MEMORANDUM

TO: Planning Commission
FROM: Tom Rogers, Planning Manager
DATE: February 11, 2022
SUBJECT: February 17, 2022 Planning Commission Meeting

The Planning Commission will hold its regularly scheduled meeting at 7:00 p.m. on Thursday, February 17, 2022. The meeting will consist of: 1) a work session on potential revisions to the City's environmental regulations relative to wetland buffers.

Due to the COVID-19 pandemic, the City of Mill Creek Planning Commission meeting will again be held remotely via Zoom. Instructions for participating in the meeting will be emailed to you and will be posted on the City's website no later than close of business Friday, February 11, 2022. If you have any questions regarding participating in the meeting, please contact me at 425-921-5721 or via email at tomr@cityofmillcreek.com.

Potential Critical Areas Regulations Updates – Wetland Buffers

This workshop will be a continuation of the discussion we had last month on required minimum buffers to wetlands. As directed at last month's Planning Commission meeting, proposed text amendments have been prepared adjusting the buffer width requirements to be consistent with the Department of Ecology's latest recommendations based upon best available science. Included in the packet is a document showing the specific proposed revisions with text to be added shown in red and text to be deleted in ~~strikethrough~~. Also included is the entire Chapter MCMC18.06 to provide context as to how the revisions fit in with the rest of the city's environmental regulations. Finally, I am including the memo from last month's Planning Commission packet and a copy of the PowerPoint presentation that was used at last month's meeting as reference material. If the proposed revisions are acceptable, the City will take the necessary procedural steps to prepare the amendments for a Planning Commission public hearing, probably in April.

If you are unable to attend the meeting, please contact me at (425) 921-5721 or at tomr@cityofmillcreek.com .We look forward to meeting with you on line next Thursday evening.

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PLANNING COMMISSION AGENDA

Mill Creek WASHINGTON

15728 Main Street, Mill Creek, Washington 98012 - (425) 745-1891

February 17, 2022

Regular Meeting
7:00 p.m.

(Held via Zoom)

		TIME
I.	CALL TO ORDER	7:00 p.m.
II.	ROLL CALL	7:01 p.m.
III.	APPROVAL OF MINUTES	7:03 p.m.
	A. Planning Commission Meeting of January 20, 2022	
IV.	WORK SESSION	7:05 p.m.
	A. Review of proposed text amendments to MCMC Chapter 18.06 – Critical Areas Code – Wetland Buffers	
V.	FOR THE GOOD OF THE ORDER	7:30 p.m.
VI.	ADJOURNMENT	7:40 p.m.

ATTACHMENTS:

1. January 20, 2022 Draft Planning Commission Minutes
2. Draft Amendments to MCMC Chapter 18.06 – Wetland Buffers
3. Copy of entire MCMC Chapter 18.06 (for context)
4. Memorandum from ESA regarding Recommendations for potential Critical Areas code updates – Wetland Buffers (from January 20, 2022 meeting) [reference material]
5. PowerPoint regarding proposed revisions to wetland buffers and background information on Critical Areas (from January 20, 2022 meeting) [reference material]

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We are trying to make our public meetings accessible to all members of the public. If you need special accommodations, please call City Hall three days prior to this meeting (425) 745-1891.

Attachment 1

CITY OF MILL CREEK
PLANNING COMMISSION MEETING MINUTES
January 20, 2022

Draft

I. CALL TO ORDER:

Chair Nolan called the virtual meeting to order at 7:00 p.m.

II. ROLL CALL:

Commissioner Sean Paddock
Commissioner Brian Hyatt (Absent)
Commissioner Stan Eisner
Commissioner Jose Borunda
Commissioner Pietra Gaebel
Vice Chair David Hambelton
Chair Matthew Nolan

Staff Present: Tom Rogers, Planning Manager
Justin Horn, Associate Planner

Margaret Clancy, Environmental Science Associates
Jessica Redman, Environmental Science Associates
John Shoesmith, Shoesmith Cox Architects
Steven Bedrossian
William Chiang

III. APPROVAL OF MINUTES

Planning Commission Meeting of September 16, 2021

MOTION: Commissioner Eisner moved, seconded by Commissioner Borunda, to approve the September 16, 2021 minutes as presented. The motion was approved unanimously.

IV. WORK SESSION

Recommendations for Potential Critical Areas Code Updates – Wetland Buffers

Planning Manager Rogers introduced the City's consultant who has been working on the wetland buffer update, Margaret Clancy. Ms. Clancy gave a presentation covering the background of wetland regulations and proposed changes to the City's wetland buffer regulations.

Under the Growth Management Act, cities are required to use the best available science when regulating critical areas. Wetlands are given a score based on a range of characteristics, and this score is used to determine the buffer requirements. Since the City adopted its current regulations, buffer recommendations based on the best available science have changed. In order to keep City code up-to-date, the proposed changes include: base buffers on a habitat

score and land use intensity, scaling back buffer averaging reductions, and reducing buffer widths in exchange for specific mitigation measures.

At the conclusion of the presentation and discussion, the Planning Commission agreed that the recommendation presented should be incorporated into specific text amendments for consideration at a future meeting.

V. NEW BUSINESS

Proposed Comprehensive Plan Amendment – Recommendation on Further Consideration

Associate Planner Horn began with a presentation outlining the comprehensive plan amendment process and presenting the staff initial assessment. The City staff initial assessment indicated that the proposal meets the criteria for further consideration, and staff recommend that the Planning Commission adopt a resolution to recommend that the City Council consider the proposed comprehensive plan amendment during the current annual review cycle.

Next, representing the applicant, John Shoesmith gave a presentation discussing the details of the proposed plan amendment. Shoesmith described how zoning and land use would be altered by the change and presented example site plans and building elevations for the type of development that could be proposed if comprehensive plan amendment is ultimately adopted.

Following Shoesmith's presentation, Planning Manager Rogers stressed that the purpose of the meeting was not to evaluate whether the proposal should be adopted, but to determine if the proposal was worthy of further consideration.

During the Q&A period, neighborhood resident William Chiang expressed reservations about increasing density, stating that increasing the number of residents would have a negative impact on the school district.

MOTION: Commissioner Eisner moved, seconded by Vice Chair Hambleton, to adopt Resolution No. 2022-169 recommending that the proposed comprehensive plan amendment be considered during the current amendment cycle. The motion was approved unanimously.

VI. FOR THE GOOD OF THE OF THE ORDER

Planning Manager Rogers announced the City Council would be receiving an update on the Mill Creek Boulevard Subarea Plan at the next Council meeting. In addition, the manager at The Farm would be at the meeting to describe the new businesses moving into the Farm.

William Chiang inquired about whether the public would be notified about further updates on the proposed comprehensive plan amendment. Associate Planner Horn

confirmed that updates would be available on the City website and emailed to everyone who has requested to be on the public contact list.

VII. ADJOURNMENT

MOTION: Commissioner Eisner moved, seconded by Vice Chair Hambleton, to adjourn the meeting at 9:00 p.m. The motion was approved unanimously.

Submitted by:

_____

Justin Horn, Associate Planner

Attachment 2

DRAFT for Planning Commission Review

Note: The text below depicts a portion of Mill Creek Municipal Code, Title 18, Chapter 18.06- Environmentally Critical Areas with suggested line-in and line-out changes. The rationale for these proposed changes was presented to the Planning Commission at the January 20, 2022 meeting. The Commissioners agreed to further review and consideration of these changes as shown below. A complete version of Chapter 18.06 is provided as Attachment A. The full text of the Mill Creek Code is available on line at https://www.codepublishing.com/WA/MillCreek/

18.06.910 Designation, mapping, and rating.

A. Wetlands shall be identified in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Publication No. Y-87-1) and the Western Mountains, Valleys, and Coast Regional Supplement (Publication No. ERDC/EL TR-10-3). All areas within the city meeting the criteria in the approved federal wetland delineation manual and regional supplement, regardless of any formal identification, are hereby designated critical areas and shall be subject to the provisions of this chapter.

B. The approximate location and extent of known or suspected wetlands are shown on the city's adopted critical area maps as contained within the environmental element of the comprehensive plan. These maps shall be used as a guide for the city, applicants and/or property owners, and may be updated as new wetlands are identified. The exact location of a wetland boundary shall be determined through field investigation by a qualified professional applying the approved federal wetland delineation manual and regional supplement methods and procedures.

C. Wetlands shall be rated and regulated according to the categories defined by the Washington State Wetland Rating System for Western Washington 2014 Update (Publication No. 14-06-029). Publication No. 14-06-029 contains the methods for determining the wetland category which are generally described below:

1. Category I. Category I wetlands are rare and irreplaceable in terms of their function and value to Mill Creek's natural aquatic systems. All wetlands with one or more of the following criteria shall be considered a Category I wetland:

   a. Wetlands that are designated as natural heritage wetlands by the Washington State Department of Natural Resources.

   b. High quality, regionally rare wetland communities with irreplaceable ecological functions, including sphagnum bogs and fens, and mature forested wetlands as defined in MCMC 18.06.210.

2. Category II. Category II wetlands are ecologically important and provide high levels of function. A wetland is considered a Category II wetland if it meets the following criteria:

   a. Wetlands that do not meet the criteria of Category I wetlands; and

   b. Wetlands performing significant wildlife habitat and/or hydrologic functions, which cannot be replicated through creation or restoration as determined by a critical area report.

3. Category III. Category III wetlands provide a moderate level of functions. They are typically more disturbed, smaller, and/or more isolated in the landscape than Category I or II wetlands.

4. Category IV. Category IV wetlands provide the lowest level of function, but still provide important functions.

The above descriptions are meant to provide a general overview. Refer to Publication No. 14-06-029 for the actual methods.

D. All wetlands shall be regulated and subject to the provisions of this chapter regardless of size, except that Category IV wetlands less than ~~1,000~~ 4,000 square feet shall be exempt from this chapter if a critical area report prepared pursuant to this chapter demonstrates all of the following:

~~1. The wetland does not provide suitable habitat for amphibian species; and~~

~~2. The wetland does not possess unique characteristics that would be difficult to replicate through standard mitigation practices. (Ord. 2015-796 § 3; Ord. 2009-702 § 2 (Exh. C); Ord. 2004-603 § 2)~~

1. The wetland is hydrologically isolated from other wetlands or waters of the state;
2. The wetland is not associated with a riparian area or its buffer;
3. The wetland is not associated with a shoreline of the state or its buffer;
4. The wetland is not part of a wetland mosaic;
5. The wetland scores fewer than 5 points for habitat function based on the Washington State Wetland Rating System for Western Washington: 2014 Update (Hruby, 2014); and
6. The wetland is not considered a Priority Habitat or a Priority Area for a Priority Species identified by the Washington Department of Wildlife; and does not contain any federally listed species or designated critical habitat, or any species of local importance.

18.06.920 Performance standards – Alteration of wetlands.

A. All activities and uses shall be prohibited in wetlands and wetland buffers except as expressly provided for in this chapter. All feasible and reasonable measures shall be taken to avoid and minimize impacts to wetlands. These actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and implementation of the performance standards contained in this chapter. Alteration of wetlands shall be permitted only in accordance with an approved critical area report and mitigation plan. The burden of proof shall be on the applicant.

B. All significant adverse impacts to wetland functions and values and to associated buffers shall be avoided. Where such impacts cannot be avoided, the applicant shall implement appropriate compensatory mitigation according to the provisions of MCMC 18.06.610 and 18.06.960.

C. Alteration of Category I wetlands is prohibited.

D. Alteration of Category II, III, and IV wetlands may be permitted in accordance with an approved critical area report and mitigation plan, and only when the applicant demonstrates that:

1. The basic project purpose cannot reasonably be accomplished without the wetland alteration; and

2. There are no reasonable or practical alternatives to the alteration, including without limitation on-site design or acquisition of additional area. (Ord. 2004-603 § 2)

18.06.930 Performance standards – Wetland buffer widths.

A. Wetland buffer areas shall be established for all development proposals and activities adjacent to wetlands to protect the integrity, function and value of the wetland in accordance with Table IX.1. The department shall determine appropriate buffer widths based upon the approved critical area report. Wetland buffers shall be measured perpendicular to the wetland edge as marked in the field and shall not include wetlands. Except as otherwise permitted by this chapter, buffers shall consist of an undisturbed area of native vegetation.

B. The buffer widths in Table IX.1 ~~standard buffer widths required by this chapter~~ shall presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. If the existing vegetation is inadequate, then the buffer width shall be increased or the buffer planted or enhanced to maintain or improve the buffer functions. All developments shall take appropriate measures to mitigate impacts on the adjacent wetlands. For developments that meet the definition of a

High Intensity Land Use, the director shall require any and all applicable mitigation measures noted in Table IX.2 to be implemented prior to approving a proposal that uses the lesser buffer widths noted in Column C of Table IX.1. ~~The following standard buffer width requirements are established as the minimum buffer width:~~

~~–~~	~~High Impact Land Use~~	~~Low Impact Land Use~~
~~1. Category I Wetland~~	~~300 feet~~	~~200 feet~~
~~2. Category II Wetland~~	~~200 feet~~	~~100 feet~~
~~3. Category III Wetland~~	~~100 feet~~	~~50 feet~~
~~4. Category IV Wetland~~	~~50 feet~~	~~25 feet~~

Table IX.1 Wetland Buffer Width Standards (Feet)

A	B	C		D
Wetland Category	Description	Proposed Buffer Widths		
		High Intensity Land Use		Low Intensity Land Use
		Buffer w/out mitigation measures	Buffer w/ mitigation measures	
I[1]	Wetlands with High Conservation Value, or special characteristics	250	190	125
I[2] and II	High habitat function (habitat score is 8-9)	300	225	150
	Moderate habitat function (habitat score is 5-7)	150	110	75
	Low habitat function (habitat score less than 5)	100	75	50
III	Moderate habitat function (habitat score is 5-7)	150	110	40
	Total wetland rating score of 16-19, but not meeting above criteria	80	60	25
IV	Total wetland rating score less than 16	50	40	25

[A] Applies to wetlands identified by the Washington Natural Heritage Program as "Wetlands of High Conservation Value" and other wetlands, such as bogs, that have special characteristics and are categorized by their sensitivity to disturbance, their significance, rarity, our ability to replace them.
[2]Category I wetlands not having special characteristics.

Table IX.2 Required Measure to Minimize Impacts to Wetlands
(Measures are required if applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation planning adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic Runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 feet of wetland • Apply integrated pest management
Stormwater Runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enter the buffer • Use Low Intensity Development techniques (for more information refer to the

Disturbance	Required Measures to Minimize Impacts
	drainage ordinances and manual)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbances using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement.
Dust	• Use best management practices to control dust

C. The director shall have the authority to "average" buffer widths on a case-by-case basis where a qualified professional demonstrates to the director's satisfaction that all the following criteria are met:

1. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;

2. The buffer averaging does not reduce the functions or values of the wetland;

3. The portion of the buffer reduced through buffer averaging is less than 25 percent of the total buffer length on a project site;

4. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation; and

5. The buffer width shall ~~is~~ not be reduced to less than ~~50~~ 75 percent of the standard width, and in no case shall the ~~except that no~~ buffer dimension ~~shall~~ be less than ~~25 feet~~ 75 feet for a Category I or II wetland, 50 feet for a Category III wetland, and 30 feet for a Category IV wetland, whichever is greater.

D. The director shall have the authority to increase the minimum width of the standard buffer on a case-by-case basis when such increase is necessary to:

1. Protect the function and value of that wetland; or

2. To protect significant habitat; or

3. To protect lands adjacent to wetlands from erosion or other hazards.

E. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the applicant has submitted written notice to the department that buffer requirements of this chapter are met. Field-marking shall remain until all construction and clearing phases are completed, and final approval has been granted by the city.

F. Structures shall be set back in accordance with MCMC 18.06.840 such that construction activities and outdoor living areas do not infringe upon the required buffer edge.

G. Impervious surfaces shall not be constructed in wetland buffers except as expressly provided for in this chapter.

H. The director shall have the authority to reduce the width of the standard buffer on a case-by-case basis if all of the following criteria are met:

1. The buffer is adjacent to a critical area that is being significantly restored through a city-approved mitigation plan that has regional benefit to critical area functions as determined by the director.

2. A critical area report has been submitted to the city that demonstrates the reduced buffer will protect the functions and value of the critical area being restored.

3. The reduced buffer shall be clearly described in any applicable SEPA, MDNS or EIS document and shall be subject to review and comment by the public agencies with jurisdiction. (Ord. 2004-603 § 2)

18.06.940 Performance standards – Wetland buffer uses.
Wetland buffers shall be retained in an undisturbed condition except that the following uses may be permitted within a wetland buffer when the applicant demonstrates to the satisfaction of the director that no adverse impact to the wetland functions and values will occur:

A. Public and private roadway crossings, including bridge construction and culvert installation in or across wetland buffers may be allowed, if the director determines that such construction is necessary and cannot be accomplished in another location.

B. Stormwater management facilities, limited to outfall facilities (level spreaders, infiltration trenches) may be allowed within the outer 50 percent of the standard buffer of a wetland; provided, that all of the following criteria are met:

1. Construction of the stormwater facility does not impact mature forest vegetation;

2. There is no other feasible location for the stormwater facility;

3. The stormwater facility is designed according to city standards and the discharge water meets state water quality standards;

4. Construction of stormwater management facilities in the buffer of a Category I wetland is prohibited;

5. Stormwater conveyance or discharge facilities such as dispersion trenches, level spreaders, and outfalls may encroach into the inner 50 percent of a Category II, III or IV wetland buffer on a case-by-case basis when the director and city engineer determine that due to topographic or other physical constraints there are no feasible locations for these facilities in the outer buffer area; and

6. Altered areas are mitigated per MCMC 18.06.610 and 18.06.960.

C. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife may be allowed.

D. Passive recreation facilities, including walkways, wildlife viewing structures, and trails, that are part of an interpretive trail system or environmental education program, may be allowed if they are designed in accordance with an approved critical area report; and provided, that they are located in the outer 50 percent of the buffer area where possible and practical and are constructed in such a manner to avoid disturbance of sensitive wildlife, feeding, roosting, breeding, or rearing sites, and meet the requirements of MCMC 18.06.410(A)(4). (Ord. 2004-603 § 2)

18.06.950 Critical area report requirements for wetlands.
A. A critical area report for wetlands shall contain site- and proposal-specific information consistent with MCMC 18.06.530 and shall at a minimum contain the following additional information:

1. A written assessment and accompanying maps of the wetlands and buffers within 300 feet of the site and an estimate of the existing acreage for each wetland;

2. A detailed description of the effects of the proposed development on wetland and buffer area, values and function, including quantification of the area of wetland disturbance;

3. Vegetation, soil, hydrologic, and topographic characteristics of all on-site wetlands and buffers. This includes the dominant species; soil type, color and texture; sources of hydrology (surface inflow, hyporheic flows, precipitation, etc.).

B. The director shall have the authority to require the critical area report to include an evaluation by the Department of Ecology. (Ord. 2004-603 § 2)

18.06.960 Wetland mitigation – General requirements.

A. All significant adverse impacts to wetlands and buffers as determined by the director shall be fully mitigated in accordance with the standards set forth in MCMC 18.06.610 and this section. All mitigation shall be specified in a mitigation plan consistent with MCMC 18.06.620 and this section. Mitigation measures to be addressed in the mitigation plan shall include, in order of preference, avoidance, minimization, restoration, rehabilitation, and compensation.

B. Mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions, and shall provide similar wetland functions as those lost except when:

1. The lost wetland provides minimal functions as determined by a site-specific function assessment and the proposed mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a watershed assessment plan or protocol; or

2. Out-of-kind replacement will best meet formally identified regional goals, such as replacement of historically diminished wetland types.

C. Compensation in the form of wetland creation, restoration or enhancement is required when a wetland is altered permanently as a result of an approved project. Alterations shall not result in net loss of wetland area except when the following criteria are met:

1. The lost wetland area provides minimal functions as determined by a function assessment and the mitigation action(s) results in a net gain in wetland functions as determined by a site-specific function assessment; or

2. The lost wetland area provides minimal functions as determined by a function assessment and other replacement habitats provide greater benefits to the functioning of the watershed, such as riparian habitat restoration and enhancement.

D. Compensation for wetland alterations shall occur in the following order of preference:

1. Creation, reestablishment, or a mixture of the two on upland sites that were formerly wetlands.

2. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of exotic introduced species.

3. Enhancing significantly degraded wetlands in accordance with MCMC 18.06.980.

4. Preserving Category I or II wetlands that are under imminent threat in accordance with MCMC 18.06.980.

E. Mitigation actions shall be conducted within the same subdrainage basin and on the same site as the alteration except when all of the following apply:

1. There are no reasonable on-site or in-drainage basin opportunities or on-site and in-drainage basin opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;

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

3. Off-site locations shall be in the same subdrainage basin unless the action qualifies as innovative mitigation under MCMC 18.06.640.

F. Where feasible, mitigation projects shall be completed prior to activities that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity

or development. Construction of mitigation projects shall be timed to reduce impacts to existing wildlife and vegetation.

G. All mitigation sites shall have buffers consistent with the buffer requirements of this chapter. The director may permit reduced buffers on mitigation sites on a case-by-case basis if site conditions would preclude application of the standard buffers but the mitigation design is otherwise acceptable.

H. The applicant shall develop a mitigation plan that provides for construction, maintenance, monitoring, contingencies and adaptive management of the wetland compensation projects as required by conditions of approval and consistent with the requirements of this chapter. The mitigation plan shall be consistent with MCMC 18.06.620. (Ord. 2015-803 § 5 (Exh. A); Ord. 2004-603 § 2)

18.06.970 Wetland mitigation – Replacement ratios.

A. When an applicant proposes to alter or eliminate a regulated wetland, the functions and values of the affected wetland and buffer shall be replaced through wetland creation or restoration according to the minimum ratios established in MCMC 18.06.980(A). The ratios shall apply to wetland creation or restoration that is in-kind, on-site, of the same category, timed prior to or concurrent with alteration, and has a high probability of success. Ratios for out-of-kind or off-site mitigation at certified mitigation banks shall be in accordance with the bank's mitigation banking instrument; otherwise replacement ratios for permittee-responsible off-site or out-of-kind mitigation may be greater than the minimum if the director determines that additional mitigation is warranted to mitigate impacts. Ratios for remedial actions resulting from unauthorized alterations shall be greater. The wetland creation and restoration ratios contained in MCMC 18.06.980(A) are given as replacement area to impact area.

B. Replacement ratios may be decreased by up to 25 percent by the director if the applicant demonstrates to the satisfaction of the director that all of the following criteria are met:

1. Documentation by a qualified professional demonstrates that the proposed mitigation actions have a very high likelihood of success;

2. Documentation by a qualified professional demonstrates that the proposed mitigation actions will provide functions and values that are significantly greater than the wetland being altered; and

3. The proposed mitigation actions are conducted in advance of the impact and shown to be successful through post-construction monitoring and function assessment.

C. The director shall increase replacement ratios under the following circumstances:

1. Uncertainty exists as to the probable success of the proposed restoration or creation; or

2. A significant period of time will elapse between impact and replication of wetland functions; or

3. Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

4. The impact was an unauthorized impact.

D. At the director's discretion, applicants may be allowed to use an alternative to the mitigation ratios contained in MCMC 18.06.980 based on the credit/debit method developed by the Department of Ecology in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report (Ecology Publication No. 10-06-011). (Ord. 2015-796 § 4; Ord. 2004-603 § 2)

18.06.980 Wetlands mitigation – Types and ratios.

A. Minimum Ratios for Compensatory Mitigation. The minimum replacement ratio for wetland impact mitigation shall be as shown ~~on the following table~~ in Table IX.3:

Table IX.3 Wetland Mitigation Ratios

Affected Wetland	Wetland Mitigation Type and Ratio*				
Category	Creation	Re-establishment	Rehabilitation	Re-establishment (R) or Creation (R) and Enhancement (E)	Enhancement
Category IV	1.5:1	1.5:1	3:1	1:1 (R:C) and 2:1 (E)	6:1
Category III	2:1	2:1	4:1	1:1 (R:C) and 2:1 (E)	8:1
Category II	3:1	3:1	6:1	1:1 (R:C) and 4:1 (E)	12:1
Category I	As determined by the director – ratios will be greater than required for Category II wetlands				
*Ratio is the replacement area: impact area. See MCMC 18.06.210 for definitions					

B. Applicants proposing to enhance or rehabilitate wetlands shall produce a critical area report that identifies how the mitigation 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 or rehabilitation proposal shall also show whether existing wetland functions will be reduced by the mitigation actions.

C. Preservation. Impacts to wetlands may be mitigated by preservation of wetland areas in a separate tract in accordance with MCMC 18.06.830. Preservation shall be used as a form of mitigation only after the standard sequencing of mitigation (avoid, minimize, and then compensate) has been applied. Mitigation ratios for preservation shall range from 10-to-one to 20-to-one, as determined by the director, depending on the quality of the wetlands being impacted, mitigated and preserved. The following criteria shall apply to mitigation by preservation:

1. Preservation as mitigation is acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of one-to-one acreage replacement is provided by restoration or creation.

2. Preservation of at-risk, high-quality wetlands may be used as the sole means of mitigation for wetland impacts to Category III or IV wetlands when the impact area is less than one-half acre and the preservation occurs in the same drainage basin as the wetland impact.

3. Preservation sites may include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

4. Wetland creation, restoration, and enhancement opportunities shall have been considered, and preservation is the best mitigation option.

5. The preservation site has the potential to experience a high rate of undesirable ecological change due to on- or off-site activities.

6. The area proposed for preservation is critical for the health of the watershed or basin.

D. Mitigation Banks. Credits from an approved wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

1. The bank is certified by the director and by state resource agencies with wetland jurisdiction;

2. The director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

3. The proposed use of credits is consistent with the terms and conditions of the bank's certification. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification. Bank credits from a certified wetland mitigation bank may be used to compensate for

impacts located within the service area specified in the bank's certification. (Ord. 2015-803 § 5 (Exh. A); Ord. 2015-796 § 5; Ord. 2006-633 § 2; Ord. 2004-603 § 2)

Attachment 3

Chapter 18.06

ENVIRONMENTALLY CRITICAL AREAS

Sections:

Legislative history: Ord. 92-273.

Article I. Purpose and General Provisions

18.06.110 Purpose.

A. The city of Mill Creek is required to comply with the Washington State Growth Management Act (Chapter 36.70A RCW) to designate natural resource lands and environmentally critical areas and to adopt development regulations to assure the conservation of such areas. In compliance with this mandate, the city finds that environmentally critical areas characterize certain portions of Mill Creek and its urban growth area. These critical areas include wetlands, fish and wildlife habitat areas, critical aquifer recharge areas, geologically hazardous areas, and frequently flooded areas.

B. The purpose of this chapter is to designate and classify environmentally critical areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.

C. By limiting development and alteration of critical areas, the city seeks to:

1. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides, steep slope failures, erosion, seismic events, or flooding;

2. Protect citizens and the unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, anadromous fish species, and other fish and wildlife and their habitats;

3. Prevent adverse and cumulative environmental impacts to critical areas, direct activities not dependent on critical area resources to less ecologically sensitive sites, and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas and requiring specific mitigation measures to compensate for unavoidable impacts;

4. Protect species listed as threatened or endangered under the Federal Endangered Species Act of 1973 (16 USC 1531 – 1534) and their habitats by prohibiting activities that kill, harass, harm, trap, collect, wound, hunt, or pursue such species/habitats. (Ord. 2004-603 § 2)

18.06.120 Intent.

A. The intent of this chapter is to avoid impacts from alteration of critical areas where such avoidance is feasible and reasonable. In appropriate circumstances, and consistent with the requirements of this chapter, unavoidable impacts to critical areas shall be minimized, rectified, restored and/or compensated for through appropriate levels of study and analysis, application of best available science, engineering, and planning principles, and regulation and limitation of land uses.

B. It is the further intent of this chapter to:

1. Implement the goals, objectives, and policies of the city of Mill Creek comprehensive plan;

2. Serve as a basis for exercise of the city's substantive authority under the State Environmental Policy Act (SEPA) and the city's SEPA regulations (Chapter 18.04 MCMC);

3. Comply with the requirements of the Growth Management Act (Chapter 36.70A RCW) and implementing rules and guidelines and through the application of best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals;

4. Coordinate Mill Creek's critical area protection activity and programs with those of other jurisdictions;

5. Coordinate environmental review and permitting of development proposals to avoid duplication and delay; and

6. Use flexibility permitted by this chapter in establishing buffer width and area standards and reasonable use on a case-by-case basis, considering the functions and values of the critical area and particular constraints on a parcel of land that make compliance with the strictest standards of this chapter unreasonable.

C. The city's enactment or enforcement of this chapter shall not be construed for the benefit of any individual person or group of persons but only for the general public. (Ord. 2004-603 § 2)

18.06.130 Findings.

The city finds that critical areas contain valuable natural resources, provide natural scenic qualities important to the character of the community, perform important ecological functions and processes, and/or present a hazard to life and property. Identification, management, and protection of these areas is, therefore, necessary to protect the public health, safety and general welfare of Mill Creek's citizens and comprise a public purpose. Beneficial biological and physical functions that critical areas provide include, but are not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage; stormwater conveyance and attenuation; ground water recharge and discharge; erosion control; protection from hazards; historical and archaeological and aesthetic value protection; and recreation. These beneficial functions are not listed in order of priority. With respect to particular critical areas, the city finds as follows:

A. Wetlands.

1. Wetlands perform numerous important functions, including but not limited to provision of wildlife and fish habitat, water quality enhancement, flood and erosion control, ground water recharge and discharge, shoreline stabilization, research and education opportunity, and recreation. Protection of these systems is necessary to protect the public health, safety, and general welfare.

2. To achieve the goal of "no net loss" of wetland functions and values within the city, the regulations of this chapter are intended to discourage or prohibit:

a. Activities that block water flows, or damage or destroy flood storage areas or storm barriers, thereby resulting in greater potential flood damages;

b. Disposal of wastewater or solid wastes, or creation of unstable fills inappropriate to the function of wetlands, which may result in water pollution;

c. Application of pesticides, herbicides and algaecides on wetlands unless warranted to protect the ecological functions of the wetland;

d. Activities that limit the function of a wetland to control erosion or runoff; provide water storage; or provide wildlife breeding, spawning, nesting, wintering, or feeding grounds; and

e. Activities that detract from a wetland's value in providing educational experiences, recreational uses, and/or open space.

B. Fish and Wildlife Habitat Areas.

1. Streams and other fish and wildlife habitats perform many important biological and physical functions that benefit the fish and wildlife species inhabiting the region. These functions include, but are not limited to: providing cover, breeding/spawning habitat, and food for fish and wildlife species; maintaining water quality; storing and conveying storm and flood water; and recharging ground water.

2. Habitat areas also serve as a valuable resource for city residents by providing areas for recreation, education, scientific study, and aesthetic appreciation. Protection of these systems is necessary to protect the public health, safety, and general welfare.

C. Critical Aquifer Recharge Areas.

1. Areas that have a critical recharging effect on ground water are essential for maintaining public water supplies including supplies of potable drinking water. These areas are susceptible to contamination from certain land use activities. Protection of these systems is necessary to protect the public health, safety, and general welfare.

2. Critical aquifer recharge areas have prevailing geologic conditions associated with infiltration rates that create or contribute significantly to the replenishment of ground water.

D. Geologically Hazardous Areas.

1. Geologically hazardous areas pose a risk to public property, welfare, and to the natural systems that make up the environment of the city. Natural processes make these areas susceptible to landslides, erosion, and seismic events. Regulation of these areas to avoid or minimize geologic hazards is necessary to protect the public health, safety, and welfare.

2. Areas subject to topographic variation – such as hillsides and ravines – provide natural scenic qualities, aesthetic resources, and community character as well as important ecological functions and values. Removal of vegetation and development in such areas can result in loss of soil and slope stability, increased erosion, increased surface water runoff, and reduced aesthetic value. These areas should be protected and enhanced consistent with their natural functions, visual qualities, and inherent development limitations.

E. Frequently Flooded Areas. Areas subject to frequent flooding provide valuable habitat for many fish and wildlife species and also pose a risk to public health and safety. Protection of floodplains and areas subject to frequent flooding is necessary to protect human life and property. The provisions of this chapter seek to prevent damage to public facilities, minimize the need for flood relief or flood control projects, and protect the natural resource functions and values provided by frequently flooded areas. Protection and management of frequently flooded areas shall be in accordance with the provisions of Chapter 15.20 MCMC and shall protect the public health, safety, and welfare. (Ord. 2004-603 § 2)

18.06.140 Identification and mapping of critical areas.

A. The city has identified portions of the Mill Creek planning area, based on studies and field investigations, where critical areas, or the conditions under which critical areas typically occur, are believed to exist. The approximate location and extent of critical areas within the city's UGA are shown on the Mill Creek comprehensive plan environmental element (as amended) maps adopted by reference as part of this chapter. These maps are intended to be used as a general guide for the assistance of property owners and as information for the public. Critical area locations and boundaries are approximate; field investigation and analysis by a qualified professional are required to confirm the existence and boundaries of a critical area. In the event of any conflict between the location, designation, or classification of a critical area shown on the city's maps and the criteria or standards of this chapter, the criteria and standards and the determination of any field investigation shall prevail. All areas within the city meeting the definition of one or more critical areas, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.

B. Areas adjacent to critical areas shall be considered to be within the jurisdiction of these requirements and regulations to support the intent of this chapter and ensure protection of the functions and values of critical areas. Adjacent shall mean any activity located:

1. On a site immediately adjoining a critical area;

2. A distance equal to or less than the required critical area buffer width plus building setback;

3. Within the floodway, floodplain, or channel migration zone; or

4. A distance equal to or less than 200 feet from a critical aquifer recharge area or geologically hazardous area. (Ord. 2004-603 § 2)

18.06.150 Protection of critical areas.

A. Any action taken pursuant to this chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science. All actions and developments shall be designed and constructed to avoid and/or minimize all adverse impacts. Applicants must first demonstrate the inability to avoid or minimize impacts before restoration and compensation of impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas within the city and its UGA.

B. These critical area regulations shall apply as an overlay and in addition to zoning and other development regulations adopted by the city, and/or other agencies that may have jurisdiction over an area or activity. In the event of an irreconcilable conflict between these regulations and any other regulations of the city, the regulations that provide greater protection for critical areas shall apply.

C. Compliance with the provisions of this chapter does not necessarily constitute compliance with other federal, state, and local regulations and permit requirements. The applicant is responsible for complying with all applicable regulations and requirements.

D. Areas characterized by a particular critical area may also be subject to other regulations established by this chapter due to the overlap or multiple functions of some critical areas. Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection to the critical areas involved.

E. The provisions of this chapter shall be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this chapter. (Ord. 2004-603 § 2)

18.06.160 Density calculations for critical areas and buffers.

On-site density transfers are permitted for critical area buffers and Category IV wetlands. The density may be transferred to the noncritical area/buffer portion of the site, (a) subject to applicable policies, setbacks and other standards of the city, (b) if it is compatible with the character of the area and adjacent uses, and (c) the area to which density is transferred is not constrained by other critical areas. (Ord. 2004-603 § 2)

Article II. Definitions

18.06.210 Definitions.

For purposes of this chapter, the following definitions shall apply. Other applicable definitions may be located in MCMC Title 14 or elsewhere in the development code.

"Actively farmed" means land that has a documented history of ongoing agricultural use and that is currently used primarily for the production of crops and/or raising or keeping livestock.

"Adaptive management" means using scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.

"Advance mitigation" means compensation, in the form of creation, re-establishment, rehabilitation, or enhancement, for an anticipated critical area impact that is completed prior to the impact for which it compensates. The compensation must be in accordance with a city-approved plan.

"Agricultural land" is land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock.

"Alteration" means any human-induced change in an existing condition of a critical area or its buffer. Alterations include, but are not limited to, grading, filling, channelizing, dredging, clearing (vegetation), draining, construction, compaction, excavation, or any other activity that changes the critical area.

"Anadromous fish" means those species that migrate up rivers from salt water to spawn in fresh water.

"Aquifer" means a geological formation, group of formations or part of formation that is capable of yielding a significant amount of water to a well or spring.

"Aquifer recharge areas" are areas that, due to the presence of certain soils, geology, and surface water, act to recharge ground water by percolation.

"Aquifer susceptibility" means the ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer unimpeded by chemical interactions with the vadose zone media.

"Aquifer vulnerability" is the combined effect of susceptibility to contamination and the presence of potential contaminants.

"Artificial wetland or surface water system" means a wetland or surface water system that was intentionally created from a nonwetland site through human activity and for a specific purpose. This includes stormwater detention ponds, bioswales, irrigation canals, wastewater treatment ponds, landscape amenities, stock ponds, and similar areas.

Artificial wetlands or surface water systems do not include wetlands created as compensation for development impacts or wetlands that have inadvertently become established as a result of changing environmental conditions or land use.

"Best available science" means information from research, inventory, monitoring, surveys, modeling and assessments that is used to designate, protect, or restore critical areas. As defined by WAC 365-195-900 through 365-195-925, best available science is derived from a process that includes peer reviewed literature, standard methods, quantitative analysis and documented references to produce reliable information.

"Best management practices (BMPs)" means conservation practices or systems of practices and management measures that:

1. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and/or sediment;

2. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of wetlands and streams;

3. Protect trees and other vegetation designated to be retained during and following site construction; and

4. Provide standards for proper use of chemical herbicides and pesticides within critical areas.

"Buffer" or "buffer area" means the area or zone contiguous to a critical area that protects the integrity or functions and values of a critical area from potential adverse impacts. Buffers shall not include areas that are functionally and effectively disconnected from the wetland by a road or other substantial developed surface.

"City" means the city of Mill Creek.

"Clearing" means the removal of timber, brush, grass, ground cover or other vegetative matter from a site, which exposes the earth's surface of the site.

"Compensatory mitigation" means replacing, to an equivalent or greater level, critical areas or buffers after all appropriate and practicable impact avoidance and minimization measures have been implemented. Compensatory mitigation includes but is not limited to: wetland creation, rehabilitation, re-establishment, enhancement, and preservation; stream restoration and relocation; and buffer enhancement and restoration.

"Conservation easement" means a legal agreement or dedication by the property owner to restrict uses of the land. Conservation easements shall be recorded in the Snohomish County real property records, shall run with the land, and are legally binding on all present and future owners of the property.

"Creation" means the manipulation of a non-wetland (upland) site for purposes of establishing wetland functions and characteristics where none previously existed. Activities could include, but are not limited to, excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of wetland plant species. Creation results in a net increase in wetland area.

"Critical aquifer recharge area" means areas designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2).

"Critical area report" means a report prepared by a qualified professional based on best available science, and the specific methods and standards for technical study required for each applicable critical area. Geotechnical reports and hydrogeological reports are critical area reports specific to geologically hazardous areas and critical aquifer recharge areas, respectively.

"Critical area tract" means land held in private ownership and retained in an open condition in perpetuity for the protection of critical areas.

"Critical areas" include any of the following areas or ecosystems: aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands, as defined in Chapter 36.70A RCW and this chapter.

"Critical habitat" means habitat areas with which endangered, threatened, or sensitive plant or wildlife species have a primary association (e.g., feeding, breeding, rearing of young, migrating). Such areas are identified herein with

reference to lists, categories, and definitions promulgated by the Washington Department of Fish and Wildlife as identified in WAC 232-12-011 or 232-12-014; in the Priority Habitat and Species (PHS) program of the Department of Fish and Wildlife; or by rules and regulations adopted by the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or any other agency with jurisdiction for such designations.

"Department" means the city of Mill Creek department of community development.

"Disturbance" means alteration (see definition of "alteration") of a critical area or associated buffer.

"Ditch" means any graded (manmade) channel specifically installed to collect and convey runoff from properties and roadways. Ditches include drains, outfalls, channels, stormwater runoff facilities or other wholly artificial watercourses, except those that directly result from the manmade modification to a natural watercourse.

"DRASTIC" means a model developed by the National Water Well Association and Environmental Protection Agency to measure aquifer susceptibility.

"Emergency activities" are those activities necessary to prevent an immediate threat to public health, safety, or welfare, or that pose an immediate risk of damage to private property and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this chapter.

"Emergent wetland" means a wetland with at least 30 percent of the surface area covered by erect, rooted, herbaceous vegetation extending above the water surface as the uppermost vegetative stratum.

"Enhancement" means the manipulation of an existing degraded wetland site to heighten, intensify or improve existing functions or to change the growth stage or composition of the vegetation present. Activities could include, but are not limited to, planting vegetation, controlling non-native or invasive species, modifying site elevations or the proportion of open water to influence plant composition, or some combination of these. Enhancement improves some wetland functions but can lead to a decline in other wetland functions; it does not result in a net increase in wetland area.

"Erosion" means a process whereby wind, rain, water and other natural agents mobilize and transport soil particles.

"Erosion hazard areas" means lands or areas underlain by soils identified by the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) as having "severe" or "very severe" erosion hazards. These include, but are not limited to, Alderwood gravelly sandy loam and Everett gravelly sandy loam soils when they occur on slopes of 15 percent or greater.

"Excavation" means the mechanical movement or removal of earth.

"Existing and ongoing agricultural activities" means those activities conducted on lands defined in RCW 84.34.020(2), and those activities involved in the production of crops and livestock, including but not limited to operation and maintenance of existing farm and stock ponds or drainage ditches, irrigation systems, changes between agricultural activities, and maintenance or repair of existing serviceable structures and facilities. Activities that result in the filling of an area or bring an area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area on which it was conducted has been converted to a nonagricultural use, or has lain idle for more than five years unless that idle land is registered in a federal or state soils conservation program. Forest practices are not included in this definition.

"Exotic" means any species of plant or wildlife that is not indigenous to the Puget Sound area.

"Fen" means a type of wetland similar to a bog that is wholly or partly covered with water and dominated by grass-like plants, grasses, and sedges. Fens accumulate peat soil and are alkaline rather than acid.

"Fill material" means a deposit of earth material.

"Filling" means the act of transporting or placing by any manual or mechanical means fill material from, to, or on any soil surface, including temporary stockpiling of fill material.

"Fish and wildlife habitat areas" means areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as synonymous with "fish and wildlife habitat conservation areas" (WAC 365-190-130). These areas include:

1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;

2. Habitats of local importance, including but not limited to areas designated as priority habitat by the Department of Fish and Wildlife;

3. Streams and surface waters within the jurisdiction of the state of Washington; and

4. Land essential for preserving connections between habitats and open spaces.

"Fish habitat" means habitat that is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish that could be recovered by restoration or management and includes off-channel habitat.

"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; and/or

2. The unusual and rapid accumulation of runoff of surface waters from any source.

"Floodplain" means the total land area adjoining a river, stream, watercourse, or lake subject to inundation by the base flood.

"Forested wetland" means a wetland with at least 30 percent of the surface area covered by woody vegetation greater than 20 feet in height that is at least partially rooted within the wetland.

"Frequently flooded areas" means lands in the floodplain subject to a one percent or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance and attenuation functions, as determined by the director in accordance with WAC 365-190-080(3). Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

"Function and value" means the beneficial roles served by critical areas including, but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical and archaeological and aesthetic value protection, noise and visual screening, open space, and recreation. These beneficial roles are not listed in order of priority.

"Function assessment" or "functions and values assessment" means a set of procedures, applied by a qualified professional, to identify the ecological functions being performed in a wetland or other critical area, usually by determining the presence of certain characteristics, and determining how well the critical area is performing those functions. Function assessments can be qualitative or quantitative and may consider social values potentially provided by the wetland or other critical area. Function assessment methods shall be consistent with best available science.

"Geologically hazardous areas" means areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological processes as designated by WAC 365-190-080(4). Types of geologically hazardous areas include: erosion, landslide, and seismic hazards.

"Grading" means any excavating or filling of the earth's surface or combination thereof.

"Ground water" means water in a saturated zone or stratum beneath the surface of land or a surface water body.

"Ground water management area" means a specific geographic area or subarea designated pursuant to Chapter 173-100 WAC for which a ground water management program is required.

"Ground water management program" means a comprehensive program designed to protect ground water quality, to assure ground water quantity, and to provide for efficient management of water resources while recognizing existing ground water rights and meeting future needs consistent with local and state objectives, policies and authorities within a designated ground water management area or subarea and developed pursuant to Chapter 173-100 WAC.

"Growth Management Act" means Chapters 36.70A and 36.70B RCW, as amended, together with administrative regulations adopted thereunder.

"Habitat management" means management of land to maintain species in suitable habitats within their natural geographic distribution so that subpopulations are not isolated. This does not imply maintaining all habitat or individuals of all species in all cases.

"Hazardous substance" means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in WAC 173-303-090 or 173-303-100.

"High impact land use" means land uses likely to have a significant adverse impact to critical areas because of the intensity of the use, levels of human activity, use of machinery or chemicals, presence of domesticated animals, or the presence of light and noise. Examples include parking lots; buildings and yard areas of residential, commercial and business park developments; private and public streets; active use parks and recreation facilities; and other uses/activities that are likely to significantly impact critical areas.

"Hydraulic project approval (HPA)" means a permit issued by the state Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 75.20 RCW.

"Hydric soil" means a soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the 1987 Corps of Engineers Wetland Delineation Manual (Publication No. Y-87-1) and the Western Mountains, Valleys, and Coast Regional Supplement (Publication No. ERDC/EL TR-10-3).

"Hydrologic soil groups" means soils grouped according to their runoff-producing characteristics under similar storm and cover conditions. Properties that influence runoff potential are depth to seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a low permeable layer. Hydrologic soil groups are normally used in equations that estimate runoff from rainfall, but can be used to estimate a rate of water transmission in soil. There are four hydrologic soil groups:

1. Low runoff potential and a high rate of infiltration potential;

2. Moderate infiltration potential and a moderate rate of runoff potential;

3. Slow infiltration potential and a moderate to high rate of runoff potential; and

4. High runoff potential and very slow infiltration and water transmission rates.

"Hydrophytic vegetation" means macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

"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.

"Impervious surface" means a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow compared to natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede

the natural infiltration of stormwater. Impervious surfaces do not include surfaces created through proven low impact development techniques.

"Indigenous" means any species of plant or wildlife that occurs naturally on a particular site or area.

"Infiltration" means the downward entry of water into the immediate surface of soil.

"In-kind compensation" means to replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity.

"Innovative mitigation" means mitigation that may occur off site and/or may be out of kind compared to the critical area being impacted.

"Isolated wetland" means a wetland that is not adjacent to or hydraulically connected via surface water, ground water, or other conveyance to another wetland, lake, or stream.

"Lake" means a naturally existing or artificially created body of standing water, which exists on a year-round basis and occurs in a depression of land or expanded part of a stream. A lake must be greater than one acre in size, greater than six and six-tenths feet in depth at the deepest point, and have less than 30 percent aerial coverage by trees, shrubs, or persistent emergent vegetation. A lake is bounded by the ordinary high water mark or the extension of the elevation of the lake's ordinary high water mark with the stream where the stream enters the lake.

"Landfill" means a disposal facility or part of a facility at which solid waste is permanently placed in or on land including facilities that use solid waste as a component of fill.

"Landslide" means episodic downslope movement of a mass of soil or rock.

"Landslide hazard areas" means areas that, due to a combination of slope inclination and relative soil permeability, are susceptible to landsliding.

"Low impact land use" means land uses which are not likely to have a significant adverse impact to critical areas because of the intensity of the use, levels of human activity, limited use of machinery or chemicals, site design, and other factors identified in this chapter. Examples include passive open space tracts and detention/retention ponds.

"Mature forested wetland" means a forested wetland where the largest trees are at least 80 years old or have diameters at breast height of at least 21 inches.

"Mitigation" means individual actions that may include one or a combination of the following measures, listed in order of preference:

1. Avoiding an impact altogether by not taking a certain action or parts of actions;

2. Minimizing impacts by limiting the degree or magnitude of an action and its implementation;

3. Rectifying impacts by repairing, rehabilitating, or restoring the affected environment;

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

5. Compensating for an impact by replacing or providing substitute resources or environments; and

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

"Monitoring" means evaluating the impacts of development proposals over time on the biological, hydrological, pedological, and geological elements of such systems and/or assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and documenting changes in natural ecosystems and features, and includes gathering baseline data.

"Native growth protection area (NGPA)" means an area where native vegetation is 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.

"Native vegetation" means plant species that are indigenous to the Puget Sound area.

"No net loss" means the maintenance of the aggregate total of the city's critical area functions and values as achieved through a case-by-case review of development proposals. Each project shall be evaluated based on its ability to meet the no net loss standard.

"Nonconformity" means a nonconforming use or nonconforming building as defined in MCMC 14.01.030(N).

"Off-site compensation" means to replace critical areas away from the site on which critical area impacts have occurred.

"On-site compensation" means to replace critical areas at or adjacent to the site on which critical area impacts have occurred.

"Ordinary high water mark (OHWM)" means that mark which is found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, that the soil has a character distinct from that of the abutting upland in respect to vegetation.

"Out-of-kind mitigation" means replacement of critical areas or buffers with substitute critical areas or buffers whose characteristics do not closely approximate those destroyed or degraded by a regulated activity.

"Permeability" means the capacity of an aquifer or confining bed to transmit water. It is a property of the aquifer or confining bed and is independent of the force causing movement.

"Permittee-responsible innovative mitigation projects" means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee/applicant/developer (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee/applicant/developer retains full responsibility. This is in contrast to an applicant purchasing credits from a certified mitigation bank.

"Pond" means a naturally existing or artificially created body of standing water that exists on a year-round basis and occurs in a depression of land or expanded part of a stream. A pond must be less than or equal to one acre and greater than 10,000 square feet in size, and greater than six and six-tenths feet in depth at the deepest point.

"Porous soil types" means soils, as identified by the National Resources Conservation Service, U.S. Department of Agriculture, which contain voids, pores, interstices or other openings which allow the passing of water.

"Potable water" means water that is safe and palatable for human use.

"Practical alternative" means an alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes, and having less impact to critical areas.

"Preservation" means actions taken to ensure the permanent protection of existing, ecologically important critical areas and/or buffers that the city or another agency has deemed worthy of long-term protection.

"Priority habitat" means areas with one or more of the following attributes: comparatively high wildlife density; high wildlife species richness; significant wildlife breeding habitat; significant wildlife seasonal ranges; significant movement corridors for wildlife; limited availability; and/or high vulnerability. Priority habitats have unique or significant value to one or more species as classified by the Washington Department of Fish and Wildlife. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element under WAC 173-26-020(28).

"Priority species" means wildlife species of concern due to their population status and their sensitivity to habitat alteration, as defined by the Washington Department of Fish and Wildlife.

"Project area" means a proposed development site and the lands within 50 feet of the area proposed to be disturbed, altered, or used by the proposed activity.

"Pruning" means mechanical removal of woody plant parts intended to maintain plant health by removing dead, injured or diseased wood or to control or direct vegetative growth. Pruning in a hillside and associated buffer area is an alteration activity subject to the provisions of this chapter.

"Qualified professional" or "qualified consultant" shall mean a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, soil science, engineering, environmental studies, fisheries, geomorphology or related field, and two years of related work experience, and meet the following criteria:

1. A qualified professional for habitats or wetlands must have a degree in biology or a related discipline and professional experience related to the subject species.

2. A qualified professional for geologically hazardous areas must be a professional engineer or geologist, licensed in the state of Washington.

3. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

"Recharge" means the process involved in the absorption and addition of water to ground water.

"Re-establishment" means the manipulation of a former wetland site with the goal of restoring natural or historic wetland characteristics and functions that are no longer present. Re-establishment activities could include, but are not limited to, grading/excavation, removing fill material, plugging ditches, breaking drain tiles, and planting. Re-establishment results in a net increase in wetland area and functions.

"Regulated activity" means activities occurring in or near and/or potentially affecting an environmentally critical area or associated buffer that are subject to the provisions of this chapter. Regulated activities generally include but are not limited to any filling, dredging, dumping or stockpiling, draining, excavating, flooding, constructing or reconstructing, driving pilings, obstructing, shading, clearing or harvesting.

"Rehabilitation" means the manipulation of the physical or hydrological characteristics of an existing degraded wetland for the purposes of repairing natural or historic functions and processes. Activities could involve, but are not limited to, breaching a dike to reconnect wetlands to a floodplain or other activities that restore the natural water regime. Rehabilitation results in a gain in wetland functions and processes but does not result in a net increase in wetland area.

"Repair" or "maintenance" means an activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

"Restoration" means the repair of an altered or damaged wetland or other area through the manipulation of its physical, chemical, and/or biological characteristics.

"Re-establishment" and "rehabilitation" are the specific forms of restoration that are utilized to mitigate impacts and to regulate critical areas, as defined in this section.

"Rills" means steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.

"Riparian habitat" means areas adjacent to streams that contain elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and

inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities.

"Scrub/shrub wetland" means a wetland with at least 30 percent of its surface area covered by woody vegetation less than 20 feet in height as the uppermost strata.

"Seismic hazard areas" means areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

"SEPA" means the Washington State Environmental Policy Act, Chapter 43.21C RCW.

"Significant habitat" means areas with one or more of the following attributes: comparatively high wildlife density; high wildlife species diversity; important wildlife nesting or breeding areas; wildlife seasonal ranges or refuge areas along migratory routes; important movement corridors for wildlife; and limited availability or high vulnerability. These areas typically contain some feature that is particularly attractive to wildlife, in most instances water. To be considered a significant habitat, the area must be of sufficient size or functionally linked to another significant habitat or critical habitat to allow continued functioning of the area at the level described in this definition considering existing and proposed developments of noncritical areas in the vicinity.

"Site" means any parcel or combination of contiguous parcels, or right-of-way or combination of contiguous rights-of-way, under the applicant's ownership or control.

"Slope" means an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance. In these regulations, slopes are generally expressed as a percentage. Percentage of slope refers to a given rise in elevation over a given run or distance. A 40 percent slope, for example, refers to a 40-foot rise in elevation over a distance of 100 feet.

"Slope buffer" means a designated area contiguous or adjacent to a slope that is required for the continued maintenance, function, and structural stability of the slope.

"Sphagnum bog" means a type of wetland dominated by mosses that form peat. Sphagnum bogs are very acidic, nutrient-poor systems, fed by precipitation rather than surface inflow, with specially adapted plant communities.

"Stormwater conveyance facilities" means bioswales, dispersal trenches, stormwater pipes, and other facilities that carry stormwater from a detention or treatment facility to a discharge location.

"Stormwater facility" means structures or lands used for the specific purpose of treating or managing storm runoff. Stormwater facilities include detention/retention ponds, wet ponds, media filtration facilities, vaults, lagoons, infiltration basins, and other approved facilities constructed in accordance with the city's stormwater management regulations.

"Stream" means those areas where surface waters produce a defined channel or bed. A defined channel or bed is an area that demonstrates clear evidence of the passage of water and includes, but is not limited to, bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round. Streams provide biological functions and habitat for aquatic organisms. This definition does not include artificially created irrigated ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses unless they are used by anadromous or resident fish populations.

"Stream buffer" means a designated area contiguous or adjacent to a stream that is required for the continued maintenance, function, and structural stability of the stream.

"Structural diversity" means the relative degree of diversity or complexity of vegetation in a habitat area as indicated by the stratification or layering of different plant communities (e.g., ground cover, shrub layer and tree canopy); the variety of plant species; and the spacing or pattern of vegetation.

"Subdrainage basin" or "subbasin" means the drainage area of the highest order stream containing the subject property impact area. Stream order is used to define the position of a stream in the hierarchy of tributaries in the

watershed. The smallest streams are the highest order (first order) tributaries. These are the upper watershed streams and have no tributaries of their own.

"Surface water systems" means aquatic resources including streams, lakes, and ponds and associated riparian habitat.

"Unavoidable" means adverse impacts that remain after all appropriate and practicable avoidance and minimization measures have been implemented.

"Utility line" means pipe, conduit, cable or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include, but are not limited to, water supply, electric power with an associated voltage of 55,000 volts or less, natural gas, communications and sanitary sewer.

"Water resources inventory area (WRIA)" means one of 62 watersheds in the state of Washington, each composed of the drainage areas of a stream or streams, as established in Chapter 173-500 WAC as it existed on January 1, 1997.

"Water table" means that surface in an unconfined aquifer at which the pressure is atmospheric. The water table is defined by the levels at which water stands in wells that penetrate the aquifer just far enough to hold standing water.

"Well" means a bored, drilled or driven shaft, or a dug hole whose depth is greater than the largest surface dimension for the purpose of withdrawing or injecting water or other liquids.

"Wellhead protection area (WHPA)" means the portion of a zone of contribution for a well, wellfield or spring, as defined using criteria established by the state Department of Ecology.

"Wetland" means 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. For identifying and delineating a wetland, local government shall use the Washington State Wetland Identification and Delineation Manual.

"Wetland buffer" means a designated area contiguous or adjacent to a wetland that is required for the continued maintenance, function, and structural stability of the wetland.

"Wetland class" means the general appearance of the wetland based on the dominant vegetative life form or the physiography and composition of the substrate. The uppermost layer of vegetation that possesses an aerial coverage of 30 percent or greater of the wetland constitutes a wetland class. Multiple classes can exist in a single wetland. Types of wetland classes include forest, scrub/shrub, and emergent.

"Wetland edge" means the boundary of a wetland as delineated based on the definitions contained in this chapter.

"Wetland mitigation bank" means a site where wetlands and buffers are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

"Zone of contribution" means the area surrounding a well or spring that encompasses all areas or features that supply ground water recharge to the well or spring. (Ord. 2017-814 § 2; Ord. 2015-803 § 4 (Exh. A); Ord. 2015-796 § 1; Ord. 2009-702 § 2 (Exh. C); Ord. 2006-633 § 2; Ord. 2004-603 § 2)

Article III. Applicability/Regulated Activities

18.06.310 Applicability of provisions.

A. The provisions of this chapter shall apply to all lands, all land uses and development activity, and all structures and facilities in the city, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the city. No person, company, agency, or applicant shall alter a critical area or buffer except as consistent with the purposes and requirements of this chapter.

B. The city shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water, or vegetation, or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer without first ensuring compliance with the requirements of this chapter. Approval of a permit or development proposal pursuant to the provisions of this chapter shall not discharge the obligation of the permit holder to comply with the provisions of this chapter. (Ord. 2004-603 § 2)

18.06.320 Regulated activities.

Activities subject to this chapter include, but are not limited to, the following:

A. Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;

B. Dumping, discharging or filling with any material;

C. Constructing, reconstructing, demolishing or altering the size of any structure or infrastructure, except where the existing square footage or foundation footprint is not altered and meets the definition of a nonconforming structure subject to the provisions of MCMC 14.01.030(N);

D. Destroying or altering vegetation through clearing, harvesting, cutting, trampling, intentional burning, shading or planting vegetation where these activities would alter the character of a critical area or buffer;

E. Draining, flooding or disturbing the water level, water flow pattern, or water table;

F. Activities that result in adverse changes in water temperature, physical or chemical characteristics of water sources to wetlands or streams;

G. Conversion of agricultural land to nonagricultural uses; and

H. Application of pesticides, fertilizers and/or other chemicals in amount or at times demonstrated as harmful to wetlands, streams, wildlife habitats, or riparian corridors. (Ord. 2004-603 § 2)

18.06.330 Nonconforming uses.

An established use or existing structure lawfully created prior to adoption of this chapter, but which is not in compliance with this chapter, may continue subject to the provisions of Chapter 17.32 MCMC. (Ord. 2004-603 § 2)

Article IV. Exemptions and Exceptions

18.06.410 Exempt activities.

A. Certain activities shall be exempt from the provisions of this chapter; provided, that they are conducted using locally adopted best management practices and that they result in the least amount of impact to the critical areas. Best management practices shall be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The city shall observe the use of best management practices to ensure that the activity does not result in degradation of the critical area or buffer. Exempt activities include the following:

1. Existing and ongoing agricultural activities as defined in this chapter; if established prior to 1992 and after that date do not cause permanent conversion of a critical area through actions such as ditching, draining, clearing, grading, and/or filling; provided, that:

a. The activity is conducted as part of normal agricultural activities. The exemption does not apply to the full or partial conversion of agricultural land to nonagricultural uses;

b. The activity does not destroy, kill, harass, or otherwise harm species listed as threatened or endangered under the Federal Endangered Species Act of 1973, or the habitats on which those species depend;

c. The property or portion of the property considered for exemption has been actively farmed since 1992, and not been idle for two consecutive years;

d. The agricultural activities comply with the flood hazard provisions of Chapter 15.20 MCMC and other applicable city regulations; and

e. The exemption is limited to specific areas upon which lawfully established agricultural activities are being conducted. A determination that a portion of a site is exempt shall not extend to other portions of the site that do not meet the requirements of this section.

2. Activities conducted pursuant to previous critical area review, including activities subject to previous development permits and approvals and construction approvals, provided all of the following conditions have been met:

a. The provisions of this chapter have been previously addressed as part of another approval;

b. There have been no material changes in the potential impact to the critical area or buffer since the prior review;

c. There is no new critical area information available for the site or adjacent areas and there have been no substantial changes to site conditions since the original study was prepared;

d. The permit or approval has not expired or, if no expiration date, no more than five years has elapsed since the issuance of that permit or approval or adoption of this chapter, whichever is later; and

e. Compliance with all standards or conditions placed upon the prior permit or approval has been achieved or secured.

3. Public and private pedestrian trails subject to the satisfaction of the following requirements as determined by the director:

a. The trail shall avoid critical areas to the greatest extent possible;

b. The trail shall be placed on the outside edge of the critical area buffer to the greatest extent possible; and

c. Fencing or other control mechanisms shall be installed at the edge of the trail closest to the critical area.

4. Select vegetation removal activities including the following; provided, that no vegetation shall be removed from a wetland, fish and wildlife habitat area, or erosion/landslide hazard area or their associated buffers without prior written approval; and provided, that disturbed areas are revegetated with native, noninvasive species approved by the city:

a. The removal of invasive weeds, such as Himalayan blackberry, using hand labor, city-approved light equipment, and/or authorized herbicides; provided, that all cut vegetation shall be left within the critical area or buffer unless removal is warranted due to the potential for disease transmittal to other healthy vegetation; and

b. 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 of removal that will minimize impacts.

5. The removal of trees from critical areas and buffers, that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to private property; provided, that written approval from the city is required before the removal of hazardous trees, and:

a. The applicant submits a report from a certified arborist, or registered landscape architect, that documents the hazard and provides a replanting schedule for the replacement trees. The director can waive this requirement if the hazard potential is readily apparent to city staff;

b. Tree cutting shall be limited to limbing and crown thinning, unless otherwise recommended and justified by a qualified professional;

c. The landowner shall replace any trees that are felled or limbed with new trees at a ratio of two replacement trees for each tree felled or limbed within one year in accordance with an approved restoration plan. The director may reduce the ratio when it can be demonstrated that a lower ratio is adequate to protect critical areas. Tree species that are native and indigenous to the site shall be used; and

d. Hazard trees determined to pose an imminent threat or danger to public health or safety, property, or cause serious environmental degradation may be removed by the landowner prior to receiving written approval from city; provided, that a reasonable attempt is made to contact the city prior to removal and within 14 days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this chapter.

6. The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, as approved by the director; provided, that their use shall be restricted in accordance with Department of Fish and Wildlife Management Recommendations, and the regulations of the Department of Agriculture and/or the U.S. Environmental Protection Agency.

7. Minor operation, maintenance, and/or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees or drainage systems, if the activity does not require construction permits, does not further alter, impact, or encroach upon the critical area or buffer, and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair.

8. Normal maintenance of groundcover or other vegetation lawfully planted in a critical area or buffer area that was disturbed prior to the effective date of the ordinance codified in this chapter; provided, that no further disturbance is created.

9. Minor site investigative work, such as surveys, soil logs, percolation tests and other related activities, when required by the city, or a state or federal agency, where such activity does not require construction of roads, significant excavation or grading, or use of heavy machinery; provided, that impacts on critical areas are minimized and disturbed areas are restored immediately to the preexisting level of function and value.

10. Passive outdoor activities such as recreation, education, and scientific research activities that do not alter or degrade the critical area or buffer, including fishing, hiking, and bird watching.

11. Activities involving artificial wetlands or surface water systems; provided, that wetlands, streams, lakes, or ponds created as mitigation for approved land use activities or that provide critical habitat shall be regulated under the provisions of this chapter.

12. Emergency actions that impact a critical area or its buffer provided such actions use reasonable methods to address the emergency and have the least possible impact to the critical area or its buffer. Prior to an emergency action, the director shall provide written determination on a case-by-case basis of the emergency action that satisfies the general requirements of this section. In the event a person or agency determines that the need to take emergency action is so urgent that there is insufficient time for review by the director, such emergency action may be taken immediately. Emergency actions that must be undertaken immediately or for which there is insufficient time for full compliance with this chapter include actions necessary to:

a. Prevent an imminent threat to public health or safety; or

b. Prevent imminent danger to public or private property; or

c. Prevent an imminent threat of serious environmental degradation.

B. The applicant shall obtain written confirmation from the city that the proposed activities meet the requirements for exemption as defined by the section before the activity is initiated. All exempted activities shall use reasonable methods to avoid potential impacts to critical areas. To be exempt from this chapter does not give permission to alter or degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be promptly restored, rehabilitated, or replaced at the responsible party's expense to the director's satisfaction. (Ord. 2004-603 § 2)

18.06.420 Public agency and utility exception.

A. If the application of this chapter would prohibit a development proposal by a public agency to install or provide streets or utilities, the agency or utility may apply for an exception pursuant to this section.

B. An application for a public agency and utility exception shall be made to the city and shall include a critical area identification form; critical area report and mitigation plan, if necessary; and any other pertinent project documents/studies. The director shall prepare a determination approving, approving with conditions, or denying the request. This determination shall be based on review of the submitted information, a site inspection, and the proposal's ability to comply with all of the following criteria:

1. There is no other practical alternative to the proposed development with less impact on critical areas and all reasonable measures have been taken to minimize impacts to critical areas;

2. The application of this chapter would unreasonably restrict the ability to provide street or utility services to the public;

3. The proposal does not pose a significant threat to the public health, safety, or welfare on or off the site; and

4. The proposal includes measures to compensate for impacts to critical area function and values consistent with the requirements of this chapter. (Ord. 2004-603 § 2)

18.06.430 Reasonable use permitted.

An exception to the provisions of this chapter may be considered by the hearing examiner if application of this chapter would deny all reasonable use of the subject property and upon a showing by the applicant of all the following elements:

A. The proposed activity will result in minimal alteration of existing contours, vegetation, fish and wildlife resources, hydrological conditions, and geologic conditions and will have a minimal effect on critical area functions;

B. The proposed activity will not jeopardize the continued existence of endangered, threatened, sensitive, or monitored species as listed by the federal or state government;

C. The proposed activity will not cause material degradation of habitat, ground water or surface water quality;

D. The proposed activity will comply with all local, state, and general laws, including those related to environmental protection, sediment control, pollution control, floodplain restrictions, and on-site wastewater disposal;

E. There will be no damage to public or private property and no threat to the health or safety of people on or off the site; and

F. The inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and/or creating or adding to the undevelopable condition. (Ord. 2010-718 § 14 (Exh. N); Ord. 2004-603 § 2)

18.06.440 Exception for minor new developments in buffers.

A. Remodels and additions to an existing, legally established structure or impervious area that currently encroaches on a critical area buffer shall be exempt from compliance with regulations in this chapter; provided, that all of the following criteria are met to the director's satisfaction:

1. The proposed development is a minor development and is consistent with the existing use of the site;

2. The impacts on critical area functions and values are avoided and minimized to the maximum extent possible consistent with this chapter;

3. The affected area is located at least 20 feet from the critical area boundary;

4. The minor development does not intensify the use or cause the existing structure/impervious surface to encroach any closer to the critical area;

5. There are no changes in slope stability or drainage; and

6. The minor development does not increase the affected site structural/impervious surface footprint by more than 25 percent.

B. This exception shall not be allowed more than once for any individual site unless a variance for reasonable use is granted pursuant to MCMC 18.06.430. (Ord. 2004-603 § 2)

Article V. Critical Area Reporting Requirements and Permit Process

18.06.510 Preapplication conference.

All applicants are encouraged to meet with the department prior to submitting an application subject to this chapter. The purpose of this meeting shall be to discuss the city's critical area standards and procedures; to review any conceptual site plans prepared by the applicant; to discuss appropriate investigative techniques and methods; and to identify potential impacts and mitigation measures. Such conference shall be for the convenience of the applicant and any recommendations shall not be binding on the applicant or the city. (Ord. 2004-603 § 2)

18.06.520 Critical area identification form – Initial determination.

A. Prior to the city's consideration of any proposed activity not found to be exempt under MCMC 18.06.410, the applicant shall submit to the department a completed critical area identification form provided by the city. The requirement for a critical area identification form may be waived if the applicant and the director determine during a preapplication conference that a critical area study/report will be prepared for the proposal and agree on the scope and timing of such critical area study/report.

B. Upon receipt of a completed critical area identification form, submitted in advance or concurrently with a project application, the director may conduct a site inspection to review critical area conditions on site.

C. The director shall review the critical area identification form and other information available pertaining to the site and the proposal and make a determination as to whether any critical areas may be affected by the proposal and whether a more detailed critical area report shall be required. The director shall use his/her own observations of the site conditions and any of the following indicators to assist in determining the need for a critical area report:

1. Indication on the city's critical areas maps of a critical area that may be affected by the proposed activity;

2. Information and scientific opinions from appropriate agencies, including but not limited to the Departments of Fish and Wildlife, Natural Resources, and Ecology;

3. Documentation from a scientific or other credible source of the possible presence of a critical area; or

4. A finding by a qualified professional or a reasonable belief by the director that a critical area may exist on or adjacent to the site of the proposed activity.

D. Following the site visit and review of information, the director shall make one of the following determinations:

1. The project area is not within or adjacent to a critical area or buffer and the proposed development is unlikely to degrade the functions or values of a critical area or buffer. If so, the director shall rule that the critical area review is complete and no further review is required.

2. There are critical areas within or adjacent to the project area but the proposed development will avoid the critical area and/or buffer so as not to alter or degrade the functions or values of the critical area or buffer. If so, the director may waive the requirement for a critical area report.

3. A critical area or buffer may be affected by the proposal. If so, the director shall notify the applicant that a critical area report must be submitted prior to further review of the project and shall indicate each of the critical area types that should be addressed in the report. A determination by the director regarding the apparent absence of one or more critical areas is not a certification regarding the presence or absence of critical areas, and the determination is subject to reconsideration by the director and reopening if new information or analysis is received.

E. The city shall notify the public of the initial critical area determination as part of the notice of application issued for the proposal. The notice shall include information as to the specific critical areas that are, or are not, determined to be affected by the proposed activity. (Ord. 2004-603 § 2)

18.06.530 General critical area report requirements.

A. The intent of this section is to require a level of technical study and analysis commensurate with the value or sensitivity of a particular critical area. If the proposed project is within, adjacent to, or is likely to impact a critical area or buffer pursuant to the provisions of MCMC 18.06.520, the city shall require from the applicant a critical area report that has been prepared by a qualified professional.

B. The critical area report shall contain all of the information listed below:

1. A detailed description of the critical areas and buffers on or adjacent to the project site, including the size, type/classification, condition, disturbance history, and functions and values;

2. A site plan for the development proposal showing the proposed development footprint and clearing limits, and all critical areas and buffers;

3. A description of the proposed stormwater management plan (both temporary and permanent) for the development and evaluation of impacts to proposed or actual drainage alterations;

4. The names and qualifications of the persons preparing the report, and documentation of the dates and all fieldwork performed on the site;

5. A detailed assessment of the potential impacts to critical areas and buffers resulting from site development;

6. An analysis of site development alternatives and measures taken or to be taken to avoid and minimize critical area impacts; and

7. Any additional information for the critical area as required by the subsequent sections of this chapter.

C. The applicant may consult with the director prior to or during preparation of the critical area report to obtain city 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.

D. The report will be used to assist the city in determining the appropriate classification of any critical area present, the functions and values of critical areas, the potential adverse impacts of proposed activities, appropriate buffering requirements, and any recommended mitigation conditions relating to site planning, development density, and construction or post-construction practices.

E. Once accepted, the report shall be one of the factors utilized to perform environmental review pursuant to the State Environmental Policy Act (SEPA) and in determining whether to approve, conditionally approve or deny a land use application; provided, that such reports may be supplemented with additional information from any source

that the director or any subsequent decision-maker determines to be credible and pertinent. Future land use applications shall require additional critical area reports unless it can be demonstrated to the satisfaction of the director that the previously prepared report is adequate for current analysis or new information is found demonstrating to the satisfaction of the director that the study is in error.

F. To avoid duplication, the reporting requirements of this chapter shall be coordinated for all critical areas located on the site.

G. Applicants shall provide reports and maps to the city in hard copy and electronic format that allows site data to be incorporated into the city's geographic information system database. (Ord. 2004-603 § 2)

18.06.540 Professional qualifications – City review.

A qualified professional shall prepare all reports and studies required by this chapter. The city will conduct a peer review of the critical area report, including any mitigation plan and if necessary a legal review, at the applicant's expense, unless the director determines that such peer review or legal review is unwarranted. (Ord. 2004-603 § 2)

18.06.550 Permit process.

A. To the extent possible, the city shall consolidate and integrate the review and processing of issues and approvals related to critical areas with other land use and environmental considerations and approvals.

B. Any alteration to a critical area or buffer, unless otherwise provided for in this chapter, shall be reviewed and approved, approved with conditions, or denied based on the proposal's ability to comply with all of the following criteria:

1. The proposal avoids or minimizes the impact on critical areas and buffers;

2. The proposal does not pose a material threat to the public health, safety, or welfare on or off the development proposal site;

3. The proposal is consistent with the general purposes of this chapter, the public interest, and the public health, safety, and welfare;

4. All alterations permitted to a critical area or buffer are mitigated in accordance with MCMC 18.06.610 and all other applicable regulations; and

5. The proposal maintains the critical area functions and values consistent with the best available science and other applicable regulations and standards.

C. Except as expressly provided for by this chapter, any project that cannot adequately mitigate its impacts to critical areas shall be denied.

D. The director shall make a determination as to whether the proposed activity and mitigation, if any, are consistent with the provisions of this chapter:

1. If the director determines that the proposed activity meets the criteria of subsection (B) of this section, the director shall prepare a written notice of determination and identify the required conditions of approval. Said conditions shall be incorporated into any mitigated determination of nonsignificance (MDNS), planned action, or environmental impact statement (EIS) as appropriate.

2. If the director determines that a proposed activity does not comply with subsection (B) of this section, the director shall prepare written notice of the determination that includes findings of noncompliance. Following notice of determination that the proposed activity does not meet the review criteria and/or does not comply with the applicable provisions of this chapter, the applicant may prepare and request consideration of a revised critical area report. If the revised report is found to be substantial and relevant to the critical area review, the director may reopen the critical area review, conduct additional peer and/or legal review, and make a new determination based on the revised report.

E. The city's final determination regarding critical areas pursuant to this chapter shall be made concurrent with the final decision to approve, condition, or deny the development proposal or other activity involved. (Ord. 2004-603 § 2)

18.06.560 Appeals.
Any decision to approve, condition, or deny a development proposal or other activity based on the requirements of this chapter may be appealed only according to, and as part of, the appeal procedure for SEPA threshold determinations. In the event that the development permit subject to this chapter is exempt from SEPA, the appeal procedures of Chapter 14.11 MCMC shall apply. (Ord. 2004-603 § 2)

Article VI. Mitigation

18.06.610 General mitigation requirements.
A. When an alteration to a critical area is proposed, the applicant shall first demonstrate that all reasonable efforts have been taken to avoid or minimize impacts in that order (consistent with MCMC 18.06.210).

B. Unless otherwise provided in this chapter, compensatory mitigation shall be provided for all unavoidable alterations of a critical area or buffer in accordance with an approved critical area report and mitigation plan, and consistent with best available science, to ensure no net loss of critical area functions and values. Mitigation shall not be implemented until final city approval of the critical area report and a mitigation plan prepared in accordance with MCMC 18.06.530 and 18.06.620 is granted.

C. Mitigation shall be in-kind and on-site whenever possible. The director may approve exceptions to this requirement for proposals prepared in accordance with the innovative mitigation standards in MCMC 18.06.640.

D. All areas at which mitigation is performed shall be permanently protected and managed to avoid degradation and ensure protection of critical area functions and values into perpetuity. Permanent protection shall be achieved through deed restriction or other protective covenant in accordance with MCMC 18.06.820. Management shall be specified in a manner acceptable to the director. (Ord. 2004-603 § 2)

18.06.620 General mitigation plan requirements.
A. When compensatory mitigation is required, the applicant shall develop a mitigation plan that provides for construction, maintenance, monitoring, and contingencies of the compensation as required by conditions of approval and consistent with the requirements of this chapter.

B. The mitigation plan shall identify and demonstrate sufficient restoration, creation, enhancement, and or preservation measures to maintain the functions and values of the critical area and its buffer, and/or to prevent risk from a hazard posed by a critical area.

C. The mitigation plan shall be prepared by a qualified professional and shall contain at a minimum the following:

1. A description and detailed drawings of the activities proposed to compensate for critical area impacts, including all clearing, grading/excavation, planting, weed management, installation of habitat structures, irrigation, and other site treatments;

2. Specific information on construction or the proposed mitigation activity, including timing, sequence, equipment needs, and best management practices;

3. Documentation that the restoration, creation, enhancement and/or preservation areas shall be of the same or greater quality and endurance as the critical area(s) being replaced;

4. A description of the functions and values that the proposed compensation area(s) shall provide;

5. The goals, objectives, and performance standards that the proposed compensation action(s) shall achieve;

6. A description of how the compensation area(s) will be evaluated to determine if the performance standards are being met;

7. A program and schedule for construction and post-construction monitoring and management of the compensation project;

8. 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;

9. Financial guarantees to ensure that the mitigation plan is fully implemented. Financial guarantees shall be in accordance with MCMC 18.06.650;

10. An assessment of the project's consistency with applicable local, state and federal regulations, including the need for permits from state and/or federal agencies; and

11. Any additional information for the critical area as required by the director or subsequent sections of this chapter. (Ord. 2004-603 § 2)

18.06.630 Mitigation monitoring.

A. All compensatory mitigation projects shall be monitored for the period necessary to establish that performance standards have been met, but in no event for a period less than five years following the acceptance of the installation/construction by the director.

B. Monitoring reports on the current status of the mitigation project shall be submitted to the department. The reports shall be prepared by a qualified consultant and shall include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation. Reports shall be submitted in accordance with the following schedule:

1. At the time of construction;

2. Thirty days after planting;

3. Early in the growing season of the first year;

4. End of the growing season of the first year;

5. Twice the second year (at the beginning and end of the growing season);

6. Annually thereafter, for at least five growing seasons.

C. The director shall have the authority to extend the monitoring and surety period and require additional monitoring reports and maintenance activities beyond the initial five-year monitoring period for any project that involves creation or restoration of forested wetland or buffer communities, does not meet the performance standards identified in the mitigation plan, does not provide adequate replacement for the functions and values of the impacted critical area, or otherwise warrants additional monitoring. (Ord. 2004-603 § 2)

18.06.640 Innovative mitigation.

A. The city may facilitate and approve the use of mitigation banks and other forms of innovative mitigation as compensation for impacts, including off-site and/or out-of-kind mitigation projects that allow linkages between natural systems and have the potential to restore ecological processes or provide unique and beneficial ecological functions.

B. The director may approve permittee-responsible innovative mitigation projects, including mitigation projects occurring outside city boundaries, when all of the following can be clearly demonstrated by the applicant:

1. The mitigation occurs in the same watercourse basin as the impacts and if possible in the same subbasin as the impacts;

2. The proposed mitigation site will provide greater improvement of critical area functions and values compared to other sites within city boundaries;

3. The proposed mitigation is approved by the local jurisdiction wherein the site is located, by state resource agencies, and other agencies and tribes that have jurisdiction over the proposed activity; and

4. The proposed mitigation is consistent with the general purposes of this chapter and the public health, safety, and welfare.

C. Permittee-responsible innovative mitigation projects allowed under the provisions of this section include projects wherein one or more applicants, or an organization with demonstrated capability, may undertake a mitigation project together if it is demonstrated by the applicant that all of the following circumstances exist:

1. The applicant and other proponents demonstrate the organizational and fiscal capability to act cooperatively;

2. The applicant and other proponents demonstrate that long-term management of the mitigation area will be provided;

3. There is a clear potential for success of the proposed mitigation project at the identified mitigation site; and

4. Performing mitigation as part of a cooperative process results in greater protection and conservation of critical areas than would be achieved using traditional mitigation approaches.

D. In lieu of designing, constructing and monitoring their own mitigation project, an applicant may request approval to purchase mitigation credits from a certified mitigation bank to compensate for unavoidable impacts to wetlands. The director may approve the use of a mitigation bank in accordance with MCMC 18.06.980(D). (Ord. 2015-796 § 2; Ord. 2004-603 § 2)

18.06.650 Surety to ensure implementation, maintenance, and monitoring.

A. If the development proposal is subject to compensatory mitigation, the applicant shall enter into an agreement with the city to complete the mitigation plan approved by the city and shall post a mitigation surety to ensure mitigation is fully functional.

B. The surety shall be in the amount of 125 percent of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater. The surety shall be based on a detailed itemized cost estimate of the mitigation activity including clearing and grading, plant materials, plant installation, irrigation, weed management, and all other costs.

C. The surety shall be in the form of an assignment of funds, bond, security device, or other means acceptable to the city attorney.

D. The performance surety authorized by this section shall remain in effect until the city determines, in writing, that the standards bonded for have been met. Once the mitigation installation has been accepted by the director, the bond may be reduced to 25 percent of the original mitigation cost estimate and shall become a maintenance surety. Said maintenance surety shall generally be held by the city for a period of five years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods under MCMC 18.06.630(C).

E. Depletion, failure, or collection of surety funds shall not discharge the obligation of an applicant to complete required mitigation, maintenance, monitoring, or restoration.

F. Public development proposals shall be relieved from having to comply with the bonding requirements of this section if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.

G. Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within 30 days after it is due or comply with other provisions of an approved mitigation plan shall constitute a default. Upon notice of any default, the city may demand immediate payment of any financial guarantees or require other action authorized by the city code or any other law.

H. Any funds paid or recovered pursuant to this section shall be used to complete the required mitigation or other authorized action.

I. The director may authorize a one-time temporary delay, up to 120 days, in completing mitigation activities when environmental conditions could produce a high probability of failure or significant construction difficulties. The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation. The request for the temporary delay shall include a written justification documenting the environmental constraints that preclude implementation of the mitigation plan and shall include a financial guarantee. The justification shall be verified by the city before approval of any delay.

J. The provisions of Chapters 16.20 and 17.44 MCMC shall also apply if necessary to ensure adequate protection of the public interest. (Ord. 2004-603 § 2)

Article VII. Enforcement

18.06.710 Unauthorized critical area alterations.

A. When the director determines that a critical area or its buffer has been or may be altered in violation of this chapter, all ongoing development work shall immediately stop and the critical area shall be promptly restored. The city shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, or replacement measures at the applicant's, owner's or other responsible party's expense, to compensate for or correct any violation of provisions of this chapter. Such stop work order shall be effective immediately upon posting at the site and/or personal service on the applicant, owner or other responsible party.

B. All development work shall remain stopped until a restoration plan is prepared by the applicant and approved by the city. Such plan shall be prepared by a qualified professional and shall describe how the actions proposed meet the minimum requirements of this chapter. The director shall, at the violator's expense, obtain expert advice, including legal advice, in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. For unpermitted alterations to critical areas the following minimum performance standards shall be met for the restoration; provided, that if the violator can demonstrate to the director's satisfaction that greater functions and habitat values can be obtained, these standards may be modified:

1. The preexisting structural and functional values shall be restored or replicated at the location of the alteration, including water quality and habitat functions;

2. The preexisting soil types and configuration shall be replicated; and

3. The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities.

D. For alterations to flood and geological hazards, the following minimum performance standards shall be met for the restoration of a critical area; provided, that if the violator can demonstrate to the director's satisfaction that greater safety can be obtained, these standards may be modified:

1. The hazard shall be reduced to a level equal to, or less than, the predevelopment hazard;

2. Any risk of personal injury or property damage resulting from the alteration shall be eliminated or minimized; and

3. The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.

E. The director is authorized to make site inspections and take such actions as are necessary to enforce this chapter.

F. This section is in addition to the authority provided by Chapter 14.13 MCMC. The director may proceed under either or both authorities at the director's discretion. (Ord. 2004-603 § 2)

18.06.720 Penalties.

Any or all of the following penalties may be applied at the director's discretion:

A. Any person, party, firm, corporation, or other legal entity violating any of the provisions of this chapter shall be guilty of a misdemeanor. Each day or portion of a day during which a violation of this chapter is committed or continued shall constitute a separate offense.

B. Any development (in whole or in part) carried out contrary to the provisions of this chapter shall constitute a public nuisance and may be enjoined as provided by this code or the statutes of the state of Washington.

C. The city may also levy civil penalties and take enforcement action pursuant to Chapter 14.13 MCMC against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this chapter. (Ord. 2004-603 § 2)

Article VIII. Critical Area Protective Measures

18.06.810 Critical area signs and fencing.

The boundary at the outer edge of the critical area or buffer shall be identified with signs or markers every 100 feet, or as approved by the director, to clearly indicate the location of the critical area. The edge of the critical area and buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. (Ord. 2004-603 § 2)

18.06.820 Notice on title.

A. The owner of any property containing a critical area or buffer on which a development proposal is approved shall file a notice with the Snohomish County auditor according to the direction of the city. The notice shall at a minimum state the general presence of the critical area or buffer on the property, the application of this chapter to the property, that limitations on actions in or affecting the critical area or buffer may exist, and list all applicable conditions or restrictions imposed under the authority of this chapter. The notice shall run with the land.

B. The notice on title shall not be required for a development proposal by a public agency or public or private utility:

1. Within a recorded easement or right-of-way;

2. Where the agency or utility has been adjudicated the right to an easement or right-of-way; or

3. On the site of a permanent public facility.

C. The applicant shall submit proof that the notice has been filed for public record before any occupancy or use of the approved development. (Ord. 2004-603 § 2)

18.06.830 Critical area tracts.

A. All development proposals for subdivisions, short subdivisions, planned unit developments, and binding site plans shall use separate critical area tracts to delineate and protect the following contiguous critical areas and buffers comprising 1,000 square feet or more of area:

1. All landslide and erosion hazard areas and buffers;

2. All wetlands and buffers;

3. All fish and wildlife habitat areas and buffers; and

4. All other lands to be protected from alteration as conditioned by the development approval.

B. Critical area tracts shall be designated as native growth protection areas ("NGPA") and shall be recorded on all documents of title for all affected lots or land areas.

C. Critical area tracts shall be designated on the face of the plat, binding site plan or recorded drawing in a format approved by the city attorney. The designation shall at a minimum include the following restrictions:

1. An assurance that native vegetation 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, fish, and animal habitat;

2. The right of the city to enforce the terms of the restriction; and

3. The city may require that any required critical area tract be held in an undivided interest by each owner of a building lot within the development with the ownership interest passing with the ownership of the lot, or held by an incorporated homeowner's association or other legal entity (such as a land trust), which assures the ownership, maintenance, and protection of the tract. (Ord. 2004-603 § 2)

18.06.840 Building setbacks.

A. Unless otherwise provided in MCMC Title 17, buildings and other structures shall be set back a distance of 10 feet from the edges of all critical area buffers. The following may be allowed in the building setback area:

1. Landscaping;

2. Uncovered decks not more than 30 inches above grade;

3. Building overhangs if such overhangs do not extend more than 18 inches into the setback area; and

B. Impervious ground surfaces less than 2,500 square feet, such as driveways and patios; provided, that such improvements may be subject to city and state water quality regulations. (Ord. 2004-603 § 2)

Article IX. Wetlands

18.06.910 Designation, mapping, and rating.

A. Wetlands shall be identified in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Publication No. Y-87-1) and the Western Mountains, Valleys, and Coast Regional Supplement (Publication No. ERDC/EL TR-10-3). All areas within the city meeting the criteria in the approved federal wetland delineation manual and regional supplement, regardless of any formal identification, are hereby designated critical areas and shall be subject to the provisions of this chapter.

B. The approximate location and extent of known or suspected wetlands are shown on the city's adopted critical area maps as contained within the environmental element of the comprehensive plan. These maps shall be used as a guide for the city, applicants and/or property owners, and may be updated as new wetlands are identified. The exact location of a wetland boundary shall be determined through field investigation by a qualified professional applying the approved federal wetland delineation manual and regional supplement methods and procedures.

C. Wetlands shall be rated and regulated according to the categories defined by the Washington State Wetland Rating System for Western Washington 2014 Update (Publication No. 14-06-029). Publication No. 14-06-029 contains the methods for determining the wetland category which are generally described below:

1. Category I. Category I wetlands are rare and irreplaceable in terms of their function and value to Mill Creek's natural aquatic systems. All wetlands with one or more of the following criteria shall be considered a Category I wetland:

a. Wetlands that are designated as natural heritage wetlands by the Washington State Department of Natural Resources.

b. High quality, regionally rare wetland communities with irreplaceable ecological functions, including sphagnum bogs and fens, and mature forested wetlands as defined in MCMC 18.06.210.

2. Category II. Category II wetlands are ecologically important and provide high levels of function. A wetland is considered a Category II wetland if it meets the following criteria:

a. Wetlands that do not meet the criteria of Category I wetlands; and

b. Wetlands performing significant wildlife habitat and/or hydrologic functions, which cannot be replicated through creation or restoration as determined by a critical area report.

3. Category III. Category III wetlands provide a moderate level of functions. They are typically more disturbed, smaller, and/or more isolated in the landscape than Category I or II wetlands.

4. Category IV. Category IV wetlands provide the lowest level of function, but still provide important functions.

The above descriptions are meant to provide a general overview. Refer to Publication No. 14-06-029 for the actual methods.

D. All wetlands shall be regulated and subject to the provisions of this chapter regardless of size, except that Category IV wetlands less than 1,000 square feet shall be exempt from this chapter if a critical area report prepared pursuant to this chapter demonstrates all of the following:

1. The wetland does not provide suitable habitat for amphibian species; and

2. The wetland does not possess unique characteristics that would be difficult to replicate through standard mitigation practices. (Ord. 2015-796 § 3; Ord. 2009-702 § 2 (Exh. C); Ord. 2004-603 § 2)

18.06.920 Performance standards – Alteration of wetlands.

A. All activities and uses shall be prohibited in wetlands and wetland buffers except as expressly provided for in this chapter. All feasible and reasonable measures shall be taken to avoid and minimize impacts to wetlands. These actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and implementation of the performance standards contained in this chapter. Alteration of wetlands shall be permitted only in accordance with an approved critical area report and mitigation plan. The burden of proof shall be on the applicant.

B. All significant adverse impacts to wetland functions and values and to associated buffers shall be avoided. Where such impacts cannot be avoided, the applicant shall implement appropriate compensatory mitigation according to the provisions of MCMC 18.06.610 and 18.06.960.

C. Alteration of Category I wetlands is prohibited.

D. Alteration of Category II, III, and IV wetlands may be permitted in accordance with an approved critical area report and mitigation plan, and only when the applicant demonstrates that:

1. The basic project purpose cannot reasonably be accomplished without the wetland alteration; and

2. There are no reasonable or practical alternatives to the alteration, including without limitation on-site design or acquisition of additional area. (Ord. 2004-603 § 2)

18.06.930 Performance standards – Wetland buffer widths.

A. Wetland buffer areas shall be established for all development proposals and activities adjacent to wetlands to protect the integrity, function and value of the wetland. The department shall determine appropriate buffer widths based upon the approved critical area report. Wetland buffers shall be measured perpendicular to the wetland edge as marked in the field and shall not include wetlands. Except as otherwise permitted by this chapter, buffers shall consist of an undisturbed area of native vegetation.

B. The standard buffer widths required by this chapter shall presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. If the existing vegetation is inadequate then the buffer width shall be increased or the buffer planted or enhanced to maintain or improve the buffer functions. The following standard buffer width requirements are established as the minimum buffer width:

	High Impact Land Use	Low Impact Land Use

	High Impact Land Use	Low Impact Land Use
1. Category I Wetland	300 feet	200 feet
2. Category II Wetland	200 feet	100 feet
3. Category III Wetland	100 feet	50 feet
4. Category IV Wetland	50 feet	25 feet

C. The director shall have the authority to "average" buffer widths on a case-by-case basis where a qualified professional demonstrates to the director's satisfaction that all the following criteria are met:

1. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;

2. The buffer averaging does not reduce the functions or values of the wetland;

3. The portion of the buffer reduced through buffer averaging is less than 25 percent of the total buffer length on a project site;

4. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation; and

5. The buffer width is not reduced to less than 50 percent of the standard width, except that no buffer dimension shall be less than 25 feet.

D. The director shall have the authority to increase the minimum width of the standard buffer on a case-by-case basis when such increase is necessary to:

1. Protect the function and value of that wetland; or

2. To protect significant habitat; or

3. To protect lands adjacent to wetlands from erosion or other hazards.

E. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the applicant has submitted written notice to the department that buffer requirements of this chapter are met. Field-marking shall remain until all construction and clearing phases are completed, and final approval has been granted by the city.

F. Structures shall be set back in accordance with MCMC 18.06.840 such that construction activities and outdoor living areas do not infringe upon the required buffer edge.

G. Impervious surfaces shall not be constructed in wetland buffers except as expressly provided for in this chapter.

H. The director shall have the authority to reduce the width of the standard buffer on a case-by-case basis if all of the following criteria are met:

1. The buffer is adjacent to a critical area that is being significantly restored through a city-approved mitigation plan that has regional benefit to critical area functions as determined by the director.

2. A critical area report has been submitted to the city that demonstrates the reduced buffer will protect the functions and value of the critical area being restored.

3. The reduced buffer shall be clearly described in any applicable SEPA, MDNS or EIS document and shall be subject to review and comment by the public agencies with jurisdiction. (Ord. 2004-603 § 2)

18.06.940 Performance standards – Wetland buffer uses.

Wetland buffers shall be retained in an undisturbed condition except that the following uses may be permitted within a wetland buffer when the applicant demonstrates to the satisfaction of the director that no adverse impact to the wetland functions and values will occur:

A. Public and private roadway crossings, including bridge construction and culvert installation in or across wetland buffers may be allowed, if the director determines that such construction is necessary and cannot be accomplished in another location.

B. Stormwater management facilities, limited to outfall facilities (level spreaders, infiltration trenches) may be allowed within the outer 50 percent of the standard buffer of a wetland; provided, that all of the following criteria are met:

1. Construction of the stormwater facility does not impact mature forest vegetation;

2. There is no other feasible location for the stormwater facility;

3. The stormwater facility is designed according to city standards and the discharge water meets state water quality standards;

4. Construction of stormwater management facilities in the buffer of a Category I wetland is prohibited;

5. Stormwater conveyance or discharge facilities such as dispersion trenches, level spreaders, and outfalls may encroach into the inner 50 percent of a Category II, III or IV wetland buffer on a case-by-case basis when the director and city engineer determine that due to topographic or other physical constraints there are no feasible locations for these facilities in the outer buffer area; and

6. Altered areas are mitigated per MCMC 18.06.610 and 18.06.960.

C. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife may be allowed.

D. Passive recreation facilities, including walkways, wildlife viewing structures, and trails, that are part of an interpretive trail system or environmental education program, may be allowed if they are designed in accordance with an approved critical area report; and provided, that they are located in the outer 50 percent of the buffer area where possible and practical and are constructed in such a manner to avoid disturbance of sensitive wildlife, feeding, roosting, breeding, or rearing sites, and meet the requirements of MCMC 18.06.410(A)(4). (Ord. 2004-603 § 2)

18.06.950 Critical area report requirements for wetlands.

A. A critical area report for wetlands shall contain site- and proposal-specific information consistent with MCMC 18.06.530 and shall at a minimum contain the following additional information:

1. A written assessment and accompanying maps of the wetlands and buffers within 300 feet of the site and an estimate of the existing acreage for each wetland;

2. A detailed description of the effects of the proposed development on wetland and buffer area, values and function, including quantification of the area of wetland disturbance;

3. Vegetation, soil, hydrologic, and topographic characteristics of all on-site wetlands and buffers. This includes the dominant species; soil type, color and texture; sources of hydrology (surface inflow, hyporheic flows, precipitation, etc.).

B. The director shall have the authority to require the critical area report to include an evaluation by the Department of Ecology. (Ord. 2004-603 § 2)

18.06.960 Wetland mitigation – General requirements.

A. All significant adverse impacts to wetlands and buffers as determined by the director shall be fully mitigated in accordance with the standards set forth in MCMC 18.06.610 and this section. All mitigation shall be specified in a mitigation plan consistent with MCMC 18.06.620 and this section. Mitigation measures to be addressed in the

mitigation plan shall include, in order of preference, avoidance, minimization, restoration, rehabilitation, and compensation.

B. Mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions, and shall provide similar wetland functions as those lost except when:

1. The lost wetland provides minimal functions as determined by a site-specific function assessment and the proposed mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a watershed assessment plan or protocol; or

2. Out-of-kind replacement will best meet formally identified regional goals, such as replacement of historically diminished wetland types.

C. Compensation in the form of wetland creation, restoration or enhancement is required when a wetland is altered permanently as a result of an approved project. Alterations shall not result in net loss of wetland area except when the following criteria are met:

1. The lost wetland area provides minimal functions as determined by a function assessment and the mitigation action(s) results in a net gain in wetland functions as determined by a site-specific function assessment; or

2. The lost wetland area provides minimal functions as determined by a function assessment and other replacement habitats provide greater benefits to the functioning of the watershed, such as riparian habitat restoration and enhancement.

D. Compensation for wetland alterations shall occur in the following order of preference:

1. Creation, reestablishment, or a mixture of the two on upland sites that were formerly wetlands.

2. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of exotic introduced species.

3. Enhancing significantly degraded wetlands in accordance with MCMC 18.06.980.

4. Preserving Category I or II wetlands that are under imminent threat in accordance with MCMC 18.06.980.

E. Mitigation actions shall be conducted within the same subdrainage basin and on the same site as the alteration except when all of the following apply:

1. There are no reasonable on-site or in-drainage basin opportunities or on-site and in-drainage basin opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;

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

3. Off-site locations shall be in the same subdrainage basin unless the action qualifies as innovative mitigation under MCMC 18.06.640.

F. Where feasible, mitigation projects shall be completed prior to activities that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing wildlife and vegetation.

G. All mitigation sites shall have buffers consistent with the buffer requirements of this chapter. The director may permit reduced buffers on mitigation sites on a case-by-case basis if site conditions would preclude application of the standard buffers but the mitigation design is otherwise acceptable.

H. The applicant shall develop a mitigation plan that provides for construction, maintenance, monitoring, contingencies and adaptive management of the wetland compensation projects as required by conditions of approval and consistent with the requirements of this chapter. The mitigation plan shall be consistent with MCMC 18.06.620. (Ord. 2015-803 § 5 (Exh. A); Ord. 2004-603 § 2)

18.06.970 Wetland mitigation – Replacement ratios.

A. When an applicant proposes to alter or eliminate a regulated wetland, the functions and values of the affected wetland and buffer shall be replaced through wetland creation or restoration according to the minimum ratios established in MCMC 18.06.980(A). The ratios shall apply to wetland creation or restoration that is in-kind, on-site, of the same category, timed prior to or concurrent with alteration, and has a high probability of success. Ratios for out-of-kind or off-site mitigation at certified mitigation banks shall be in accordance with the bank's mitigation banking instrument; otherwise replacement ratios for permittee-responsible off-site or out-of-kind mitigation may be greater than the minimum if the director determines that additional mitigation is warranted to mitigate impacts. Ratios for remedial actions resulting from unauthorized alterations shall be greater. The wetland creation and restoration ratios contained in MCMC 18.06.980(A) are given as replacement area to impact area.

B. Replacement ratios may be decreased by up to 25 percent by the director if the applicant demonstrates to the satisfaction of the director that all of the following criteria are met:

1. Documentation by a qualified professional demonstrates that the proposed mitigation actions have a very high likelihood of success;

2. Documentation by a qualified professional demonstrates that the proposed mitigation actions will provide functions and values that are significantly greater than the wetland being altered; and

3. The proposed mitigation actions are conducted in advance of the impact and shown to be successful through post-construction monitoring and function assessment.

C. The director shall increase replacement ratios under the following circumstances:

1. Uncertainty exists as to the probable success of the proposed restoration or creation; or

2. A significant period of time will elapse between impact and replication of wetland functions; or

3. Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

4. The impact was an unauthorized impact.

D. At the director's discretion, applicants may be allowed to use an alternative to the mitigation ratios contained in MCMC 18.06.980 based on the credit/debit method developed by the Department of Ecology in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report (Ecology Publication No. 10-06-011). (Ord. 2015-796 § 4; Ord. 2004-603 § 2)

18.06.980 Wetlands mitigation – Types and ratios.

A. Minimum Ratios for Compensatory Mitigation. The minimum replacement ratio for wetland impact mitigation shall be as shown on the following table:

Affected Wetland	Wetland Mitigation Type and Ratio*				
Category	Creation	Re-establishment	Rehabilitation	Re-establishment (R) or Creation (R) and Enhancement (E)	Enhancement
Category IV	1.5:1	1.5:1	3:1	1:1 (R:C) and 2:1 (E)	6:1
Category III	2:1	2:1	4:1	1:1 (R:C) and 2:1 (E)	8:1
Category II	3:1	3:1	6:1	1:1 (R:C) and 4:1 (E)	12:1

Affected Wetland	Wetland Mitigation Type and Ratio*				
Category	Creation	Re-establishment	Rehabilitation	Re-establishment (R) or Creation (R) and Enhancement (E)	Enhancement
Category I	As determined by the director – ratios will be greater than required for Category II wetlands				
*Ratio is the replacement area: impact area. See MCMC 18.06.210 for definitions					

B. Applicants proposing to enhance or rehabilitate wetlands shall produce a critical area report that identifies how the mitigation 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 or rehabilitation proposal shall also show whether existing wetland functions will be reduced by the mitigation actions.

C. Preservation. Impacts to wetlands may be mitigated by preservation of wetland areas in a separate tract in accordance with MCMC 18.06.830. Preservation shall be used as a form of mitigation only after the standard sequencing of mitigation (avoid, minimize, and then compensate) has been applied. Mitigation ratios for preservation shall range from 10-to-one to 20-to-one, as determined by the director, depending on the quality of the wetlands being impacted, mitigated and preserved. The following criteria shall apply to mitigation by preservation:

1. Preservation as mitigation is acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of one-to-one acreage replacement is provided by restoration or creation.

2. Preservation of at-risk, high-quality wetlands may be used as the sole means of mitigation for wetland impacts to Category III or IV wetlands when the impact area is less than one-half acre and the preservation occurs in the same drainage basin as the wetland impact.

3. Preservation sites may include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

4. Wetland creation, restoration, and enhancement opportunities shall have been considered, and preservation is the best mitigation option.

5. The preservation site has the potential to experience a high rate of undesirable ecological change due to on- or off-site activities.

6. The area proposed for preservation is critical for the health of the watershed or basin.

D. Mitigation Banks. Credits from an approved wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

1. The bank is certified by the director and by state resource agencies with wetland jurisdiction;

2. The director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

3. The proposed use of credits is consistent with the terms and conditions of the bank's certification. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification. Bank credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. (Ord. 2015-803 § 5 (Exh. A); Ord. 2015-796 § 5; Ord. 2006-633 § 2; Ord. 2004-603 § 2)

Article X. Fish and Wildlife Habitat Areas

18.06.1010 Designation, mapping, and rating.
A. All areas within the city meeting the criteria for fish and wildlife habitat areas, regardless of any formal identification, are hereby designated critical areas and shall be subject to the provisions of this chapter.

B. The approximate location and extent of known or suspected fish and wildlife habitat areas are shown on the critical area maps adopted by the city within the comprehensive plan environmental element. These maps shall be used as a guide for the city, applicants and/or property owners, and may be updated as new fish and wildlife habitat areas are identified. The exact location of a fish and wildlife habitat area shall be determined through field investigation by a qualified professional applying the best available science.

C. For purposes of this chapter, fish and wildlife habitat areas shall include the following:

1. Streams, lakes, ponds, and other water bodies and their associated riparian habitat areas.

2. Nonriparian habitat areas that support or have a primary association with:

   a. State or federally designated endangered, threatened, and sensitive species; or

   b. State priority habitats and areas associated with state priority species; or

   c. Habitats and species of local importance including habitat corridors connecting habitat blocks and open spaces. (Ord. 2004-603 § 2)

18.06.1020 Performance standards – Alteration of fish and wildlife habitat areas.
A. Alteration of fish and wildlife habitat areas shall be prohibited, except as expressly provided for in this chapter. All feasible and reasonable measures shall be taken to avoid and minimize impacts to such areas. These actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and implementation of the performance standards contained in this chapter. Alteration of fish and wildlife habitat areas shall be permitted only in accordance with an approved critical area report and mitigation plan. The burden of proof shall be on the applicant.

B. All significant adverse impacts to fish and wildlife habitat functions and values and their associated buffers shall be mitigated according to the provisions of MCMC 18.06.610.

C. Where impacts cannot be avoided, the applicant or property owner shall prepare and implement an appropriate compensatory mitigation plan in compliance with the intent, standards, and criteria of MCMC 18.06.620.

D. No alteration is allowed that will result in a take of a listed threatened or endangered species as defined by the Federal Endangered Species Act.

E. New on-site sewage systems and individual wells may be permitted in a fish and wildlife habitat area or buffer only if accessory to an approved residential structure which cannot be feasibly connected to a public sanitary sewer system. (Ord. 2004-603 § 2)

18.06.1030 Performance standards – Alteration of streams, lakes, ponds and riparian habitats.
A. Relocation of streams is not permitted unless it is part of a stream restoration project and it will result in equal or better habitat and water quality, and will not diminish the flow capacity of the stream.

B. Culverts may be allowed in streams only if they are necessary, and if they are designed according to Water Crossing Design Guidelines (WDFW, 2013), and a state hydraulic project approval has been issued. The applicant or property owner shall keep every culvert free of debris and sediment at all times to allow free passage of water and, if applicable, fish. The city may require that a stream be removed from a culvert as a condition of approval, unless the culvert is not detrimental to fish habitat or water quality, or removal and/or replacement would be detrimental to fish or wildlife habitat or water quality on a long-term basis.

C. Clearing and grading, when permitted as part of an authorized development activity or as otherwise allowed in these standards, shall comply with the following:

1. Grading shall be allowed only during the designated dry season, which is typically regarded as beginning April 1st and ending October 31st of each year; provided, that the city may extend or shorten the designated dry season on a case-by-case basis, to reflect actual weather conditions and the incorporation of best management practices to control stormwater.

2. The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, any soil disturbed shall be redistributed to other areas of the site; provided, that this shall not constitute authorized fill.

3. The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or reestablishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces.

4. The requirements of Chapters 15.10 and 15.12 MCMC.

D. Stream bank stabilization to protect new structures from future channel migration is not permitted except when such stabilization is achieved through bioengineering or soft armoring techniques in accordance with an applicable hydraulic permit issued by the Washington Department of Fish and Wildlife.

E. Construction of trails, roadways, and bridges less than or equal to 30 feet wide may be permitted subject to the following standards:

1. There is no other feasible alternative route with less impact on the critical area or buffer;

2. The crossing minimizes interruption of downstream movement of wood and gravel;

3. Roads shall not run parallel to the water body unless specific mitigation measures are incorporated to prevent impacts to the stream and riparian habitat;

4. Trails shall be located on the outer 50 percent of the riparian buffer where possible and practical, except for limited viewing platforms and crossings;

5. Crossings, where necessary, shall only occur as near to perpendicular with the water body as possible; and

6. Road bridges are designed according to the Department of Fish and Wildlife Fish Passage Design at Road Culverts, March 1999, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000, or as updated.

F. Utility Facilities. New utility lines and facilities may be permitted to cross streams and riparian habitat areas in accordance with the public agency and utility exception standards in MCMC 18.06.420, if all of the following criteria are met:

1. Impacts to fish and wildlife shall be avoided to the maximum extent possible;

2. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone, where feasible;

3. The utilities shall cross at an angle greater than 60 degrees to the centerline of the channel in streams or perpendicular to the channel centerline whenever boring under the channel is not feasible;

4. Crossings shall be contained within the footprint of an existing road or utility crossing where possible;

5. The utility route shall avoid paralleling the stream or following a down-valley course near the channel where feasible; and

6. The utility installation shall not increase or decrease the natural rate of channel migration.

G. Public Flood Protection Measures. New public flood protection measures and expansion of existing ones may be permitted subject to the director's review and approval of a critical area report and mitigation plan and upon acquisition of all required state and federal permits.

H. Instream Structures. Instream structures, including, but not limited to, high flow bypasses, dams, and weirs, shall be allowed only as part of an approved watershed basin restoration project approved by the city and upon acquisition of all required state and federal permits. The structure shall be designed to avoid modifying flows and water quality in ways that may adversely affect habitat areas.

I. Stormwater management facilities, limited to outfall facilities and infiltration trenches, may be allowed within the outer 50 percent of the standard buffer; provided, that:

1. There is no other feasible location for the stormwater conveyance with less impact on critical areas or buffer;

2. The stormwater facility is designed according to city standards and the discharge water meets state and local water quality standards;

3. Vegetation shall be maintained and, if necessary, added adjacent to all stormwater conveyance channels to reduce erosion, filter out sediments, and provide shade.

J. Stormwater conveyance or discharge facilities such as dispersion trenches and outfalls may encroach into the inner 50 percent of the buffer on a case-by-case basis when the director and city engineer determine that due to topographic or other physical constraints there are no other feasible locations for these facilities in the outer buffer area. (Ord. 2015-803 § 5 (Exh. A); Ord. 2004-603 § 2)

18.06.1040 Performance standards – Alteration of nonriparian habitats.

A. Alteration of nonriparian habitat areas shall include reasonable measures to maintain vegetation as open space and to consolidate vegetation in contiguous blocks to contribute to a system or corridor that provides habitat shelter and connections to adjacent habitat areas.

B. Development in nonriparian habitat areas shall include measures to preserve healthy and native vegetation and plant resources that provide food, shelter, structure and cover for reproduction and rearing. To the extent possible, such areas shall be in consolidated areas. (Ord. 2004-603 § 2)

18.06.1050 Performance standards – Stream, lake, pond and riparian buffer widths.

A. Stream, lake, and pond buffers shall be established for all development proposals and activities adjacent to streams to protect the integrity, functions and values of the resource. Buffers shall consist of an undisturbed area of native vegetation and shall reflect the sensitivity of the stream and the type and intensity of the adjacent human use or activity.

B. The standard buffer widths required by this chapter shall presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the stream functions and values at the time of the proposed activity. If the existing vegetation is inadequate then the buffer width shall be increased or the buffer planted or enhanced to maintain or improve the buffer functions. The following standard buffer width requirements are established as the minimum buffer width:

North Creek and Tambark Creek	150 feet
All other streams	75 feet
Lakes	75 feet
Ponds	50 feet

C. The director shall have the authority to "average" buffer widths on a case-by-case basis where a qualified professional demonstrates to the director's satisfaction that all the following criteria are met:

1. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;

2. The buffer averaging does not reduce the functions or values of the stream or riparian habitat;

3. The portion of the buffer reduced through buffer averaging is less than 25 percent of the total buffer length on a project site;

4. The site contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation; and

5. The buffer width is not reduced to less than 50 percent of the standard width. In no case shall the reduced buffer be less than 25 feet.

D. The director may increase the minimum width of a riparian buffer on a case-by-case basis when it can be demonstrated by a critical area report that such increase is necessary to:

1. Protect the functions and values of the water body;

2. Protect significant species or habitat;

3. Protect lands adjacent to a stream from erosion or channel migration;

4. Provide flood protection; or

5. To provide protection from erosion, landslide, or other geologic hazards.

E. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the applicant has submitted written notice to the department that buffer requirements of this chapter are met. Field-marking shall remain until all construction and clearing phases are completed, and final approval has been granted by the city.

F. Structures shall be set back in accordance with MCMC 18.06.840 such that construction activities and outdoor living areas do not infringe upon the required buffer edge. (Ord. 2004-603 § 2)

18.06.1060 Nonriparian habitat area buffer widths.

A. Buffers shall be established for regulated activities in or adjacent to nonriparian habitat areas. Buffers shall consist of an area of native vegetation established, preserved and/or enhanced to protect the integrity, functions and values of the affected species or habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of the adjacent human use or activity.

B. Appropriate widths shall be determined by the director based on the following:

1. Critical area report;

2. Habitat management and species recommendations of the Washington State Department of Fish and Wildlife;

3. Sensitivity and value of the habitat areas;

4. Nature, intensity and design of the proposed use; and

5. Adjacent uses and activities.

C. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the applicant has submitted written notice to the department that buffer requirements of

this chapter are met. Field-marking shall remain until all construction and clearing phases are completed, and final approval has been granted by the city.

D. Structures shall be set back in accordance with MCMC 18.06.840 such that construction activities and outdoor living areas do not infringe upon the required buffer edge. (Ord. 2004-603 § 2)

18.06.1070 Critical area report requirements for fish and wildlife habitat areas.

A. A critical area report for a fish and wildlife habitat area shall contain an assessment of habitats in accordance with the requirements of this chapter. The report shall be prepared in accordance with MCMC 18.06.530 and shall at a minimum include the following additional information:

1. All critical areas and buffers within 300 feet of the project area;

2. Habitat and life cycle requirements for species of local importance, priority species, or endangered, threatened, sensitive or candidate species that have a primary association with habitat on or adjacent to the project area; and

3. All federal, state, or local special management recommendations, including Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area.

B. When appropriate due to the type of habitat or species present or the project area conditions, the director may also require the critical area report include additional information including, but not limited to, direct observations of species use or detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 2004-603 § 2)

18.06.1080 Mitigation standards for fish and wildlife habitat areas.

A. All significant adverse impacts to riparian and nonriparian habitats as determined by the director shall be fully mitigated in accordance with the standards set forth in MCMC 18.06.610 and this section. All mitigation shall be specified in a mitigation plan consistent with MCMC 18.06.620 and this section. Mitigation measures to be addressed in the mitigation plan shall include, in order of preference, avoidance, minimization, restoration, rehabilitation, and compensation.

B. Mitigation for alterations to habitat areas shall achieve equivalent or greater biologic functions, and shall provide similar functions as those lost.

C. Compensation in the form of habitat restoration or enhancement is required when a habitat is altered permanently as a result of an approved project. Alterations shall not result in net loss of habitat area except when the following criteria are met:

1. The lost habitat area provides minimal functions as determined by a critical area report and other replacement habitats provide greater benefits to the functioning of the affected species.

D. Mitigation actions shall be conducted within the same subdrainage basin and on the same site as the alteration except when the all of the following apply:

1. There are no reasonable on-site or in-drainage basin opportunities or on-site and in-drainage basin opportunities do not have a high likelihood of success due to development pressures, adjacent land uses, or on-site buffers or connectivity are inadequate;

2. Off-site mitigation has a greater likelihood of providing equal or improved habitat functions for the affected species; and

3. Off-site locations shall be in the same subdrainage basin unless the action qualifies as innovative mitigation under MCMC 18.06.640.

E. Where feasible, mitigation projects shall be completed prior to activities that will disturb fish and wildlife habitat areas. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or

occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing wildlife and vegetation.

F. All mitigation sites shall have buffers consistent with the buffer requirements of this chapter.

G. The applicant shall develop a mitigation plan that provides for construction, maintenance, monitoring and contingencies of the wetland compensation as required by conditions of approval and consistent with the requirements of this chapter. The mitigation plan shall be consistent with MCMC 18.06.620. (Ord. 2004-603 § 2)

Article XI. Critical Aquifer Recharge Areas

18.06.1110 Designation, mapping and rating.

A. Areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2) are hereby designated critical areas and shall be subject to the provisions of this chapter.

B. The approximate location and extent of known or suspected critical aquifer recharge areas are shown on the city's adopted critical area maps within the comprehensive plan environmental element. Critical aquifer recharge areas are shown on the maps as moderate and high sensitivity and also include the Cross Valley Aquifer, which is a sole source aquifer. These maps shall be used as a guide for the city, applicants and/or property owners, and may be continuously updated as new critical areas are identified.

C. For purposes of this chapter, critical aquifer recharge areas include the following:

1. Areas designated by United States Geological Survey (USGS) as aquifers with moderate and high sensitivity.

2. Wellhead protection areas as defined by the boundaries of the one-, five- and 10-year time of ground water travel, or boundaries established using alternate criteria approved by the Snohomish County health department in those settings where ground water time of travel is not a reasonable delineation criterion, in accordance with WAC 246-290-135.

3. Sole source aquifers (Cross Valley). (Ord. 2004-603 § 2)

18.06.1120 Performance standards – Alteration of critical aquifer recharge areas.

A. Activities that do not cause degradation of ground water quality and will not adversely affect the recharging of the aquifer may be permitted in a critical aquifer recharge area, and do not require preparation of a critical area report; provided, that they comply with the Mill Creek stormwater management regulations and applicable state and federal regulations, including the water source protection requirements of the Federal Environmental Protection Agency, the state Department of Health, and the Snohomish County health department. These activities typically include residential, commercial and industrial development that does not include storage, processing, or handling of any dangerous waste or hazardous substance, or other development that does not substantially divert, alter, or reduce the flow of surface or ground waters.

B. Activities that have the potential to cause degradation of ground water quality or adversely effect the recharging of the aquifer may be permitted in critical aquifer recharge areas only in accordance with an approved critical area report and mitigation plan. The applicant shall have the burden of proof. These activities include but are not limited to:

1. Activities that substantially divert, alter, or reduce the flow of surface or ground waters, or otherwise adversely affect aquifer recharge;

2. The use, processing, storage or handling of hazardous substances, or dangerous wastes, other than household chemicals used according to the directions specified on the packaging for domestic applications;

3. The use of injection wells, including on-site septic systems, except domestic septic systems releasing less than 14,500 gallons of effluent per day and that are limited to a maximum density of one system per one acre; or

4. Any other activity determined by the director likely to have an adverse impact on ground water quality, or on the recharge of an aquifer. (Ord. 2004-603 § 2)

18.06.1130 Performance standards – Specific uses.
The following standards shall apply to uses within critical aquifer recharge areas:

A. Underground Storage Tanks. All new underground storage facilities proposed for use in the storage of hazardous substances or dangerous wastes shall be designed and constructed in accordance with Chapter 173-360 WAC, Underground Storage Tank Regulations and the Uniform Fire Code, so as to:

1. Prevent releases due to corrosion or structural failure for the operational life of the tank;

2. Be protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substances; and

3. Use material in the construction or lining of the tank that is compatible with the substance to be stored.

B. Aboveground Storage Tanks. All new aboveground storage facilities proposed for storage of hazardous substances or dangerous wastes shall be designed and constructed in accordance with Chapter 173-303 WAC, Dangerous Waste Regulations, and the Uniform Fire Code, so as to:

1. Prevent releases to the ground, ground waters, or surface waters;

2. Have a primary impermeable containment area enclosing or underlying the tank; and

3. Include a secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.

C. Vehicle Repair and Servicing. Vehicle repair and servicing shall be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing shall be stored in a manner that protects them from weather and provides containment should leaks occur.

D. Residential Use of Pesticides and Nutrients. Application of household pesticides, herbicides, and fertilizers shall not exceed times and rates specified on the packaging.

E. Spreading of reclaimed water must meet the ground water recharge criteria given in RCW 90.46.010(10) and 90.46.080. (Ord. 2004-603 § 2)

18.06.1140 Performance standards – Prohibited uses.
A. The following activities and uses are prohibited in critical aquifer recharge areas:

1. Dry Wells. Dry wells on sites used for vehicle repair and servicing shall not be allowed in critical aquifer recharge areas. Dry wells existing on any site prior to facility establishment shall be abandoned using techniques approved by the state Department of Ecology prior to commencement of the proposed activity;

2. Landfills, including hazardous substances or dangerous waste, municipal solid waste, special waste, and inert and demolition waste landfills;

3. Injection of reclaimed water;

4. Underground Injection Wells. Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;

5. Storage, processing, or disposal of radioactive substances, including facilities that store, process, or dispose of radioactive substances; and

6. Other uses as determined by the director that:

a. Would significantly reduce the recharge to aquifers currently or potentially used as a potable water source; or

b. Would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream or water body; or

c. Would significantly affect ground water quality.

B. Sand and gravel mining is prohibited in critical aquifer recharge areas designated as highly vulnerable. (Ord. 2004-603 § 2)

18.06.1150 Critical area report requirements for critical aquifer recharge areas.
In addition to the general critical area report requirements of MCMC 18.06.530, a hydrogeologic report for aquifer recharge areas shall include the following additional site- and proposal-related information at a minimum:

A. Available information regarding geologic and hydrogeologic characteristics of the site, including the surface location of all critical aquifer recharge areas located on site or immediately adjacent to the site, and permeability of the unsaturated zone;

B. Ground water depth, flow direction and gradient based on available information;

C. Currently available data from wells and springs within 1,300 feet of the project area;

D. Location of other critical areas, including surface waters, within 1,300 feet of the project area;

E. Historic ground water and surface water quality data for the area to be affected by the proposed activity compiled for at least the previous five-year period;

F. Best management practices proposed to be used;

G. Ground water monitoring plan provisions;

H. Discussion of the effects of the proposed project on the ground water quality and quantity, including predictive evaluation of ground water withdrawal effects on nearby wells and surface water features and predictive evaluation of contaminant transport based on potential releases to ground water; and

I. A spill plan that identifies equipment and/or structures that could fail, resulting in an impact. Spill plans shall include provisions for regular inspection, repair, replacement of structures and equipment that could fail, cleanup and disposal of all materials spilled. (Ord. 2004-603 § 2)

Article XII. Geologically Hazardous Areas

18.06.1210 Designation, mapping, and classification.
A. Geologically hazardous areas are areas susceptible to erosion, landsliding, earthquake, activity or other geological processes. Areas susceptible to these types of hazards are hereby designated as geologically hazardous areas and shall be subject to the provisions of this chapter.

B. The approximate location and extent of geologically hazardous areas are shown the city's critical area maps within the comprehensive plan environmental element. These maps shall be used as a guide for the city, applicants and/or property owners, and may be updated as new critical areas are identified. They do not provide a definitive critical area designation.

C. Geologically hazardous areas shall be classified as follows:

1. Landslide and Erosion Hazard Areas. Erosion hazard areas include those identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a moderate to severe, severe, or very severe

erosion hazard because of natural characteristics, including vegetative cover, soil texture, slope, gradient, and rainfall patterns, or human-induced changes to natural characteristics. Landslide hazard areas are areas potentially subject to risk of mass movement due to a combination of geologic, topographic, and hydrologic factors. Landslide and erosion hazard areas include areas with the following characteristics:

a. Areas that have shown movement during the Holocene epoch (from 10,000 years ago to the present) or that are underlain or covered by mass wastage debris of that epoch;

b. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

c. Slopes having gradients steeper than 80 percent subject to rock fall during seismic shaking;

d. Areas potentially unstable because of stream incision and stream bank erosion;

e. Areas located in a canyon, ravine, or on an active alluvial fan, presently or potentially subject to inundation by debris flows or flooding;

f. Any area with a slope of 40 percent or steeper and a vertical relief of 10 or more feet except areas composed of consolidated rock and properly engineered manmade slopes/retained fill. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief;

g. Areas with a severe limitation for building development because of slope conditions, according to the Natural Resource Conservations Service; and

h. Areas meeting all three of the following criteria: slopes steeper than 15 percent except that slopes of less than 15 percent may be considered erosion hazard areas if they have certain unstable soil and drainage characteristics; hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and wet season springs or ground water seepage.

2. Seismic Hazard Areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. Settlement and soil liquefaction conditions occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with a shallow ground water table. (Ord. 2004-603 § 2)

18.06.1220 General standards – Alteration of geologically hazardous areas.

A. Alteration of geologically hazardous areas and buffers shall be prohibited except as expressly allowed in this chapter. The city may approve, condition or deny proposals based on the degree to which risks posed by geologically hazardous areas to public and private property and to health and safety can be mitigated. In an individual case, conditions may include limitations of or on proposed uses, density modification, alteration of site layout and other changes to the proposal determined appropriate by the director. Where the director determines that potential adverse impacts cannot be effectively mitigated, or where the risk to public health, safety and welfare, property, or important natural resources is significant notwithstanding mitigation, the proposal shall be denied. The burden of proof shall be on the applicant.

B. Alterations of geologically hazardous areas and their associated buffers may be permitted; provided, that all of the following criteria are met to the director's satisfaction:

1. The alteration will not increase the threat of the geological hazard to adjacent properties beyond predevelopment conditions;

2. The alteration will not adversely impact other critical areas;

3. The proposed development activity is designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than predevelopment conditions;

4. The alteration is certified to be safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington; and

5. The applicant complies with the city's other clearing and grading regulations. (Ord. 2004-603 § 2)

18.06.1230 Performance standards – Alteration of landslide and erosion hazard areas.

A. Alteration of land with slopes of 40 percent or greater shall be prohibited.

B. Alteration of slopes less than 40 percent, including slopes of 15 percent or less that have unstable soil or drainage characteristics, may be permitted pursuant to an approved critical area report and mitigation plan that certifies the following to the director's satisfaction:

1. The development will not increase or concentrate surface water discharge or sedimentation to adjacent sites beyond predevelopment conditions; and

2. The development will not decrease slope stability on the development site or on adjacent sites.

C. Development within an erosion or landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated through a geotechnical study that an alternative design that deviates from one or more of these standards provides greater long-term slope stability while meeting all other provisions of this chapter. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. The basic development design standards are:

1. The proposed development shall not increase the risk of landslide occurrences;

2. Structures and improvements shall avoid geologically hazardous areas and other critical areas;

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

4. Structures and improvements shall be located, and clustered, if appropriate, to preserve the most critical portion of the site and its natural landforms and vegetation;

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

6. The use of engineered retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes. Engineered retaining walls shall not exceed 15 feet in height and preferably should be less than eight feet in height. Engineered retaining walls over eight feet in height shall be allowed by the director only when it can be demonstrated that no other reasonable alternative exists. Riprap retaining walls should not exceed eight feet in height. Wherever possible, retaining walls should be designed as structural elements of the building foundation;

7. Development shall be designed to minimize impervious lot coverage. Use of common access drives and utility corridors is encouraged; and

8. Disturbed areas of a site not used for buildings, roads and other improvements shall be replanted promptly pursuant to an approved landscape plan.

D. Native vegetation shall be retained. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited. Limited pruning or selective removal of dead, diseased or damaged branches; limited removal of specified branches that block views; and topping as shown on a landscape plan may be approved by the director if the activity will not adversely affect slope stability. Identification of significant vegetation shall be based upon the tree species, location and condition in addition to size. Significant habitat should be preserved to the greatest extent feasible.

E. Seasonal Restriction. Clearing shall be allowed only from April 1st to October 31st of each year; provided, that the city may extend or shorten the designated dry season on a case-by-case basis depending on actual weather conditions.

F. Utility Lines and Pipes. Utility lines and pipes shall be permitted in landslide and erosion hazard areas pursuant to MCMC 18.06.430. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Above ground utility lines and pipes shall be located and designed to minimize potential risks associated with tree fall.

G. Stormwater conveyance shall be allowed only by use of high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.

H. Point Discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:

1. The discharge is conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge; or

2. The discharge is released at flow durations matching predeveloped conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the predeveloped state; or

3. The discharge is dispersed upslope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface and stormwater runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope.

I. Subdivisions. The division of land in landslide and erosion hazard areas and associated buffers is subject to the following:

1. Land that is located wholly within an erosion or landslide hazard area or its buffer may not be subdivided. Land that is located partially within an erosion or landslide hazard area or its buffer may be divided; provided, that each resulting lot has sufficient buildable area outside of, and will not affect, the erosion or landslide hazard and its buffer;

2. Access roads and utilities may be permitted within the erosion or landslide hazard area and associated buffers if the director determines based on an approved critical area report and mitigation plan that the road will not increase the risk to adjacent sites and that no other feasible alternative exists.

J. Erosion control plans shall be required for all regulated activities within landslide and erosion hazards areas. The erosion control plans shall be consistent with the provisions of Chapter 15.10 and 15.12 MCMC and prepared pursuant to a plan approved by the city engineer. A master drainage plan shall be prepared for large projects as required and approved by the city engineer.

K. Prohibited Development. On-site sewage disposal systems, including drain fields, shall be prohibited within landslide and erosion hazard areas and related buffers.

L. A monitoring plan shall be prepared and implemented for permitted construction activities permitted in landslide and erosion hazard areas. (Ord. 2004-603 § 2)

18.06.1240 Performance standards – Landslide and erosion hazard area buffers.
Activities, development and uses on sites containing erosion or landslide hazards shall meet the following buffer requirements:

A. A buffer shall be established from the top, toe, and edges of all slope or erosion or landslide hazard areas with 10 feet or more of vertical elevation change. The size of the buffer shall be sufficient, as determined by the director, to eliminate or minimize the risk of damage to persons or property resulting from landslide and erosions caused in whole or part by the development, shall be based upon the director's review of and concurrence with the geotechnical report prepared by a qualified professional, and shall be consistent with the following criteria:

1. For slopes between 16 and 39 percent, the minimum buffer shall be equal to one-half the height of the slope or 25 feet, whichever is greater. The buffer may be reduced by 25 percent or to a minimum of 25 feet, whichever is greater, when a qualified professional demonstrates to the director's satisfaction that the reduction will adequately protect the proposed development, adjacent areas, developments, uses, and the subject critical area.

2. For slopes equal to or greater than 40 percent, the minimum buffer shall be equal to the height of the slope or 25 feet, whichever is greater. The buffer may be reduced by 25 percent when a qualified professional demonstrates to the director's satisfaction that the reduction will adequately protect the proposed development, adjacent areas, developments, uses, and the subject critical area.

3. For slopes with a vertical elevation of 25 feet or less, the minimum buffer shall be equal to one-half the height of the slope, regardless of the slope percent; provided, that there are no other factors that pose a slope stability risk.

B. The minimum buffer area shall be comprised of undisturbed natural vegetation consisting of trees or dense woody vegetation and have adequate drainage.

C. To improve the functional attributes of the buffer, the director may require that the buffer be enhanced through planting.

D. Based on the findings of the geotechnical report, the director may require that the buffer be increased where a larger buffer is necessary to prevent risk of damage to adjacent areas and proposed and existing development.

E. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any site clearing and construction. The buffer boundary markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the applicant has submitted written notice to the department that buffer requirements of this chapter are met. Field marking shall remain until all construction and clearing phases are completed, and final approval has been granted by the city. The buffer shall be maintained and preserved through a protective easement or other appropriate permanent protective covenant consistent with MCMC 18.06.610 and 18.06.820.

F. Structures shall be set back in accordance with MCMC 18.06.840 such that construction activities and outdoor living areas do not infringe upon the required buffer edge. (Ord. 2004-603 § 2)

18.06.1250 Performance standards – Seismic hazard areas.
A. Activities proposed to be located in seismic hazard areas shall meet the standards of MCMC 18.06.1220.

B. Construction of new buildings and additions to existing buildings within a seismic hazard area shall conform to the International Building Code standards for seismic protection. (Ord. 2004-603 § 2)

18.06.1260 Critical area report requirements for geologically hazardous areas.
A. A critical areas report for geologically hazardous areas must meet the general critical area report requirements of MCMC 18.06.530 and the geotechnical report requirements of this chapter. A geotechnical report for a geologically hazardous area shall also meet all of the following additional standards:

1. It shall address the area of the proposed activity and all geologically hazardous areas within 200 feet of the project area or that have potential to affect or be affected by the proposal;

2. It shall contain an assessment of geological hazards including at a minimum all of the following information:

a. A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report; an assessment of the geologic characteristics and engineering properties of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties; a review of the site history regarding landslides, erosion, and prior grading; and an evaluation of the vulnerability of the site to seismic and other geologic events. Soils analysis shall be performed in accordance with accepted classification systems in use in the region.

b. A recommendation for the minimum buffer and minimum building setback from all geologic hazards based upon the geotechnical analysis.

c. When hazard mitigation is required, the report shall specifically address how the activity maintains or reduces the preexisting level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the preexisting conditions following abandonment of the activity.

B. Where a valid geotechnical report 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 area report. Further updated analysis may be required if site-specific conditions so warrant in the director's discretion. The applicant shall submit a geotechnical assessment detailing any changed environmental conditions associated with the site.

C. Geotechnical studies for two or more types of hazard areas shall meet the report requirements for each relevant type.

D. 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 critical area report shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the director. (Ord. 2004-603 § 2)

Attachment 4

ESA

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206.789.9658 phone
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esassoc.com

memorandum

date	January 12, 2022
to	Tom Rogers, City of Mill Creek
from	Margaret Clancy & Jessica Redman
subject	Recommendations for potential Critical Areas code updates – Wetland Buffers

At the request of the City of Mill Creek (City), ESA identified potential revisions to wetland buffer widths and associated regulations in the Mill Creek Municipal Code (MCMC 18.06) based on changes in best available science that have been published since the City's last major code update. The observations and recommendations described below are based on our review of the Washington State Department of Ecology's (Ecology) *Wetland Guidance for CAO Updates – Western Washington Version* (Bunten et al., 2016) and *Modifications for Habitat Score Ranges, modified from Wetland Guidance for CAO* (Ecology, 2016). In our judgment, the City's code is consistent with best available science for wetland protection. In some cases, City requirements exceed Ecology recommendations and may warrant reconsideration.

Background

The Washington State Growth Management Act (GMA[1]) requires all cities and counties in Washington to adopt critical areas ordinances to preserve the natural environment and limit development in hazard-prone areas like floodplains and landslide hazard areas. The GMA defines five types of critical areas:

1. Wetlands
2. Critical aquifer recharge areas
3. Fish and wildlife habitat conservation areas, including streams
4. Frequently flooded areas
5. Geologically hazardous areas

Counties and cities are required to develop policies and regulations to protect the functions and values of critical areas using the "best available science"[2] and to update those regulations periodically as new information becomes

[1] Revised Code of Washington (RCW) 36.70A
[2] https://ecology.wa.gov/Water-Shorelines/Wetlands/Tools-resources/Best-available-science

available. ESA has assisted the City with development and implementation of their wetland regulations for over 15 years. This has including reviewing the best available science, providing recommendations for wetland protection and mitigation, interpreting code requirements, reviewing public and private development proposals for compliance with the code and resolving code violations. ESA also assists the City in addressing other federal and state wetland regulations including Federal Clean Water Act and the State Water Pollution Control Act, to name a few. A primary objective of this work is to ensure the City meets its legal requirements for wetland protection while also achieving its economic development goals.

The City has a strong history of protecting and managing wetland ecosystems including the forested wetlands along the North Creek corridor, the emergent marshes around Thomas Lake and the hundreds of smaller wetlands scattered throughout the City. These wetlands provide important habitats for wetland-dependent species, store runoff and flood waters, recharge groundwater, and improve water quality. In our 15 years of working with the City, very few developments have directly impacted a wetland. Rather, the City has implemented robust wetland buffer standards that have kept developments from encroaching on sensitive wetland habitats.

The City's wetland buffer requirements are among the most protective in western Washington. The buffer standards reflect the best available science and the agency guidance in place at the time of the City's last major code update (2004). In recent years, the Washington Department of Ecology (the primary state agency with wetland jurisdiction), revised their wetland buffer guidance and offered some additional flexibility on how to protect wetlands and mitigate development impacts. Ecology's recommendations call for varying buffer widths depending on the wetland category (a relative measure of the wetland's overall ecological value) and its habitat function score (the value of the wetland to species that depend on wetlands for one or more of their life history requirements). Ecology also provided an option for developers to choose a suite of standard impact minimization measures that, if implemented, allow for buffer width adjustment. For example, if a developer provides a 100-foot-wide corridor connecting onsite wetlands to nearby habitats, they are eligible for a smaller buffer. If the applicant chooses not to implement such measures, a larger buffer would apply.

Earlier this year, the City elected to review the adopted buffers and compare them with the buffers that could be allowed using the new Ecology guidance. The City reviewed 18 wetlands on City-owned property and determined that the adopted buffer regulations could be adjusted without significant adverse consequences and while still meeting best available science.

Wetland Buffer Widths

Some of the City's required buffer widths in MCMC 18.06.930 are larger than those noted in the Ecology guidance. Category III wetlands with moderate to high habitat scores are the only wetlands where buffer widths based on Ecology guidance would be more restrictive than existing City requirements. The City can consider some buffer width reductions that would be consistent with best available science. For example, buffer widths could be based on the wetland category and habitat value as determined by the Washington State Wetland Rating System for Western Washington: 2014 Update (Hruby, 2014). In this scenario, the criterion of land-use intensity currently used by the City would be eliminated. For wetlands with habitat scores between 3 to 5 points, Ecology guidance allows for a smaller buffer when the applicant incorporates mitigation measures designed to minimize wetlands impacts. Examples of these mitigation measures include but are not limited to, reduction of noise and light pollution into wetlands and wetland buffers, routing untreated runoff away from wetlands, the use of Low-Intensity Development techniques for stormwater runoff, and limiting pet and human disturbances by using

protective fencing and/or conservation easements. Applicability of mitigation measures is site-specific, but all measures should be implemented if possible. For wetlands with habitat scores greater than 6, Ecology suggests applicants be required to implement all mitigation measures, and if present, also maintain a 100-foot biodiversity corridor between on-site wetlands and nearby priority habitats, as defined by the Washington State Department of Fish and Wildlife.

An example of this approach—with the buffers based on a combination of habitat score and mitigation measure application—is shown in the table below. However, if the City prefers, they can still use land-use intensity as a decision criterion when determining buffer widths while maintaining the mitigation measures as an option. We suggest the City maintain the current buffer requirements for Category I wetlands with special characteristics such as bogs, and wetlands identified as "Wetlands of High Conservation Value" by the Washington Natural Heritage Program (WNHP). Some of these wetlands (or remnants thereof) are known to occur in Mill Creek.

Table 1. Example of buffer width requirements (in feet) based on land use, habitat score, and mitigation measures (adapted from Snohomish County Code 30.62A.320).

Wetland Category	Description	Current Mill Creek Buffer Width (high/low intensity use)	Ecology's Standard Buffer Width	Proposed Buffer Widths		
				High Intensity Land Use		Low Intensity Land Use
				Buffer w/out mitigation measures	Buffer w/ mitigation measures	
I[1]	Wetlands with High Conservation Value, or special characteristics	300/200	190	250	190	125
I[2] and II	High habitat function (score is 8-9)	200/100	225	300	225	150
	Moderate habitat function (score is 5-7)		110	150	110	75
	Low habitat function (score less than 5)		75	100	75	50
III	Moderate habitat function (score is 5-7)	100/50	110	150	110	40
	Total habitat score of 16-19 but not meeting above criteria		60	80	60	25
IV	Total score less than 16	50/25	40	50	40	25

[1]Some wetlands such as bogs, and wetlands identified as "Wetlands of High Conservation Value" by the Washington Natural Heritage Program have special characteristics and are categorized by their sensitivity to disturbance, their significance, rarity, our ability to replace them, and the functions they provide. These wetlands require larger buffer widths regardless of their habitat score. There are currently no mapped Wetlands of High Conservation Value within the City of Mill Creek but bogs are known to occur.
[2]Category I wetlands not having special characteristics.

Buffer Modifications

MCMC 18.06.930.C.5 allows for buffer averaging wherein an applicant can reduce the buffer up to 50 percent of the standard buffer width in one area and compensate by increasing the buffer in a different area such that the total area contained in the buffer area is maintained. However, Ecology's current guidance only allows for

reductions of up to 25 percent of the standard buffer width. To be consistent with Ecology, the City should consider the following code change:

> "The buffer width is not reduced to less than ~~50~~ 75 percent of the standard width, except that no buffer dimension shall be less than ~~25 feet~~ 75 feet for Category I and II, 50 feet for Category III, and 30 feet for Category IV, whichever is greater."

Limited Exemptions

Ecology guidance exempts Category IV wetlands that are isolated and less than 4,000 square feet in size from certain regulations, provided that the following criteria are met:

- They are not associated with riparian areas or their buffers;
- They are not associated with a shoreline of the state or their associated buffers;
- They are not part of a wetland mosaic;
- They do not score 5 or more points for habitat function based on the *Washington State Wetland Rating System for Western Washington*: 2014 Update (Hruby, 2014); and
- They do not contain A Priority Habitat or a Priority Area for a Priority Species identified by the Washington Department of Wildlife, do not contain federally listed species or their critical habitat, or species of local importance.

Impacts to small wetlands are not exempt from the requirements to provide compensatory mitigation for those impacts. If filled, impacts must be mitigated through creation, the purchase of credits through an approved mitigation bank, or other alternative forms of mitigation, to help reduce a net loss of wetland function from impacts to small wetlands. All proposed compensatory mitigation should be consistent with mitigation requirements of MCMC Chapter 18.06.610. Ecology guidance also requires an applicant demonstrate avoidance and minimization measures when applying this exemption.

MCMC 18.06.910.D has a similar exemption but it only applies to Category IV wetlands under 1,000 square feet in size. The City could consider increasing the size eligible for this exemption to be consistent with Ecology guidance. If the exemption threshold is increased from 1,000 to 4,0000 square feet, the City may still wish to require more information from applicants to ensure the wetland does not provide suitable habitat for amphibian species, and the wetland does not possess unique characteristics that would be difficult to replicate through standard mitigation practices.

Conclusion

In summary, the current code is generally consistent with best available science for wetland protection. Minor adjustments to buffer widths and limited exemptions are proposed to better align with Ecology's wetland guidance. The observations and recommendations provided are based on our review of the Ecology's *Wetland Guidance for CAO Updates – Western Washington Version*[3].

[3] Bunten, D., Mraz, R., Driscoll, L., and Yahnke, A. 2016. Wetland Guidance for CAO Updates: Western Washington Version. Washington Department of Ecology Publication No. 16-06-001. Olympia, WA. June. Available: https://apps.ecology.wa.gov/publications/summarypages/1606001.html.

Glossary

Best Available Science – Scientific information derived by qualified scientific experts through a valid process involving peer review, clearly stated methods, supported conclusions, quantitative analysis, context, and references.

Buffers – Vegetated areas adjacent to wetlands, or other aquatic resources, that can reduce impacts from adjacent land uses through various physical, chemical, and/or biological processes.

Habitat Function Score – A measure of the value of the wetland to fish and wildlife species that depend heavily on wetland systems for one or more of their life history requirements. The habitat score takes into account the complexity of the vegetation, the connectivity to adjacent habitats, the presence of specific habitat features such as snags, and other characteristics. The higher the habitat function score, the more valuable the wetland.

Isolated Wetlands – Wetlands that have no surface water connections to other aquatic resources.

Mitigation – A series of actions used to reduce the severity of negative impacts. Mitigation involves the following: 1) Avoiding the impact altogether by not taking a certain action or parts of an action; 2) 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; 3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; 4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; 5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and 6) Monitoring.

Wetland Category – A relative measure of the wetland's overall ecological value. Categories range from I (highest value) to IV (lowest value). Ecology has a numeric scoring system designed to differentiate between wetlands based on their sensitivity to disturbance, rarity, the functions they provide, and whether we can replace them or not.

Wetland Functions – The physical, biological, chemical, and geologic interactions among different components of the environment that occur within a wetland. Wetlands perform many valuable functions: functions that improve water quality, functions that change the water regime in a watershed such as flood storage, and functions that provide habitat for plants and animals.

Wetlands – 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 typically 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.

Planning Commission Meeting

Wetland Buffer Code Update

City of Mill Creek

Attachment 5

Topics

- Background
- Current Mill Creek Code
- Proposed Code Changes

Washington State Growth Management Act (GMA)

- A series of statutes, first adopted in 1990, that requires cities and counties to develop comprehensive plans to manage growth
- Key requirements:
  - Identify and protect critical areas and resource lands
  - Prepare and adopt comprehensive plans
  - Adopt development regulations to carry out the comprehensive plan Evaluate and update the comprehensive plan and development regulations periodically
- Critical area regulations must be based on the Best Available Science (BAS)

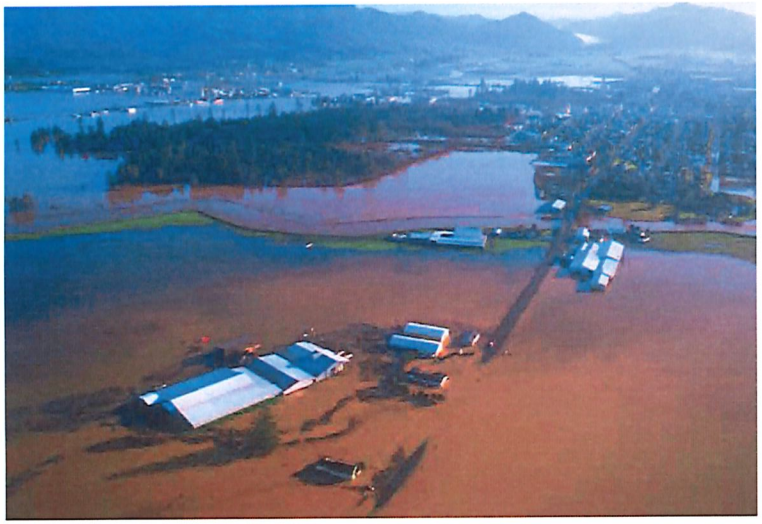
ESA

Mill Creek Critical Areas Timeline

- 2004
  - City conducts comprehensive inventory of critical areas, including wetlands
  - Consultants reviewed and documented best available science
  - Staff and consultants developed code recommendations and language
  - Recommendations and draft code shared with the Planning Commission, Public, City Council and State Agencies
  - Code (MCMC 18.06) adopted
- 2005 – 2021
  - City implements code
  - State issues new BAS
  - City reviews updated BAS relative to City projects
- 2022
  - City considers code amendments to allow flexibility

Why Designate and Protect Critical Areas?

- To preserve the natural environment, wildlife habitats, and sources of fresh drinking water.
- To limit development in areas prone to natural hazards like floods and landslides.

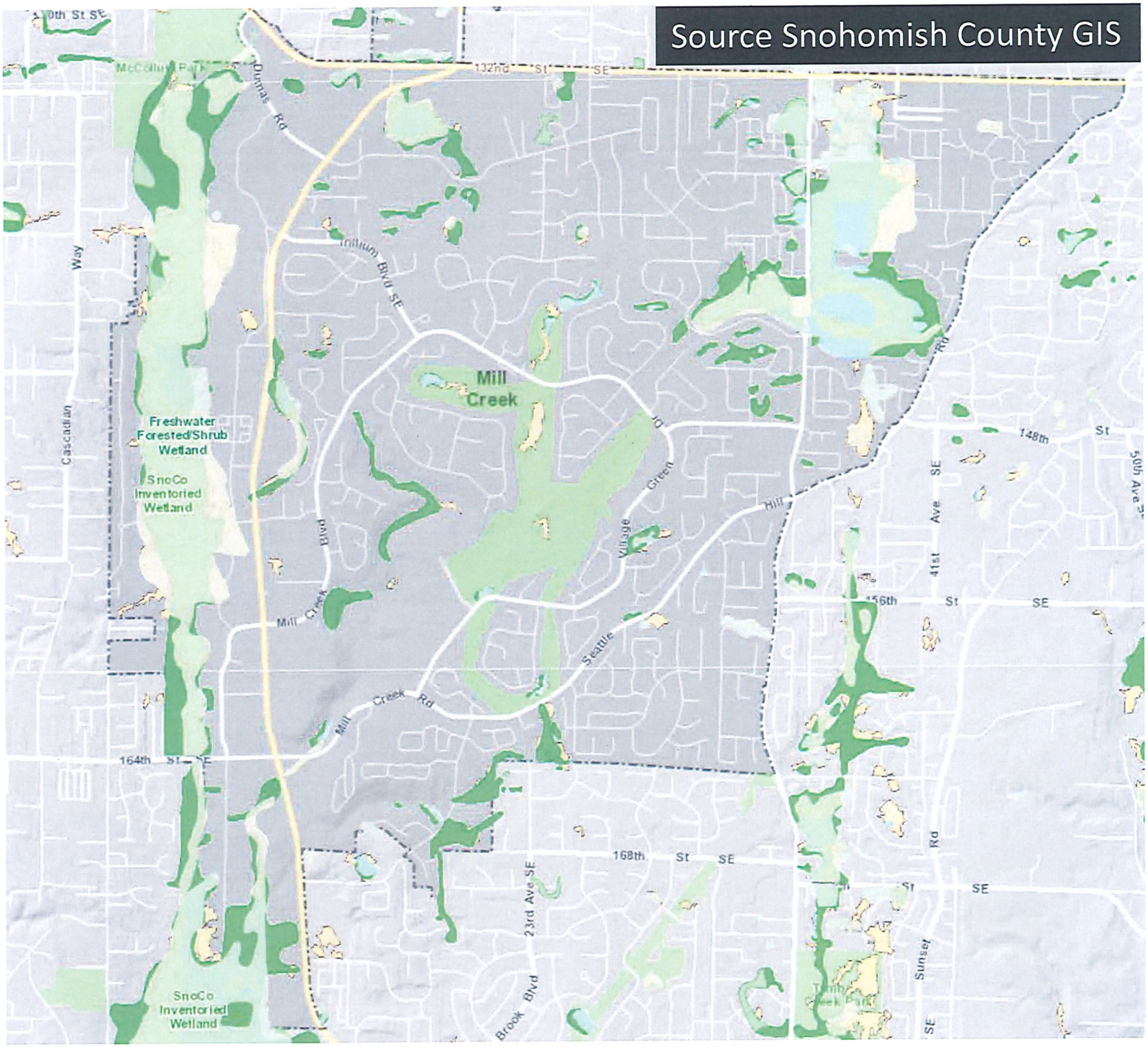


Types of Critical Areas

- Wetlands
- Frequently Flooded Areas
- Fish and Wildlife Habitat Conservations Areas (e.g., streams)
- Critical Aquifer Recharge Areas
- Geologically Hazardous Areas

All of these occur within the City of Mill Creek

Mapped Wetlands within Mill Creek



Wetlands

"areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Plants

Soils

Hydrology

Wetland Functions and Values

Wetlands are highly productive and biologically diverse systems that:

- Enhance water quality
- Control erosion
- Store floodwaters
- Provide recreational opportunities
- Maintain stream flows
- Sequester carbon
- Provide a home to at least one third of all threatened and endangered species

Wetland Regulations

- **Federal Clean Water Act** – prohibits the dredge and fill of wetlands and other waters of the U.S. (Army Corps of Engineers)
- **State Water Pollution Control Act** – insure the purity of all waters of the state … require the use of all known available and reasonable methods to prevent and control the pollution of the waters of the state (Dept. of Ecology)
- **State Hydraulic Code** – ensure that any action that that will use, divert, obstruct, or change the natural flow or bed of any salt or fresh waters is done in a manner that protects fish life (Dept. of Fish and Wildlife).

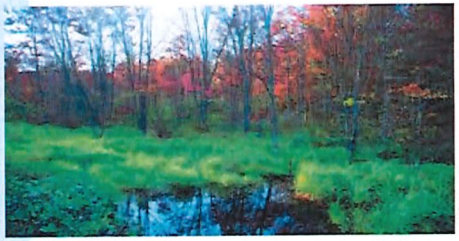
Sources of BAS

Wetlands Research Program Technical Report Y-87-1 (on-line edition)

Corps of Engineers Wetlands Delineation Manual

by Environmental Laboratory

DEPARTMENT OF ECOLOGY
State of Washington



Characterizing Wetland Buffers in Washington State

EPA United States Environmental Protection Agency | Office of Water Washington, DC 20460 | EPA-822-R-02-020 March 2002

METHODS FOR EVALUATING WETLAND CONDITION

#10 Using Vegetation To Assess Environmental Conditions in Wetlands

DEPARTMENT OF ECOLOGY
State of Washington

US Army Corps of Engineers Seattle District

Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance

Version 2

April 2021
Publication 21-06-003

Wetlands in Washington State

Volume 1: A Synthesis of the Science

Final

US Army Corps of Engineers
Waterways Experiment Station

Wetlands Research Program Technical Report WRP-DE-4

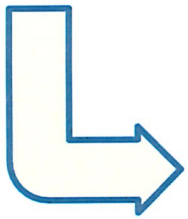
A Hydrogeomorphic Classification for Wetlands

by Mark M. Brinson

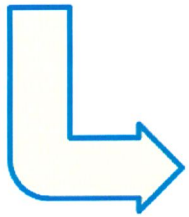
August 1993 – Final Report
Approved For Public Release, Distribution is Unlimited

Methods of Protecting Wetlands

- Prevent dredging, filling and direct encroachment
- Maintain natural drainage (to/from wetlands)
- Treat / control stormwater runoff into wetlands
- Limit human intrusion (activity, light & noise)



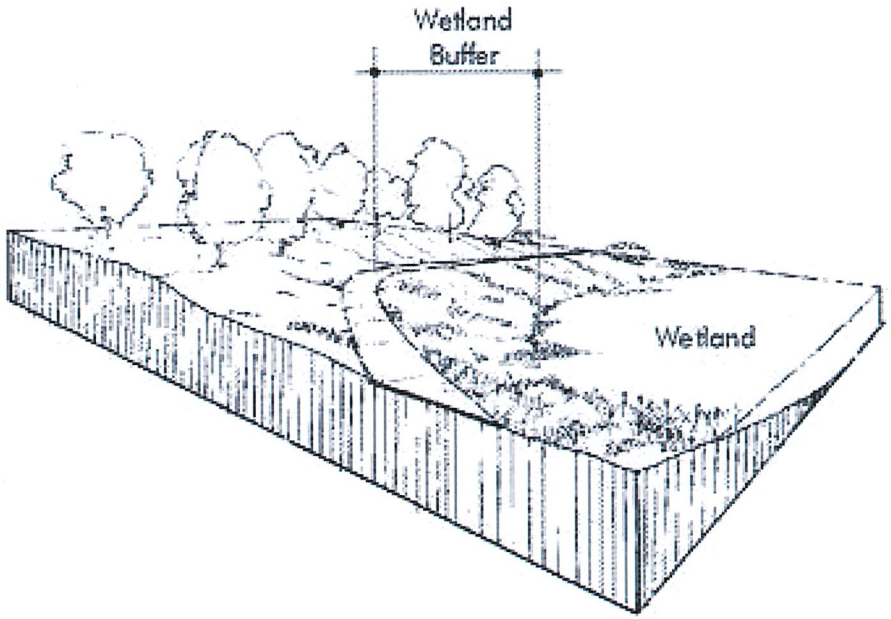
Establish protective buffers



Avoid, minimize and compensate for unavoidable impacts

Wetland Buffers

- The area or zone contiguous to a wetland that protects the integrity or functions and values from potential adverse impacts.
- Buffers must have relatively intact native vegetation to protect the wetland at the time of the proposed activity.
- Width of the required buffer depends on the quality of the wetland type *and other factors* – higher quality wetlands require wider buffers.



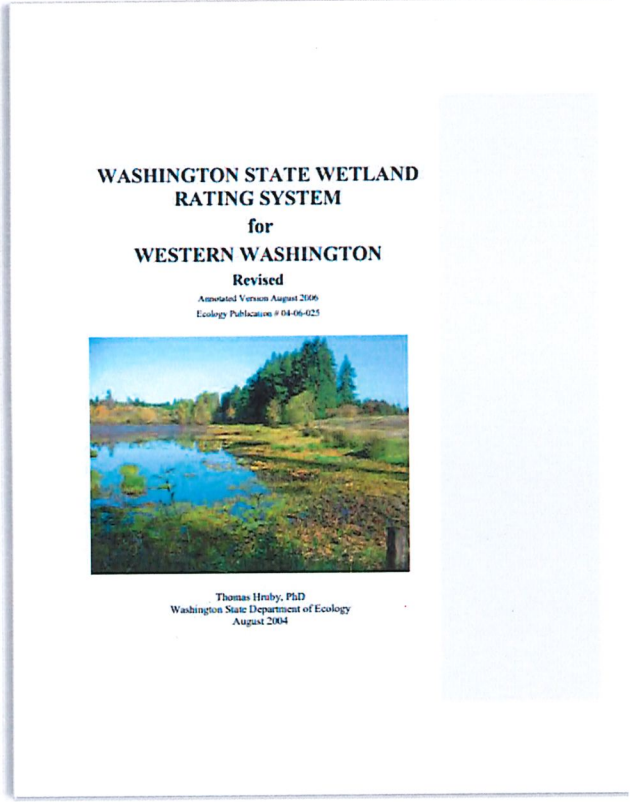
Rating Wetland Quality

- State has adopted a four-tiered rating system based on the wetland rarity, irreplaceability, sensitivity and functions:
  I. **Category I** - unique or rare wetland type; more sensitive to disturbance than most wetlands; relatively undisturbed
  II. **Category II** - difficult, though not impossible, to replace; provides high levels of some functions
  III. **Category III** - may have been disturbed; often less diverse or more isolated from other wetlands in the landscape
  IV. **Category IV** - have the lowest levels of functions; often heavily disturbed
- Category is determined using a point system prescribed by Dept. of Ecology

Rating System Scores

Wetland Rating	Rating System Score (Pts)
Category I	>70
Category II	51-69
Category III	30-50
Category IV	< 30

Rating manual and sample form



WASHINGTON STATE WETLAND RATING SYSTEM

for

WESTERN WASHINGTON

Revised

Annotated Version August 2006

Ecology Publication # 04-06-025

Thomas Hruby, PhD
Washington State Department of Ecology
August 2004

Wetland name or number Cook Property

	D Depressional and Flats Wetlands WATER QUALITY FUNCTIONS – Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	**D 1. Does the wetland unit have the potential to improve water quality?**	*(see p.38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) points = 3 Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch points = 1 *(If ditch is not permanently flowing treat unit as "intermittently flowing")* Provide photo or drawing	Figure 1
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions)* YES points = 4 NO points = 0	4
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation >= 95% of area points = 5 Wetland has persistent, ungrazed, vegetation >= 1/2 of area points = 3 Wetland has persistent, ungrazed vegetation >= 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 Map of Cowardin vegetation classes	Figure 5
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0 Map of Hydroperiods	Figure 2
D	**Total for D 1** *Add the points in the boxes above*	12
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* Surrounding Development is new – no untreated stormwater — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other **YES** multiplier is 2 **NO** multiplier is 1	*(see p. 44)* multiplier 1
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	12

Three Parts to the Rating System Score

- Hydrology functions
  - Size of the wetland, storage capacity, location in the watershed, etc.
- Habitat functions
  - Plant community structure / complexity, diversity of vegetation, habitat features (e.g., snags), accessibility / proximity to other habitats, etc.
- Water quality functions
  - Location relative to pollution sources, soil type, vegetation density, etc.

BAS says that most important factor in determining buffer width is the habitat score, because the width of the buffer needed to maintain habitat functions is almost always greater than the width needed to maintain hydrology or water quality functions

Mill Creek Code

- Requires buffers based on wetland category and the intensity of the adjacent land use
  - wetlands adjacent to high impact land uses require a wider buffer
  - buffer tied to overall rating but not specifically the habitat score
- Developers can reduce the buffer width in one area in exchange for increasing width in another area
  - allows flexibility to adjust the buffer based on site conditions
  - can reduce to 50% of standard with
- Widths are at the high end of the range according to BAS

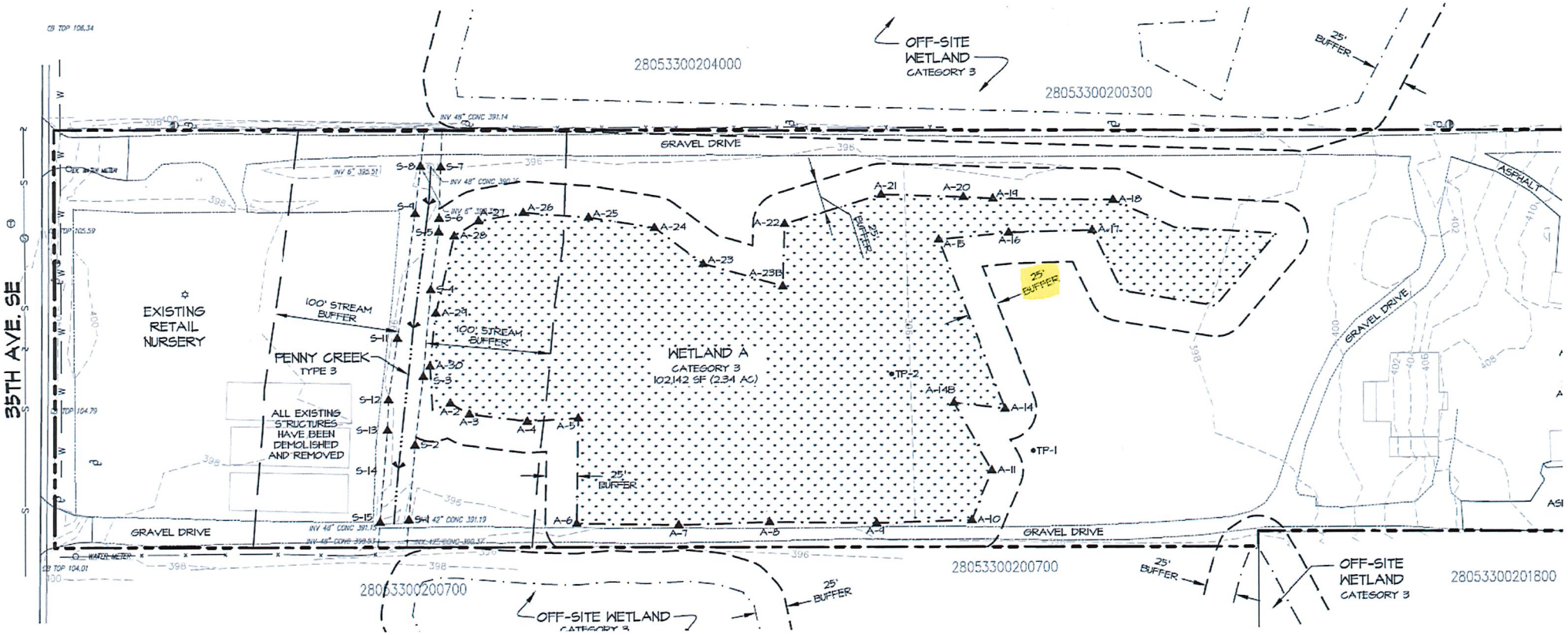
ESA

Current Mill Creek Buffer Widths

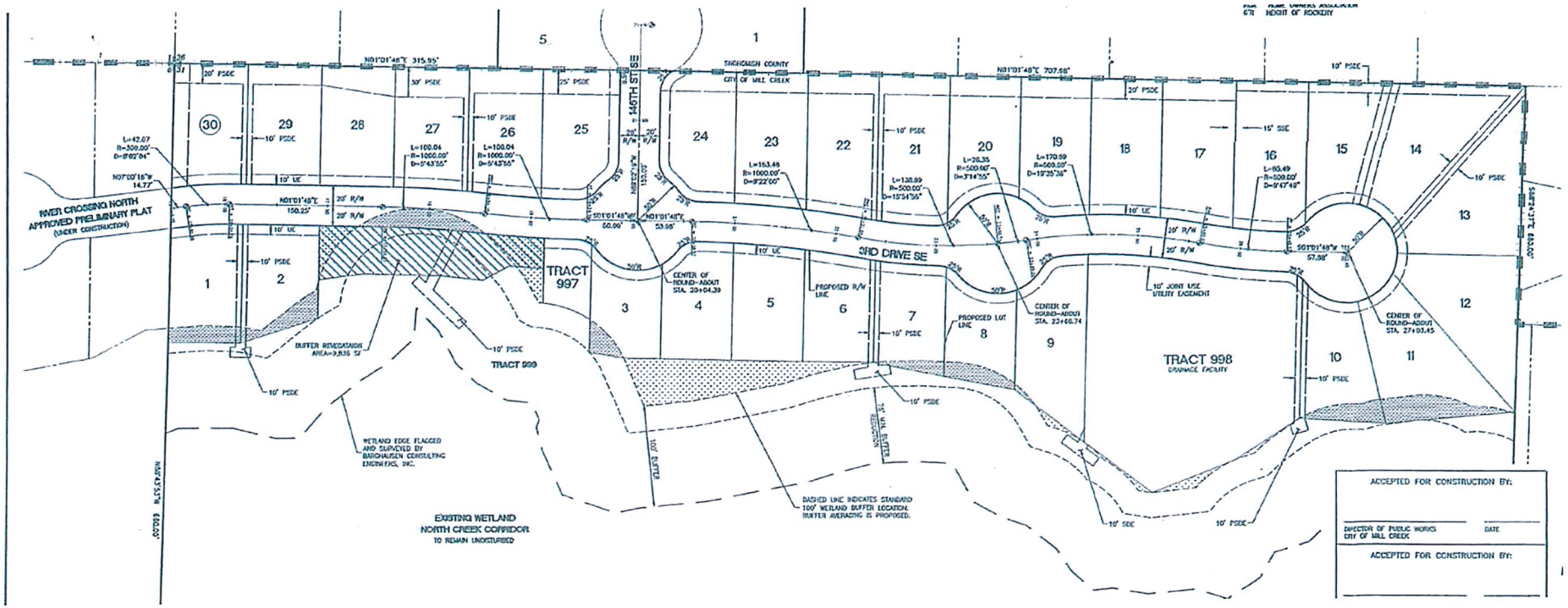
	High Impact Land Use	Low Impact Land Use
1. Category I Wetland	300 feet	200 feet
2. Category II Wetland	200 feet	100 feet
3. Category III Wetland	100 feet	50 feet
4. Category IV Wetland	50 feet	25 feet

Width varies by category and the adjacent land use, but not the habitat function score

Standard buffer example – Category III wetland



Buffer averaging example



Buffer can become narrower in one area, but must become wider in another

Proposed Amendments to Buffer Regulations

- Base buffers on the habitat score *and* the intensity of the adjacent land use
- Allow buffer averaging but reduce the allowance to 25% of the standard buffer
- Reduce buffer widths in exchange for specific mitigation measures that reduce impacts

Mitigation Measures

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10 feet heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 feet of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use Best Management Practices to control dust

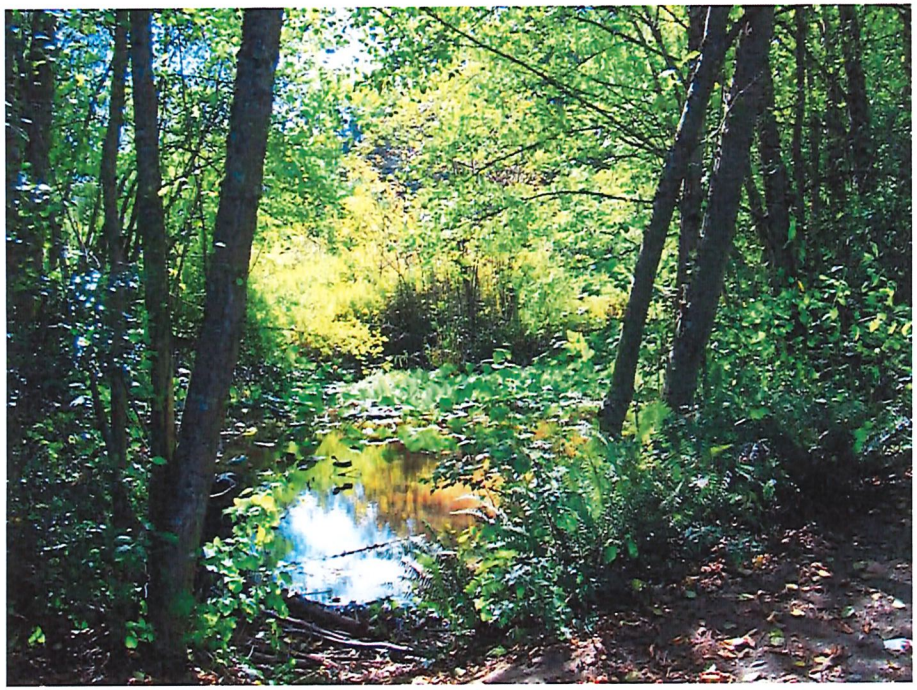
Source: July 2018 Modifications for Habitat Score Ranges, modified from Wetland Guidance for CAO Updates: Western Washington Version. Available: https://fortress.wa.gov/ecy/publications/parts/1606001part1.pdf

Proposed Buffer Widths

Wetland Category	Description	Current Mill Creek Buffer Width (high/low intensity use)	Ecology's Standard Buffer Width	Proposed Buffer Widths		
				High Intensity Land Use		Low Intensity Land Use
				Buffer w/out mitigation measures	Buffer w/ mitigation measures	
I[1]	Wetlands with High Conservation Value, or special characteristics	300/200	190	250	190	125
I[2] and II	High habitat function (score is 8-9)	200/100	225	300	225	150
	Moderate habitat function (score is 5-7)		110	150	110	75
	Low habitat function (score less than 5)		75	100	75	50
III	Moderate habitat function (score is 5-7)	100/50	110	150	110	40
	Total habitat score of 16-19 but not meeting above criteria		60	80	60	25
IV	Total score less than 16	50/25	40	50	40	25

[1]Some wetlands such as bogs, and wetlands identified as "Wetlands of High Conservation Value" by the Washington Natural Heritage Program have special characteristics and are categorized by their sensitivity to disturbance, their significance, rarity, our ability to replace them, and the functions they provide. These wetlands require larger buffer widths regardless of their habitat score. There are currently no mapped Wetlands of High Conservation Value within the City of Mill Creek but bogs are known to occur.
[2]Category I wetlands not having special characteristics.

Other Proposed Amendments



- Increase exemption for isolated wetlands from 1,000 SF to 4,000 SF, as long as they:
  - are not associated with riparian areas
  - are not associated with a shoreline of the state
  - are not part of a wetland mosaic
  - score less than 5 pts for habitat function
  - do not contain a Priority Habitat or Species

Questions?