for mine workings in coal seams that could potentially influence the site by trough subsidence. The locations, depths, and thicknesses of such seams and workings shall be documented. Coal mine workings that could potentially influence the site shall be determined by projecting the downdip limit angle from the lowest limit of the documented workings to the ground surface. Mine workings are considered to potentially influence the property if the property lies within the line at which the limit angle intersects the ground surface.

2. Subsurface Investigations. Subsurface conditions may be evaluated by drilling. Although drilling is not compulsory, it is the most acceptable method for providing information that is acceptable for reducing the remaining mine height value used in subsidence calculations.

If the applicant wishes to conduct a subsurface investigation, the proposed approach must be submitted to DSD for review and acceptance.

Rotary drilling is an acceptable method of drilling, provided it is used in combination with downhole geophysical logging, including caliper logs. Core drilling is preferred, but is not compulsory, immediately above and through the predicted coal seam locations to facilitate interpretation of the condition of the mine workings. Rotary drillholes shall be logged continuously from 100 feet above to 20 feet below mine workings, including lithology at five-foot intervals, drill fluid circulation, penetration rate, and free fall of the drill string. Greater confidence will be placed in core drilling logs than rotary drilling logs.

As a guideline, it is recommended that a minimum of one drillhole penetrating each coal seam that could potentially cause trough subsidence at the site should be drilled for each 200-foot length of the south property boundary.

If a drillhole encounters solid or broken coal in an area that available mine maps indicates has been mined out, it shall be assumed that the true thickness of coal represents the thickness of intact or crushed pillars, and corresponds to the remaining mine height for calculating potential trough subsidence affects at surface. If the drillhole

encounters voids at or above the location of the coal seam, the cumulative length of the voids shall be used to calculate the true cumulative thickness of the voids, which shall be taken to correspond to the remaining mine height. These assumptions can be modified based on additional drilling.

Direct evidence of the condition of panels in the same seam with similar dimensions, similar extraction ratios, and at a similar or shallower depth, shall be accepted as evidence of the condition of mine workings at any point.

Surface geophysics, or other indirect means, may be used to assist in projecting information between and beyond drillholes, but shall not be accepted as the sole method for evaluating the condition of underground mine workings and calculating remaining mine height. Assumptions concerning the extent of collapse of mine workings based on recorded extraction ratios shall be conservative because of possible inaccuracies of mine records, the likely presence of remnant pillars and the lack of data to accurately locate them, and because uncollapsed mine workings have been documented under similar conditions in King County.

3. Calculation of Trough Subsidence Magnitudes, Tilts, and Strains. Proposed calculation methods, design parameters, and assumptions that will be used shall be submitted for review and acceptance by the Director prior to calculating trough subsidence.

The recommended method for calculating potential trough subsidence magnitudes, strains, and tilts is the empirical function method of the British National Coal Board, as presented in their Subsidence Engineers' Handbook, adjusted to reflect the effects of inclined seams and a downdip limit angle of 45 degrees. Recommended calculation procedures are detailed in subsection K.1 of this section.

Calculations shall be based on a conservative evaluation of site conditions developed from the review of available records, site investigation or other acceptable means, such as previous documentation by subsurface exploration of the condition of the coal seam(s) in the immediate vicinity of the site and at an equivalent depth below the ground surface. A subsidence factor of 0.5, a downdip limit angle of 45 degrees, and a value of remaining mine height equal to the seam thickness shall be used for the subsidence calculations unless direct field evidence or a review of detailed mine records is used to modify these values. The effects of individual panel widths and barrier pillar widths shall be considered in the calculation of potential tilts and strains. If direct subsurface investigation indicates that the mine workings are fully collapsed, an estimate of potential surface settlements due to consolidation of rubble and loose material shall be made for sites directly underlain by coal mine workings.

The subsidence analysis shall evaluate the cumulative effect of all seams that could induce trough subsidence at the site.

Alternative methods of calculating potential subsidence magnitudes, strains, and tilts may be used provided they incorporate similar assumptions to those specified in the preceding paragraphs. If alternative design parameters and assumptions are proposed, detailed justification must be provided to the DCD for consideration during their review and acceptance of the proposed calculation approach.

4. Documentation of Trough Subsidence Evaluation. The results of the detailed site evaluation shall be documented. Site plans shall be prepared showing the proposed development and calculated magnitudes of potential subsidence, strains, and tilts at the

property boundaries and at the locations of any proposed structures. In addition, a map showing contours of potential subsidence magnitudes, strains, and tilts throughout the property shall be submitted for use in design of roads and utilities.

Appropriate recommendations shall be provided for structural and civil design requirements outlined in subsections I and J of this section, respectively.

H. Site-Specific Evaluation – Potential Sinkhole Development or Other Public Safety Mine Hazards.

1. Review of Available Record. To evaluate the potential for sinkholes in CMS Zone 2, the applicant's qualified engineer or geologist shall first conduct a detailed review of available copies of the original mine records for mine workings that could potentially influence the property. Coal mine workings that could potentially influence the site shall be determined by projecting the downdip limit angle from the lowest limit of the documented workings to the ground surface. Mine workings are considered to potentially influence the property if the property lies within the line at which the limit angle intersects the ground surface. The locations, depths, and thicknesses of such seams shall be documented.

2. Proposed Site Investigation. Based on the review of available mine records, the qualified engineer or geologist shall then propose a site investigation program and submit it for review and acceptance by DSD as part of the surface reconnaissance report. The proposed program shall include the items and meet the requirements listed below:

a. Drillhole Locations. Subsurface conditions for coal seams located within 200 feet of the ground surface shall be investigated by drilling. Drillhole sites shall be selected at representative locations and at representative coal seam depths. Drillholes shall be located adjacent to, but not within, coal pillars that are shown on the mine plans. A minimum of five drillholes shall be drilled along the alignment of any linear structure, such as roads or utility lines designed to cross CMS Zone 2, or within the property boundary for other development of properties of five acres or less. The minimum number of drillholes for properties larger than five acres shall be one hole per acre or as determined by the Director.

b. Method of Drilling. Rotary drilling is an acceptable method of drilling provided it is used in combination with downhole geophysical logging, including caliper logs. Core drilling is preferred, but is not compulsory, immediately above and through the predicted coal seam locations to facilitate interpretation of the condition of the mine workings. Drillholes shall be logged continuously throughout their length, including lithology at five-foot intervals for rotary drillholes, drill fluid circulation, penetration rate, and free fall of the drill string. Greater confidence will be placed in core drilling logs than in rotary drilling logs; this may result in less drillholes being required if core drilling is used in the vicinity of coal seams instead of rotary drilling.

c. Shallow Public Safety Hazards. Shallow hazards such as slope entry portals, shaft collars, prospects and mine waste dumps may be investigated by test pits or trenching, providing the method enables investigation to an adequate depth for the hazard being investigated.

d. Any Other Site Investigation Techniques Proposed. Indirect means of subsurface evaluation, including geophysics, geologic projection, and evaluation of

mining records, may be used to supplement drilling results, but shall not be used as the sole source for evaluating subsurface conditions prior to construction in Zone 2 areas.

3. Investigation Results and Interpretation. Once the Director has accepted the proposed site-evaluation, the applicant can proceed to the actual site investigation and must submit the results and the interpretation of those results to DSD.

The need for additional drilling shall be determined by the Director based on the results of the initial five drillholes. If a drillhole encounters solid or broken coal in an area that available mine maps indicate has been mined out, it shall be assumed that the true thickness of coal represents the thickness of intact or crushed pillars. If true coal thickness approximately corresponds to the original seam thickness, it shall be assumed that the mine workings have not collapsed. If the drillhole encounters a void at the location of the coal seam, the true length of the void shall be taken to correspond to the remaining mine height for evaluating the potential for sinkhole development. These assumptions can be modified based on additional drilling. If all drillholes verify that mine workings have effectively collapsed at all depths, further subsurface investigation shall not be required.

I. Mitigation of Trough Subsidence – Buildings in CMS Zone 1.

These mitigation requirements apply to all new construction in CMS Zone 1, except as exempted by subsection A.1 of this section.

1. General Design Requirements.

a. Every building site shall be investigated by a qualified engineer or geologist who shall calculate tilts and strains, and determine appropriate design values for the building site.

b. The foundation elements of each building or structure shall be designed by a Washington State licensed structural engineer, with consideration of the subsidence effects anticipated at the site. The requirements of this subsection I are minimum standards. The structural engineer is responsible to ensure the adequacy of the foundation for the building or structure under consideration. The Building Official may accept alternate designs meeting the intent of these standards. Any portion of the building lateral system not meeting the conventional bracing requirements of the International Building Code, as adopted and amended by the City of Bellevue, must be designed by a structural engineer.

c. Building and structure foundations shall be designed for the loads and conditions specified in subsections I.2, I.3, and I.4 of this section in conjunction with all applicable loads stipulated in the International Building Code, as adopted and amended by the City of Bellevue. Vertical steps and horizontal offsets of footings and walls must be reinforced to meet the requirements of the International Building Code, as adopted and amended by the City of Bellevue, and the American Concrete Institute, to provide continuity of the reinforcement.

d. The forces generated by subsidence effects of tilt and strain shall be treated as live loads with the appropriate load factors and/or factors of safety in design. The friction drag force loads of subsection I.2 of this section must be combined simultaneously with the lateral earth pressure loads specified in subsection I.3 of this section, with both loads treated as earth pressure in load combinations. The subsection I.4.a, I.4.b, and I.4.d design requirements may be applied independently of the friction and earth pressure loads.

e. Utility lines shall not be rigidly connected to the foundation wall. A flexible joint shall be provided at the point of transition from soil support to building support for all utilities.

2. Design for Friction Force Loads.

a. CMS Zone 1 includes both tension and compression ground strain zones. Foundations and slabs on grade shall be designed to resist not less than the following ultimate friction forces for tension and/or compression as determined from the geotechnical investigation. Rigid crosstie struts may be used to reduce the span of foundation elements under horizontal load.

Fd = f(DL + 0.5 LL)
where Fd = Drag force parallel to ground strain direction
f = Ultimate coefficient of friction from soil to footing
DL = Design dead load
LL = Design live load (including snow load).

b. Isolated pad footings and posts shall be designed and constructed to ensure that the post remains plumb. This may be accomplished by reducing the friction under the footing, by rigid bracing of the post in each of four directions, or by other approved means. When post footings are incorporated into rigid crosstie struts, the struts must meet the requirements of subsection I.4.a of this section.

3. Design for Lateral Earth Pressure Loads.

a. Ultimate passive soil pressure shall be assumed to act on all vertical surfaces in contact with foundation soil due to horizontal strain occurring from a subsidence event. This applies to the horizontal projection of all below grade elements. These ultimate pressures, and the distribution, shall be determined by a qualified engineer or geologist in accordance with established engineering practice. Rigid crosstie struts may be used to reduce the span of foundation elements under horizontal load.

b. Where walls and footings are subject to compression zone forces, these lateral forces may be reduced by the use of compressible backfill material such as wood chips, shredded rubber, or other approved materials. If such a material is used, it is the responsibility of a qualified engineer or geologist to determine the appropriate design loads to be applied to the structure.

4. Design for Tilt and Curvature Conditions.

a. Foundations shall be rigid and shall be designed in accordance with standard engineering practices, but shall be able to resist as a minimum the shears and moments generated by (DL + 0.5 LL) on the support conditions specified in subsections I.4.a.i and I.4.a.ii of this section, where L is the total length of the building foundation in the direction under consideration.

i. An unsupported simple span length of eight feet or 0.4 L, whichever is less, anywhere within each segment of the foundation in each direction of the building.

ii. An unsupported cantilever length, fixed at one end and pinned at the other end, of four feet or 0.2 L, whichever is less, anywhere within each segment of the foundation in each direction of the building.

b. Rigid foundations longer than 60 feet in severe subsidence conditions (tilts greater than one in 200) shall be designed based on an analysis made by a

qualified engineer or geologist to account for the specific curvature, but shall meet subsection I.4.a of this section as a minimum.

c. If rigid materials, such as masonry, veneer or stucco, are used in construction, allowance shall be made at all corners, joints and transitions to other materials for differential movement and settlement.

d. Stone, brick or masonry arches are not allowed unless the supporting footing is designed per subsection I.4.a of this section for any downward gravity load directly supported on it and upward full allowable soil bearing pressure, spanning unsupported the entire outer length of the arch.

e. The superstructure shall be bolted to the foundation to resist earth pressure, wind, and seismic forces. Bolts shall have four inches of additional thread such that the building can be disconnected, releveled, shimmed and reconnected if so required.

J. Mitigation of Trough Subsidence: Roads, Utilities, Grading, Retaining Walls.

Utilities shall be designed to accommodate the magnitudes of strains and tilts specified in these regulations by using available engineering design techniques, such as those presented by Yokel and others (1981). The following requirements shall apply to CMS Zones 1 and 2.

Structures associated with roads and utilities shall be strong enough to resist the forces induced by maximum predicted subsidence-related tilts and strains, or flexible enough to accommodate the resulting deformations. Where more stringent performance criteria are specified in these regulations, the more stringent criteria apply.

1. Grading. Gradients of landscaped areas shall be designed for the intended drainage under the most critical predicted subsidence conditions. Minimum required slopes needed for positive drainage shall be increased and maximum allowable slopes decreased by amounts equal to the slope of the predicted subsidence profile averaged over a 50-foot length. Gradients away from building foundations shall be not less than two percent.

2. Retaining Walls. Concrete or masonry retaining walls, not used as foundation elements for buildings or structures, shall be constructed with expansion joints spaced not greater than 40 feet along the length of the wall and at each corner. The joints shall extend through the wall and footing. Smooth reinforcing dowels may be used for shear connection if one end is greased to prevent bonding of the concrete or grout. Such retaining walls shall be designed to meet the International Building Code, as adopted and amended by the City of Bellevue, other City of Bellevue regulations, and any requirements determined to be appropriate by a qualified engineer or geologist, or a licensed structural engineer.

3. Water. The system design shall be able to provide for twice the maximum predicted tilts and strains, including service lines, structures, and related appurtenances.

4. Sewer. The system design shall be able to provide for 1.5 times the maximum predicted tilts and strains, including service lines, structures, and related appurtenances. Design grades shall provide positive grade after allowing for the maximum predicted subsidence profiles.

5. Storm Drainage. The system design shall be able to provide for 1.5 times the predicted tilts and strains, including service lines, structures, and related

appurtenances. Design grades shall provide positive grade after allowing for the maximum predicted subsidence profile. Detention and retention facilities shall be designed to remain functional following the occurrence of twice the maximum predicted tilts and strains. Such facilities shall only be located in CMS Zone 2 if all risk of sinkhole development has been eliminated. Detention and retention facilities shall be designed and located so that they will not cause damage or a risk to public safety.

6. Roadways and Bridges. All roadways shall be flexible material. Roadways shall have a minimum slope of not less than one-half percent plus the slope of the maximum predicted subsidence profile to facilitate maintaining positive drainage. Bridges shall be designed to safely accommodate twice the maximum strains and tilts predicted at the bridge location.

7. Private Utilities. Utility cables and pipelines shall be designed to accommodate the maximum predicted tilts and strains with suitable safety factors applied to these magnitudes. Utilities shall be designed such that failure of the utility line will not present a risk to public safety. The applicant shall present certification from the respective private utility that utilities have been designed in accordance with the above.

K. Background Information – References, and Sources for Site Evaluation.

The Coal Mine Subsidence Zone Maps have been developed in general by using conservative design criteria for shallow workings and by explicitly considering the condition of the workings in some of the northernmost deeper workings. The Zone 1 boundary is intended to represent the limit of subsidence effects that could potentially occur; the probable magnitudes of future subsidence within Zone 1 may be less or more severe based on site specific analysis. The methods used to develop the maps are described below to facilitate calculation of potential subsidence effects at specific sites.

1. CMS Zone 1. Development of the zone boundary for Zone 1 was based on conservative assumptions regarding the existing condition of the documented workings within 700 feet of the ground surface and with explicit consideration of the condition of the workings below approximately 700 feet based on available records of the mining activities in the No. 3, No. 4 and Muldoon seams.

Analyses of the workings above 700 feet and workings below 700 feet not explicitly considered as described above (i.e., No. 3, No.4 and Muldoon seams) included the assumption that the coal seams were worked with a high extraction ratio, but have not collapsed so that the remaining mine height is equal to the seam thickness, and that the magnitude of the remaining subsidence (equivalent to the remaining mine height times the subsidence factor) will occur in the future. Individual seam thicknesses are taken from a published survey of abandoned coal mines in the Coal Creek area (Skelly and Loy, 1985). The distribution of coal mine workings has been based primarily on maps prepared for the Office of Surface Mining by Dunrud (1987). These maps are basically skeletal and do not provide complete details of past coal extraction activities. They were spot checked against the most recent submittals of the more detailed mine maps available from the Washington Department of Natural Resources, Division of Geology and Earth Resources.

Analyses of the workings in the No. 3, No. 4 and Muldoon seams below a depth of 700 feet considered the average panel width, the width and location of the barrier pillars, and the extraction ratio. The likelihood of previous collapse was assumed to have been high where mine records indicated pillars have been recovered, resulting in a

high extraction ratio. Previous collapse and high extraction ratios were modeled through a reduced subsidence factor. Extraction ratios were estimated based on detailed mine maps available from the Washington Department of Natural Resources.

Subsidence profiles, tilts, and strains were calculated using the methods detailed in the Subsidence Engineers' Handbook (SEH, 1975) with adjustments as noted below. Important assumptions and calculation procedures were as follows:

a. A subsidence factor of 0.5 was used for workings above approximately 700 feet depth and for any deeper workings not explicitly considered as noted above. The subsidence factor is based on site conditions and previous experience under similar conditions. For workings below 700 feet, a maximum subsidence factor of 0.25 was used for workings with extraction ratios of 50 percent. This subsidence factor was reduced using a curve approximating an inverted parabola. For extraction ratios of 90 percent and 10 percent on the parabolic curve, a subsidence factor of 0.1 was used.

b. The maximum vertical subsidence for each seam was calculated as the maximum subsidence that would be predicted for a horizontal seam, multiplied by the cosine of the seam dip (Whittaker, et al., 1989, Equation 62). Coal seams in the Newcastle area of King County generally dip about 40 degrees.

c. The maximum vertical subsidence for each panel of the workings below 700 feet was corrected for the panel width to depth ratio and for the face length to depth ratio as per Fig. 3 and Fig. 4 of the Subsidence Engineers Handbook (SEH, 1975, pp. 8-11). Barrier pillar widths were estimated from available mine maps.

d. Downdip, centerline, and updip limit angles of 45, 15, and 15 degrees, respectively, have been assumed based on data developed by Ren, et al., as presented by Whittaker (1989, pp. 254-255). These limit angles are considered to be conservative based on lithology, but have been used in the absence of specific site data.

e. Topography is considered in determining the point at which the limit angle intersects the ground surface.

f. Trough subsidence profiles were first calculated for a flat seam, and then adjusted to account for seam inclination by proportioning the subsidence profile for a flat seam between the limit lines at which the limit angles determined for the inclined seams intersect the ground surface.

g. Predicted ground tilts are calculated as the slope between adjacent points of the calculated subsidence profile.

h. Maximum ground strains applicable for horizontal seams were multiplied by correction factors for inclined seams prior to calculating the strain profile. Correction factors to determine the updip and downdip maximum tensile strain are 0.25 and 1.75, respectively, based on Table 6 of SEH. A correction factor of 1.75 was used to determine the maximum compressive strain (Whittaker, 1989, p. 239). Strain profiles were first calculated for flat seam conditions and then converted to develop inclined seam strain profiles using the same limit angles used for the subsidence profiles. Additional correction factors for ground strain calculations considering the panel width to depth ratio (SEH, 1975, Fig. 15, p. 28) have been included in the analysis.

i. The inclined seam subsidence and strain profiles were determined by superimposing the effects of multiple seams across eight cross sections. Subsidence and strain values were calculated at 10-foot intervals along the cross sections.

The interaction of the subsidence effects of multiple seams results in canceling of calculated tilts and strains as, for example, when the zone of compressive strains from the subsidence of one seam corresponds to the zone of tensile strains from the subsidence of an underlying seam. Depending on the assumptions that are made regarding the timing of collapse of coal mine workings, a variety of different strain and tilt values could be calculated at points located within areas potentially influenced by multiple seams.

2. CMS Zone 2. The zone of potential sinkhole development (CMS Zone 2) has been defined as all areas directly underlain by coal mine workings at a depth of 200 feet or less, documented prospects, and the area within 100 feet of such areas. The area within 100 feet of a shaft collar or slope entry is included in CMS Zone 2 even if additional coal mine workings have not been identified in the immediate area. Gangways between documented mine workings that are within 300 feet of the ground surface and are accessed by the same entry as the documented workings are included in CMS Zone 2 because of the possibility of undocumented workings at such locations.

3. References and Sources for Detailed Site Evaluation. The following sources have been used in developing these regulations. Additional information available from these sources could be used in performing detailed site evaluations for specific properties.

Dunrud, Richard, 1987, Mine Map of Newcastle Area, King County, Washington. Prepared for U.S. Department of the Interior, Office of Surface Mining, Denver, Colorado.

National Coal Board, 1975, Subsidence Engineers' Handbook.

Skelly and Loy, 1985, Abandoned Coal Mine Survey, Coal Creek, King County, Washington. Prepared for the U.S. Department of the Interior, Office of Surface Mining, Denver, Colorado.

Washington Department of Natural Resources, Division of Geology and Earth Resources. Available copies of original mine maps for the No. 3, No. 4 and Muldoon seams.

Whittaker, Barry N., and David J. Reddish, 1989, Subsidence, Occurrence, Prediction, and Control. Developments in Geotechnical Engineering, 56, published by Elsevier.

Yokel, F. Y., L. A. Salomone, and R. M. Chung, 1981, Construction of Housing in Mine Subsidence Areas. NBSIR 81-2215. (Ord. 5680, 6-26-06, § 3)

20.25H.135 Mitigation and monitoring – Additional provisions for landslide hazards and steep slopes.

In addition to the general mitigation and restoration plan requirements of LUC 20.25H.210, each mitigation or restoration plan for geologic hazard critical areas shall include:

A. Erosion and Sediment Control Plan.

The erosion and sediment control plan shall be prepared in compliance with requirements set forth in Chapter 23.76 BCC, now or as hereafter amended. Such plans shall also include, if not otherwise addressed in Chapter 23.76 BCC, the location and methods of drainage, surface water management, locations and methods of erosion

control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability;

B. Drainage Plan.

The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with applicable City codes and standards. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;

C. Monitoring Surface Waters.

If the Director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site.

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

In addition to the provisions of LUC 20.25H.230, any proposal to modify a landslide hazard or steep slope or associated critical area buffer through a critical areas report shall comply with the requirements of this section.

A. Limitation on Modification.

The provisions for coal mine hazard areas in LUC 20.25H.130 may not be modified through a critical areas report.

B. Area Addressed in Critical Area Report.

In addition to the general requirements of LUC 20.25H.230, the following areas shall be addressed in a critical areas report for geologically hazardous areas:

1. Site and Construction Plans. The report shall include a copy of the site plans for the proposal and a topographic survey;

2. Assessment of Geological Characteristics. The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region;

3. Analysis of Proposal. The report shall contain a hazards analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties; and

4. Minimum Critical Area Buffer and Building Setback. The report shall make a recommendation for a minimum geologic hazard critical area buffer, if any, and minimum building setback, if any, from any geologic hazard based upon the geotechnical analysis.

20.25H.145 Critical areas report – Approval of modification.

Modifications to geologic hazard critical areas and critical area buffers shall only be approved if the Director determines that the modification:

A. Will not increase the threat of the geological hazard to adjacent properties over conditions that would exist if the provisions of this part were not modified;

B. Will not adversely impact other critical areas;

C. Is designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than would exist if the provisions of this part were not modified;

D. Is certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington;

E. The applicant provides a geotechnical report prepared by a qualified professional demonstrating that modification of the critical area or critical area buffer will have no adverse impacts on stability of any adjacent slopes, and will not impact stability of any existing structures. Geotechnical reporting standards shall comply with requirements developed by the Director in City of Bellevue Submittal Requirements Sheet 25, Geotechnical Report and Stability Analysis Requirements, now or as hereafter amended;

F. Any modification complies with recommendations of the geotechnical support with respect to best management practices, construction techniques or other recommendations; and

G. The proposed modification to the critical area or critical area buffer with any associated mitigation does not significantly impact habitat associated with species of local importance, or such habitat that could reasonably be expected to exist during the anticipated life of the development proposal if the area were regulated under this part.

VIII. HABITAT ASSOCIATED WITH SPECIES OF LOCAL IMPORTANCE

20.25H.150 Designation of critical area.

A. Definition of a Species of Local Importance.

The following species are hereby designated as species of local importance:

1. Bald eagle (Haliaeetus leucocephalus);
2. Peregrine falcon (Falco peregrinus);
3. Common loon (Gavia immer);
4. Pileated woodpecker (Dryocopus pileatus);
5. Vaux's swift (Chaetura vauxi);
6. Merlin (Falco columbarius);
7. Purple martin (Progne subis);
8. Western grebe (Aechmophorus occidentalis);
9. Great blue heron (Ardea herodias);
10. Osprey (Pandion haliaetus);
11. Green heron (Butorides striatus);
12. Red-tailed hawk (Buteo jamaicensis);
13. Western big-eared bat (Plecotus townsendii);
14. Keen's myotis (Myotis keenii);
15. Long-legged myotis (Myotis volans);
16. Long-eared myotis (Myotis evotis);
17. Oregon spotted frog (Rana pretiosa);
18. Western toad (Bufo boreas);
19. Western pond turtle (Clemmys marmorata);

20. Chinook salmon (Oncorhynchus tshawytscha);
21. Bull trout (Salvelinus confluentus);
22. Coho salmon (Oncorhynchus kisutch);
23. River lamprey (Lampetra ayresi).

B. Habitat (other than the critical areas and critical area buffers otherwise designated in LUC 20.25H.025) associated with species of local importance is hereby designated a critical area; provided, that compliance with these species of local importance regulations, LUC 20.25H.150 through LUC 20.25H.170 inclusive, shall constitute compliance with the requirements of this part where such habitat is located outside of other critical areas designated in this part.

C. Naturally occurring ponds of under 20 acres (see LUC 20.50.036) are hereby designated critical areas.

D. Designation of Critical Area for Naturally Occurring Ponds. The following critical area buffer is hereby established for naturally occurring ponds that are not classified as a stream~~, shoreline,~~ or wetland:

Naturally occurring ponds where no other critical area designation applies: 35 feet.

Comment [CoB15]: Shorelines not regulated as critical area.

20.25H.155 Uses in habitat for species of local importance.

The uses allowed in the underlying land use district are allowed within habitat associated with species of local importance, so long as the development complies with the performance standards of LUC 20.25H.160. The section does not allow modification of other critical areas or critical area buffers.

20.25H.160 Performance standards.

If habitat associated with species of local importance will be impacted by a proposal, the proposal shall implement the wildlife management plan developed by the Department of Fish and Wildlife for such species. Where the habitat does not include any other critical area or critical area buffer, compliance with the wildlife management plan shall constitute compliance with this part.

20.25H.165 Critical areas report – Additional provisions.

In addition to the general critical areas report requirements of LUC 20.25H.230, critical areas reports to modify the performance standards for habitat for species of local importance must meet the requirements of this section.

A. Habitat Assessment.

A habitat assessment is an investigation of the site to evaluate the potential presence or absence of designated species of local importance or habitat for species of local importance. A critical areas report for habitat for species of local importance shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:

1. Detailed description of vegetation on and adjacent to the site;
2. Identification of any species of local importance that have a primary association with habitat on or adjacent to the site, and assessment of potential project impacts to the use of the site by the species;

3. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the site;

4. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;

5. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed use or activity and to be conducted in accordance with the mitigation sequence set forth in LUC 20.25H.215; and

6. A discussion of ongoing management practices that will protect habitat after the site has been developed, including proposed monitoring and maintenance programs.

20.25H.170 Process to identify additional species of local importance.

A. Designation Process.

Additional species of local importance may be designated pursuant to the Land Use Code amendment process, Part 20.30J LUC.

B. Additional Decision Criteria.

In addition to the decision criteria of LUC 20.30J.135, a species may be designated a species of local importance only if it demonstrates the following characteristics:

1. Local populations of native species are in danger of extirpation based on existing trends:

a. Local populations of native species that are likely to become endangered; or

b. Local populations of native species that are vulnerable or declining;

2. The species or habitat has recreation, commercial, game, tribal, or other special value;

3. Long-term persistence of a species is dependent on the protection of the species through the provisions of this part;

4. Protection by other county, state, or federal policies, laws, regulations, or nonregulatory tools is not adequate to prevent degradation of the species or habitat in the City; and

5. Without protection, there is a likelihood that the species or habitat will be diminished over the long term.

C. Effect of Designation.

Designation of a species of local importance under this section shall not impact projects or proposals with a vested application or approved permit.

IX. AREAS OF SPECIAL FLOOD HAZARD

20.25H.175 Designation of critical area.

A. Designation of Critical Area.

Areas of special flood hazard shall include:

1. Land Subject to One-Hundred-Year Flood. The land in the floodplain subject to the flood having a one percent chance or greater of being equaled or exceeded in

any given year as determined by customary methods of statistical analysis defined in the City of Bellevue Storm and Surface Water Engineering Standards, January 2011, or as hereafter amended. Also referred to as the 100-year flood.

2. Areas Identified on the Flood Insurance Rate Map(s). Those areas identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for King County" dated April 19, 2005, with an accompanying flood insurance map(s) and any revisions thereto. The Flood Insurance Study and accompanying map(s) are hereby adopted by reference, declared part of this part, and are available for public review at the City of Bellevue.

3. Additional Areas. Other areas designated by the Director pursuant to this section shall be considered areas of special flood hazard.

4. Designation of Areas of Special Flood Hazard. Flood Insurance Rate Maps are to be used as a guide for the City of Bellevue, project applicants, and/or property owners to identify areas of special flood hazard. Flood Insurance Rate Maps may be continuously updated as areas are reexamined or new areas are identified. Newer and more restrictive information for flood hazard area identification shall be the basis for regulation.

5. Use of Additional Information. The Director may use additional flood information that is more restrictive or detailed than that provided in the Flood Insurance Study to designate areas of special flood hazard, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show stream habitat areas, or similar information.

6. Flood Elevation Data. When base flood elevation data is not available (A and V zones), the Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer provisions for the area of special flood hazard. In areas of special flood hazard where the BFE has increased due to remapping efforts, the new BFE will establish the regulatory limit.

20.25H.177 Definitions.

For purposes of the regulations for the area of special flood hazard, the following definitions apply:

"Base flood elevation (BFE)" means the flood having a one percent chance of being equaled or exceeded in any given year as determined by customary methods of statistical analysis defined in the Storm and Surface Water Utility Code, Chapter 24.06 BCC. Also referred to as the 100-year flood.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Development" means any man-made change to improved or unimproved real estate in the area of special flood hazard, including, but not limited to, building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

"Encroachment" means any alteration or development within the regulatory floodway that would result in any increase in the flood levels during the occurrence of the base flood discharge.

"Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; or
2. The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood Insurance Rate Map" means the map delineating special flood hazard areas effective December, 1978, that was prepared by the Federal Insurance Administration for the City or as subsequently revised by the Federal Emergency Management Agency.

"Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate of improved real property, water and sanitary facilities, structures and their contents.

"Floodway" means the channel of a river or stream and overbank areas adjacent to the channel. The floodway carries the bulk of floodwater downstream and is usually the area where water velocities and forces are the greatest and most destructive. The floodway and the adjacent land areas must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

"Hyporheic zone" means the saturated zone located beneath and adjacent to streams that contains some portion of surface waters, serves as a filter for nutrients and maintains water quality.

"Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this part found in LUC 20.25H.180.D.1.a.

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include "recreational vehicle."

One-Hundred-Year Flood. See "Base flood elevation (BFE)."

"Pre-FIRM building" means a building constructed prior to December 1, 1978.

"Recreational vehicle" means a vehicle which is:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

"Regulatory floodway" means the floodway delineated on the flood insurance rate map (FIRM).

"Structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a mobile home.

"Substantial damage" means damage of any origin sustained by a structure where the cost of restoring the structure to its before damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" includes the following: Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either (1) before the improvement or repair is started, or (2) if the structure has been damaged, and is being restored, before the damage occurred. For the purpose of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or (2) any alteration of a structure listed on the National Register of Historic Places.

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

No use, development or activity may occur in an area of special flood hazard except as specifically allowed by this part. All use, development or activity which is allowed is subject to the performance standards of this section and shall not result in a rise in the BFE. The requirements of this section may not be modified through a critical areas report.

A. Existing Development Declared Legally Nonconforming.

All development within the area of special flood hazard for which a vested Building Permit application exists prior to the effective date of this part and which fails to comply with the requirements of this part is legal nonconforming development. Lateral additions, new development or substantial improvements to a legally nonconforming development shall be allowed in compliance with subsection D of this section, and shall comply with the applicable performance standards of this section. Any other modification to a legally nonconforming development shall not result in a rise in the BFE.

B. Review of Proposed Development – Applicable Process.

Proposals for development in the areas of special flood hazard shall require a Critical Areas Land Use Permit, Part 20.30P LUC. The Director shall determine that all necessary permits have been obtained from federal, state, or local agencies prior to approval.

C. General Performance Standards.

Where use or development is allowed pursuant to LUC 20.25H.055, the following general performance standards apply:

1. Intrusion Over the Area of Special Flood Hazard Allowed. Any structure may intrude over the area of special flood hazard if:

a. The intrusion is located above existing grade, and does not alter the configuration of the area of special flood hazard;

b. The intrusion is at an elevation and orientation which maintains the existing vegetation of the area of special flood hazard in a healthy condition. Solar access to vegetation must be maintained at least 50 percent of daylight hours during the normal growing season; and

c. The intrusion does not encroach into the regulated floodway except in compliance with subsection C.5 of this section.

Development not meeting the requirements of this subsection C.1 may be allowed pursuant to LUC 20.25H.055 and only in accordance with the requirements set forth in the remainder of this section C.

2. Elevation Certificate Following Construction. Following construction of a structure within the area of special flood hazard, where the base flood elevation is provided, the applicant shall obtain an elevation certificate. The elevation certificate shall be completed by a surveyor licensed in the state of Washington and shall be submitted to City of Bellevue, Utilities Department. The Director shall obtain and transmit to the Director of the Utilities Department the elevation in relation to City of Bellevue vertical datum (NAVD 88) of the lowest floor, including basement, and attendant utilities of a new or substantially improved structure permitted by this part. All records shall be maintained for public inspection in accordance with 44 C.F.R. 60.3(b)(5)(iii) and the City of Bellevue record retention policy.

3. Construction Materials and Methods.

a. Site Design. All structures, utilities, and other improvements shall be located on the buildable portion of the site out of the area of special flood hazard unless there is no buildable site out of the area of special flood hazard. For sites with no buildable area out of the area of special flood hazard, structures, utilities, and other improvements shall be placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the stream and other critical areas as possible. Located in flood-fringe where flood flow velocities are less than three feet per second and flood depths are less than three feet. If the Director detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

b. Methods That Minimize Flood Damage. All new construction and substantial improvements shall be constructed using flood-resistant materials and using methods and practices that minimize flood damage.

c. Utility Protection. Electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

d. Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

4. No Rise in the Base Flood Elevation (BFE). Any allowed use or development shall not result in a rise in the BFE.

a. Post and Pile. Post and piling techniques are preferred and are presumed to produce no increase in the BFE. Demonstration of no net rise in the BFE through calculation is not required.

b. Compensatory Storage. Proposals using compensatory storage techniques to assure no rise in the BFE shall demonstrate no net rise in the BFE through the calculation by methods established in the Utilities Storm and Surface Water Engineering Standards, January 2011, Section D4-04.5, Floodplain/Floodway Analysis, now or as hereafter amended.

5. Development in the Regulatory Floodway.

a. Encroachment into Regulatory Floodway Prohibited. Encroachments, including, but not limited to, fill, new construction, substantial improvements, and other development, are prohibited, unless a registered professional engineer certifies that the proposed encroachment into the regulatory floodway shall not result in any rise in the BFE using hydrological and hydraulic analysis performed in accordance with City of Bellevue Storm and Surface Water Engineering Standards, January 2011, or as hereafter amended. All new construction and substantial improvements shall comply with this section.

b. Residential Structures. A residential structure located partially within the regulatory floodway will be considered as totally within the regulatory floodway and must comply with this subsection C.5. This subsection does not apply to structures identified as historical places. Construction or reconstruction of residential structures is prohibited within the regulatory floodway, except when:

i. Repairs, reconstruction, or improvements to a structure do not increase the footprint; and

ii. Repairs, reconstruction, or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either (1) before the repair, reconstruction, or improvement is begun, or (2) if the structure has been damaged, and is being restored, before the damage occurred. Work done to comply with state or local health, sanitary, or safety codes identified by the Building Official and which are the minimum necessary to assure safe living conditions or any alteration of a structure listed on the National Register of Historic Places shall not be included in the 50 percent market value determination.

c. Substantially Damaged Residential Structures.

i. The Director may request the Washington State Department of Ecology assess the risk of harm to life and property posed by the specific conditions of the regulatory floodway, and provide the City with a recommendation on repair or replacement of a substantially damaged residential structure consistent with WAC 173-158-076, now or as hereafter amended. Property owners shall be responsible for submitting to the City any information necessary to complete the assessment when such information is not otherwise available. No repair or replacement of a substantially damaged residential structure located in the regulatory floodway is allowed without a recommendation from the Department of Ecology.

ii. Before the repair, replacement, or reconstruction is started, all requirements of this section must be satisfied. In addition, the following conditions shall be met:

(1) There is no potential safe building location for the replacement residential structure on the same property outside the regulatory floodway;

(2) A replacement residential structure is a residential structure built as a substitute for a previously existing residential structure of equivalent use and size;

(3) Repairs or reconstruction or replacement of a residential structure shall not increase the total square footage of floodway encroachment;

(4) The elevation of the lowest floor of the substantially damaged or replacement residential structure is a minimum of one foot higher than the base flood elevation;

(5) New and replacement water supply systems are designed to eliminate or minimize infiltration of flood water into the system;

(6) New and replacement sanitary sewerage systems are designed and located to eliminate or minimize infiltration of flood water into the system and discharge from the system into the flood waters; and

(7) All other utilities and connections to public utilities are designed, constructed, and located to eliminate or minimize flood damage.

6. Modification of Stream Channel. Alteration of open stream channels shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:

a. Modifications shall only be allowed in accordance with the habitat improvement projects.

b. Modification projects shall not result in blockage of side channels.

c. The City of Bellevue shall notify adjacent communities, the state departments of Ecology and Fish and Wildlife, and the Federal Insurance Administration about the proposed modification at least 30 days prior to permit issuance.

d. The applicant shall maintain the altered or relocated portion of the stream channel to ensure that the flood-carrying capacity is not diminished. Maintenance shall be bonded for a period of five years, and be in accordance with an approved maintenance program.

7. Compensatory Storage. Development proposals must not reduce the effective base flood storage volume of the area of special flood hazard. Grading or other activity that would reduce the effective storage volume must be mitigated by creating compensatory storage on the site. The compensatory storage must:

a. Provide equivalent elevations to that being displaced;

b. Be hydraulically connected to the source of flooding;

c. Be provided in the same construction season and before the flood season begins on September 30th;

d. Occur on site or off site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time;

e. Be supported by a detailed hydraulic analysis that:

i. Is prepared by a licensed engineer;

ii. Demonstrates that the proposed compensatory storage does not adversely affect the BFE; and

f. Meet all other critical areas rules subject to this part. If modification to a critical area or critical area buffer is required to complete the compensatory storage requirement, such modification shall be mitigated pursuant to an approved mitigation and restoration plan, LUC 20.25H.210.

D. Specific Performance Standards.

Where use or development is allowed pursuant to LUC 20.25H.055, the following specific performance standards apply.

1. Modification of Existing Development and Existing Nonconforming Development. Lateral additions and substantial improvements to existing development and existing nonconforming development is allowed only through a reasonable use exception, LUC 20.25H.190.

a. Substantial Improvements. Substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more

above the base flood elevation (BFE). Fully enclosed areas below the BFE that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

i. A minimum of two openings having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding shall be provided.

ii. The bottom of all openings shall be no higher than one foot above grade.

iii. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

iv. Enclosed areas (including breakaway walls) below the BFE shall be no larger than 300 square feet.

b. Lateral Additions. Lateral additions to structures that qualify as a substantial improvement must meet the elevation standards of new construction. If the common wall between the lateral addition and the existing structure is demolished as part of the project, then the entire structure must meet the elevation standards of new construction. If only a doorway or similar opening is knocked through, only the addition has to meet the elevation standards.

c. Pre-FIRM Buildings. Pre-FIRM buildings that qualify as a substantial improvement (including lateral additions) must meet the elevation standards of new construction.

2. Repair and Maintenance of Existing Parks and Park Facilities – New or Expanded City and Public Parks. Substantial improvement of any structure in the area of special flood hazard must comply with the nonresidential performance standards found in this section.

3. New or Expanded Essential Public Facilities.

a. The facility is elevated or protected to the 100-year flood elevation.

b. Dry floodproofing and sealing measures must be taken to ensure that hazardous or toxic substances will not be displaced by or released into floodwaters.

4. New or Expanded Public Rights-of-Way, Private Roads, Access Easements and Driveways.

a. The low chord on the bridge structure will be no less than the elevation of the BFE.

b. Access to Essential Public Facilities must be elevated to or above the BFE to the nearest maintained public street or roadway.

5. Public Flood Protection Measures. Such projects may be allowed in the area of special flood hazard and may increase the BFE; provided, that the project produces measurable benefits, such as decreased erosion, peak flow reduction, improved water quality, improved aquatic habitat and doesn't threaten structures. Prior to approval, the applicant shall obtain conditional approval from the Region X FEMA office to increase the BFE, where applicable.

6. Recreational Vehicles. Recreational vehicles are required to either:

a. Be on the site for fewer than 180 consecutive days; and

b. Be fully licensed and ready for highway use on its wheels or jacking system, be attached to the site only by quick-disconnect-type utilities and security devices, and have no permanently attached additions; or

c. Obtain a development permit and meet the requirements, including elevation and anchoring, for manufactured homes.

7. Reasonable Use Exception. Where a reasonable use exception is granted under LUC 20.25H.190, the following performance standards apply:

a. Residential Construction (Single-Family and Multifamily Dwellings).

i. Must Be Above Base Flood Elevation. New construction of any residential structure shall have the lowest floor, including basement and attendant utilities, elevated one foot or more above the base flood elevation.

ii. Enclosed areas (including breakaway walls) below the BFE shall be no larger than 300 square feet.

iii. Must comply with the requirements for openings set forth in subsection D.1.a of this section.

b. Manufactured Homes. All manufactured homes must meet the elevation standards for new construction. All manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

c. Nonresidential Construction.

i. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation, or

ii. Together with attendant utility and sanitary facilities, shall:

(A) Be floodproofed so that below one foot or more above the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water;

(B) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(C) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Such certification shall be provided to the Development Services Department. Following construction of the structure, elevation certificates shall be submitted to the City that record the actual (as-built) elevation to which the structure was floodproofed.

iii. Fully enclosed areas below the BFE that are not floodproofed shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or must meet or exceed the following minimum criteria:

(A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;

(B) The bottom of all openings shall be no higher than one foot above grade; and

(C) Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

iv. Lateral Additions. Lateral additions to structures that qualify as a substantial improvement must meet the elevation standards of new nonresidential construction. If the common wall between the lateral addition and the existing structure is demolished as part of the project, then the entire structure must meet the standards of new, nonresidential construction. If only a doorway or similar is knocked through, only the addition has to meet the construction standards.

v. Pre-FIRM Buildings. Pre-FIRM buildings that qualify as a substantial improvement (including lateral additions) must meet the elevation standards of new construction.

X. REASONABLE USE EXCEPTION

20.25H.190 Reasonable use exception – Purpose.

The reasonable use exception is a mechanism by which the City may approve limited use and disturbance of a critical area and critical area buffer when no other use of the property constitutes a reasonable alternative.

20.25H.195 Reasonable use exception – Process.

A request for a reasonable use exception shall be processed as a Critical Areas Land Use Permit, Part 20.30P LUC.

20.25H.200 Reasonable use exception – Applicability.

A. When Allowed.

A reasonable use exception may be granted when no other reasonable use of property exists by the application of the regulations of this part. “Reasonable use” is defined for each land use district and site as follows:

1. Single-Family Land Use Districts – Large Lots.

a. Large Lot Defined. A “large lot” is any lot that earns more than one unit of density under the density/intensity calculation set forth in LUC 20.25H.045.

b. Reasonable Use for Large Lots. A large lot will be considered to have no reasonable uses under the regulations of this part where no more than one unit can be created through the subdivision process, Part 20.45A LUC, or the short subdivision process, Part 20.45B LUC, after maximizing the dimensional modifications allowed in LUC 20.25H.040 and in Part 20.45A or 20.45B LUC for conservation subdivisions or conservation short subdivisions, as applicable. In such cases, the Director may allow disturbance within a critical area and critical area buffer as follows:

i. Up to 10 percent of the total site area may be disturbed for development, including all structures, grading, utility installation, landscaping and other necessary land alteration; but not including areas of temporary disturbance associated with construction, which areas shall be restored pursuant to LUC 20.25H.210. The Director shall allow more than 10 percent of the total site area to be disturbed where

necessary to allow the creation of two units, each of which includes an area for development equal to the area set forth in subsection A.2.b of this section;

ii. Density shall not exceed the density allowed under LUC 20.25H.045; provided, that in no event shall allowed density be less than two units;

iii. Where more than one unit is created, the applicant shall also follow the processes of subdivision (Part 20.45A LUC), short subdivision (Part 20.45B LUC), or Planned Unit Development (Part 20.30D LUC), including applicable decision criteria, except as modified in this section; and

iv. Through this reasonable use exception, minimum lot size and other dimensional requirements may be modified as necessary to accommodate the allowed reasonable development; provided, that the resulting development is compatible with other development or potential development in the immediate vicinity of the subject property in the same zone and with similar site constraints.

c. Performance Standards. Where disturbance of a critical area or critical area buffer is allowed under this section, development is subject to the performance standards of LUC 20.25H.205 below.

2. Single-Family Land Use Districts – Small Lots.

a. Small Lot Defined. A “small lot” is any lot that does not earn more than one unit under the density/intensity calculation of LUC 20.25H.045.

b. Reasonable Use for Small Lots. A small lot will be considered to have no reasonable use under the regulations of this part where the area available for development, including all structures, grading, utility installation, landscaping and other necessary land alteration, is less than the amount set forth in the table in subsection A.2.b.i of this section; but not including areas of temporary disturbance associated with construction, which areas shall be restored pursuant to LUC 20.25H.210. In such cases, the Director may allow disturbance within a critical area and critical area buffer as allowed in this subsection A.2. For purposes of this section, the area available for development is that consolidated area of the site outside of the critical area and critical area buffer.

i. Minimum available development area:

Land Use District	R-1	R-1.8	R-2.5	R-3.5	R-4	R-5	R-7.5*
Area available for development (in square feet)	3,000	3,000	3,000	2,625	2,231	2,160	1,410

*Not effective within the jurisdiction of the East Bellevue Community Council

ii. Where the area available for development is less than described above, the Director may allow disturbance in a critical area and critical area buffer to the extent required to create a consolidated area for development equal to the amounts set forth in subsection A.2.b.i of this section.

c. Performance Standards. Where disturbance of a critical area or critical area buffer is allowed under this section, development is subject to the performance standards of LUC 20.25H.205.

3. Single-Family Land Use Districts – Nonresidential Uses.

a. Reasonable Use. The reasonable use process applies to lots that are more than 90 percent constrained by critical area and critical area buffer and proposed for a nonresidential use. In such cases, the Director may allow disturbance within a critical area and critical area buffer as follows:

i. Up to 10 percent of the total site area, or 3,000 square feet, whichever is greater, may be disturbed for development, including all structures, grading, utility installation, landscaping and other necessary land alteration; but not including areas of temporary disturbance associated with construction, which areas shall be restored pursuant to LUC 20.25H.210; and

ii. Density shall not exceed the density allowed under LUC 20.25H.045.

b. Performance Standards. Where disturbance of a critical area or critical area buffer is allowed under this section, development is subject to the performance standards of LUC 20.25H.205.

4. All Other Land Use Districts.

a. Reasonable Use. The reasonable use process applies to lots that are more than 90 percent constrained by critical area and critical area buffer. In such cases, the Director may allow disturbance within a critical area and critical area buffer as follows:

i. Up to 10 percent of the total site area, or 3,000 square feet, whichever is greater, may be disturbed for development, including all structures, grading, utility installation, landscaping and other necessary land alteration; but not including areas of temporary disturbance associated with construction, which areas shall be restored pursuant to LUC 20.25H.210; and

ii. Density shall not exceed the density allowed under LUC 20.25H.045.

20.25H.205 Reasonable use exception – Performance standards.

Where disturbance of a critical area or critical area buffer is allowed under this section, development is subject to the following performance standards. Additional performance standards apply to development in streams (LUC 20.25H.080), wetlands (LUC 20.25H.100), geologic hazard areas (LUC 20.25H.125), and areas of special flood hazard (LUC 20.25H.180). Where a conflict exists with the performance standards of this section, the provisions providing the most protection to critical area functions and values apply.

A. The structure shall be located on the site in order to minimize the impact on the critical area or critical area buffer, including modifying the non-critical area setbacks to the maximum extent allowed under LUC 20.25H.040;

B. Ground floor access points on portions of the structure adjacent to undisturbed critical area or critical area buffer shall be limited to the minimum necessary to comply

with the requirements of the International Building Code and International Fire Code, as adopted and amended by the City of Bellevue;

C. Associated development, including access driveways and utility infrastructure shall be located outside of the critical area or critical area buffer to the maximum extent technically feasible;

D. Areas of disturbance for associated development, including access and utility infrastructure shall be consolidated to the maximum extent technically feasible;

E. All areas of temporary disturbance associated with utility installation, construction staging and other development shall be determined by the Director and delineated in the field prior to construction and temporary disturbance shall be restored pursuant to a restoration plan meeting the requirements of LUC 20.25H.210;

F. Areas of permanent disturbance shall be mitigated to the maximum extent feasible on-site pursuant to a mitigation plan meeting the requirements of LUC 20.25H.210; and

G. Fencing, signage and/or additional buffer plantings should be incorporated into the site development in order to prevent long-term disturbance within the critical area or critical area buffer.

XI. GENERAL MITIGATION AND RESTORATION REQUIREMENTS

20.25H.210 Applicability.

Where a mitigation or restoration plan is required under this part ~~or Part 20.25E LUC~~, the plan shall be developed in accordance with the standards of LUC 20.25H.210 through 20.25H.225 inclusive. Any mitigation or restoration plan shall be approved as part of the permit or approval required for the underlying activity. Where a project requires a critical areas report and a mitigation or restoration plan, the mitigation or restoration plan may be included with the critical areas report.

Comment [CoB16]: Shorelines not regulated as critical area.

20.25H.215 Mitigation sequencing.

Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to the critical area and/or critical area buffer. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized, or compensated for in the following order of preference:

A. Avoiding the impact altogether by not taking a certain action or parts of an action;

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

C. Performing the following types of mitigation (listed in order of preference):

1. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

2. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or

3. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

D. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Mitigation for individual actions may include a combination of the above measures.

20.25H.220 Mitigation and restoration plan requirements.

The applicant shall submit a mitigation or restoration plan for approval as part of the review of the underlying proposal. Where standard restoration requirements or templates have been approved by the Director for the proposal in question, those requirements or templates may be followed without need for submission of an individual mitigation or restoration plan. These general requirements shall be modified for areas of temporary disturbance included as part of an approved Critical Areas Land Use Permit or use or development allowed under LUC 20.25H.055, so long as the requirements of subsection H of this section are met.

A. Plan Phases.

Where an applicant is seeking modifications to this part ~~or Part 20.25E LUC~~ through a critical areas report pursuant to LUC 20.25H.230, the mitigation plan required for the proposal may be submitted in phases. A conceptual plan shall be submitted as part of the critical areas report and approved with the land use approval for the proposal. A detailed plan shall be approved prior to or with approval of the first permit or other approval required to perform work associated with the proposal.

Comment [CoB17]: Shorelines not regulated as critical area.

B. Restoration and Mitigation Project Details.

The plan shall be prepared by a qualified professional and shall at minimum include the content identified in this section. Additional requirements may be found for specific critical areas in LUC 20.25H.085 (streams); 20.25H.105 (wetlands); and 20.25H.135 (geologic hazard areas). Additional detail about the contents of restoration and mitigation plans may be developed by the Director in submittal requirements. The Director may waive any of the plan requirements where, in the Director's discretion, the information is not necessary to develop a mitigation or restoration plan that addresses the impacts of the proposed action.

1. A written report identifying environmental goals and objectives of the restoration or compensation proposed, based on replacing or restoring the critical area and critical area buffer functions and values impacted by the proposal;

2. Measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation or restoration project have been successfully attained and whether or not the requirements of this part have been met; and

3. Written specifications and descriptions of the restoration or mitigation proposed.

a. When the mitigation plan is submitted as a single-phase, or for the detailed plan phase when submitted in two phases, these written specifications shall be accompanied by detailed site diagrams, scaled cross sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

b. When the mitigation plan is submitted in phases pursuant to subsection A of this section, the written specifications may be general in nature for the conceptual phase, including general identification of areas for work, planting species, size and number. The more precise details may be provided in the detailed plan phase.

C. Timing of Work.

Unless a different time period is established in another section of this part, or is established by the Director in the approval for a specific project, all work required in a mitigation or restoration plan shall be completed prior to final inspection or issuance of a temporary certificate of occupancy or certificate of occupancy, as applicable, for the development.

D. Monitoring Program.

The plan shall include a program for monitoring construction of the mitigation project and for assessing a completed project. The mitigation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five years. The required monitoring period for a plan involving restoration only shall be reduced to a period of not less than three years.

E. Contingency Plan.

The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met and such failure would result in significant impact on the critical area or buffer. A plan involving restoration only is not required to include a contingency plan.

F. Assurance Devices.

The Director may require assurance devices in compliance with LUC 20.40.490 to ensure that the approved mitigation, monitoring program, contingency plan and any conditions of approval are fully implemented.

G. Mitigation for City Park Projects.

Through a critical areas report, impacts of City park projects on critical areas and critical area buffers may be mitigated through restoration or enhancement of critical areas on other City park sites. Such restoration or enhancement may include restoration or enhancement projects completed prior to the proposal for which mitigation is required, so long as the restoration or enhancement project was not performed as mitigation for any other public or private project. The critical areas report shall demonstrate that the proposed mitigation restores the impacted critical area functions and values at least as well as mitigation performed on-site and in-kind associated with the development proposal. The Director may require an NGPE or NGPA be recorded for the mitigation area to ensure that it is maintained in perpetuity.

H. Restoration for Areas of Temporary Disturbance.

The Director may impose conditions for the restoration of areas of temporary disturbance included as part of an approved Critical Areas Land Use Permit or use or development allowed under LUC 20.25H.055, without requiring the restoration plan and other measures described in this section, so long as the following requirements are satisfied:

1. All areas of temporary disturbance shall be identified in the plans approved with the Critical Areas Land Use Permit or allowed use or development and shall be the minimum necessary to allow the completion of the approved use or development. For uses and development involving the repair or renovation of existing structures that can be accessed from non-critical area or critical area buffer, the minimum necessary area of temporary disturbance shall be no greater than 10 feet around the perimeter of the existing structure. Proposals involving areas of greater disturbance shall require a full

restoration plan under this section. The Director may impose conditions requiring areas of temporary disturbance to be marked in the field through the use of markers, fencing, or other means;

2. The condition of the areas of temporary disturbance existing prior to undertaking any development activity shall be documented with the proposal. The Director may require photographic evidence, site plans showing the size, location and type of existing vegetation, or other materials to document existing conditions;

3. The Director shall impose a condition that the area be restored to existing conditions prior to final approval of the work performed, or within 30 days following completion of the work if no final approval is required; and

4. The Director shall impose a condition requiring monitoring of the restored area and additional restoration to achieve existing conditions, consistent with subsection D of this section; provided, that the Director may reduce the monitoring period to not less than one year from completion of the original restoration. (Ord. 5680, 6-26-06, § 3)

20.25H.225 Innovative mitigation.

The Director may encourage, facilitate, and approve innovative mitigation projects that are based on the best available science.

XII. CRITICAL AREAS REPORT

20.25H.230 Critical areas report – Purpose.

A critical areas report is a mechanism by which the requirements of this part~~, certain requirements of Part 20.25E LUC as set forth in that part,~~ and the impervious surface standards set forth in LUC 20.20.010 may be modified for a specific proposal.

The critical areas report is intended to provide flexibility for sites where the expected critical area functions and values are not present due to degraded conditions or other unique site characteristics, or for proposals providing unique design or protection of critical area functions and values not anticipated by this part. The scope and complexity of information required in a critical areas report will vary, depending on the scope and complexity and magnitude of impact on critical areas and critical area buffers associated with the proposed development. Generally, the critical areas report must demonstrate that the proposal with the requested modifications leads to equivalent or better protection of critical area functions and values than would result from the application of the standard requirements. Where the proposal involves restoration of degraded conditions in exchange for a reduction in regulated critical area buffer on a site, the critical areas report must demonstrate a net increase in certain critical area functions.

Comment [CoB18]: Shorelines not regulated as critical area. Special shoreline report process contained in the Planning Commission-recommended SMP at LUC 20.25E.160.E.

20.25H.235 Critical areas report – Review process.

Requests for modifications to the requirements of this part through a critical areas report shall be processed through a Critical Areas Land Use Permit. Where additional permits are required for the underlying use or activity, the permits may be merged.

20.25H.240 Critical areas report – Limitation on modifications.

The critical areas report may not be used to modify sections of the Land Use Code outside of this part~~ and Part 20.25E LUC~~ unless otherwise expressly permitted. The

Comment [CoB19]: Shorelines not regulated as critical area.

critical areas report may not be used to modify the definitions of critical areas or definitions of stream types or wetland categories, or any other provision of this part that expressly prohibits modification. The critical areas report may not be used to modify streams~~,~~ or wetlands~~, or the shoreline below the ordinary high water mark~~ unless otherwise expressly permitted. Additional limitations on modifications for specific critical areas may be found in the sections of this part addressing that critical area.

Comment [CoB20]: Shorelines not regulated as critical area.

20.25H.245 Incorporation of best available science.

The critical areas report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used, where applicable. The critical area report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this part.

20.25H.250 Critical areas report – Submittal requirements.

A. Specific Proposal Required.

A critical areas report must be submitted as part of an application for a specific development proposal. In addition to the requirements of this section, additional information may be required for the permit applicable to the development proposal.

B. Minimum Report Requirements.

The critical areas report shall be prepared by a qualified professional and shall at minimum include the content identified in this section. The Director may waive any of the report requirements where, in the Director's discretion, the information is not necessary to assess the impacts of the proposal and the level of protection of critical area function and value accomplished. At a minimum, the report shall contain the following:

1. Identification and classification of all critical areas and critical area buffers on the site;

2. Identification and characterization of all critical areas and critical area buffers on those properties immediately adjacent to the site;

3. Identification of each regulation or standard of this code proposed to be modified;

3. A habitat assessment consistent with the requirements of LUC 20.25H.165;

4. An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;

5. An analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:

a. A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist;

b. A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and

c. A discussion of the functions and values likely to be provided by the critical area and critical area buffer on the site through the modifications and

performance standards included in the proposal over the anticipated life of the proposed development;

6. A discussion of the performance standards applicable to the critical area and proposed activity pursuant to LUC 20.25H.160, and recommendation for additional or modified performance standards, if any;

7. A discussion of the mitigation requirements applicable to the proposal pursuant to LUC 20.25H.210, and a recommendation for additional or modified mitigation, if any; and

8. Any additional information required for the specific critical area as specified in the sections of this part addressing that critical area.

C. Additional Report Submittal Requirements.

1. Unless otherwise provided, a critical areas report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Director.

2. Where a project requires a critical areas report and a mitigation or restoration plan, the mitigation or restoration plan may be included with the critical areas report, and may be considered in determining compliance with the applicable decision criteria, except as set forth in subsection C.4 of this section.

3. The applicant may consult with the Director prior to or during preparation of the critical areas report to obtain approval of modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

4. Proposals to obtain reductions in regulated critical area buffers below the buffers required by this part shall include the following information in addition to the minimum critical areas report contents described in subsection B of this section. The restoration proposed to improve existing function included in the proposal must be separate from any impact mitigation proposal:

a. The specific restoration actions proposed and the specific regulated buffer dimensions proposed.

b. The functions that will be enhanced by the restoration actions, addressing at minimum habitat, hydrology, water quality and (where applicable) stream process functions.

c. Functions that will be provided outside of the reduced regulated buffer dimension proposed by the project, if any (for example, stormwater quality and quantity controls or low impact development features).

d. The relative importance of the enhanced functions to the ecosystem in which they exist.

e. A description of the net gain in functions by the restoration actions in the reduced regulated buffer area and the proposal, compared to the functions that would be preserved under standard buffer provisions of the CAO without restoration.

D. Incorporation of Previous Study.

Where a valid critical areas report or report for another agency with jurisdiction over the proposal has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said

report may be incorporated into the required critical areas report. The applicant shall submit an assessment detailing any changed environmental conditions associated with the site.

20.25H.255 Critical areas report – Decision criteria.

A. General.

Except for the proposals described in subsection B of this section, the Director may approve, or approve with modifications, the proposed modification where the applicant demonstrates:

1. The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code;
2. Adequate resources to ensure completion of any required mitigation and monitoring efforts;
3. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and
4. The resulting development is compatible with other uses and development in the same land use district.

B. Decision Criteria – Proposals to Reduce Regulated Critical Area Buffer.

The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;
2. The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;
3. The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;
4. Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;
5. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and
6. The resulting development is compatible with other uses and development in the same land use district.

20.25H.260 Critical areas report – Assurance devices.

The Director may require assurance devices to ensure that any conditions of approval are fully implemented. Assurance devices shall be posted in accordance with LUC 20.40.490.

20.25H.265 Critical areas report – City technical review.

The City may require the applicant to pay for technical review of the critical areas report and related proposal by a consultant retained by the City to assist in determining compliance with the requirements for incorporating best available science, LUC 20.25H.245; compliance with submittal requirements, LUC 20.25H.250; and compliance with the applicable decision criteria, including LUC 20.25H.255 and LUC 20.30P.140.

20.25H.270 Critical areas report – Independent third-party review.

Regardless of whether the City conducts a technical review pursuant to LUC 20.25H.265, the applicant may request independent third-party review of the critical areas report and related proposal following the procedures of this section where disagreement exists between the City and the applicant on the critical areas report findings or technical recommendations contained in the critical areas report.

A. Timing of Independent Third-Party Review.

The applicant may request independent third-party review at any time during the applicable decision process. If the City and applicant agree, the review may be conducted prior to issuance of any decision. If the City and applicant do not agree to pre-decision review, the review shall be conducted as part of the applicable appeal process. If conducted as part of the applicable appeal process, the timing of review and associated impact on the hearing date and the appeal schedule shall be determined during a pre-hearing conference held pursuant to the Hearing Examiner's rules of procedure.

B. Qualified Reviewers.

The independent third-party review shall be performed by a qualified professional who was not involved in preparing the critical areas report, and who was not engaged by the City to perform any technical review pursuant to LUC 20.25H.265.

C. Selection of Qualified Professional.

1. Pre-Decision Independent Third-Party Review. The qualified professional shall be chosen by mutual agreement between the City and the applicant. If the City and the applicant cannot agree on a qualified professional, the City shall issue its decision on the proposal pursuant to the applicable decision process. If the applicant appeals the decision and requests independent third-party review, the qualified professional shall be selected as set forth in subsection C.2 of this section.

2. Independent Third-Party Review on Appeal. The Hearing Examiner shall select a qualified professional from among candidates submitted by the City and the applicant. The Hearing Examiner's selection shall be made during a pre-hearing conference held pursuant to the Hearing Examiner's rules of procedure.

D. Impact on Required Project Timelines.

1. Timelines Suspended During Third-Party Review Process. The applicant shall agree in writing that the time period between initiating the selection process for the qualified professional to conduct the independent third-party review through issuance of any written report of that qualified professional shall not count against any project timelines applicable to the decision or appeal process pursuant to City code or state law.

2. Timelines Suspended During Revisions. The applicant shall agree in writing that the time period during which the applicant prepares revisions to the proposal as a

result of the independent third-party review shall not count against any project timelines applicable to the decision or appeal process pursuant to City code or state law.

3. Additional Time for City Review. The applicant shall agree in writing that any project timeline applicable to the decision or appeal process pursuant to City code or state law shall be extended by 30 days to allow for City or Hearing Examiner review of any written report of the qualified professional.

E. Effect of Independent Third-Party Report.

The report of the qualified professional shall not be binding, but shall be considered, together with all other reports and materials in the record, in determining compliance with the applicable decision criteria. The report of the qualified professional shall not be entitled to any more or less weight than other reports and materials in the record.

F. Cost of Independent Third-Party Review.

The applicant shall bear the cost of independent third-party review, unless the applicant is determined to be the prevailing party on issues associated with the critical areas report and associated conditions and recommendations.