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MEMORANDUM

Date: **May 13, 2016**

To: **Houghton Community Council**

From: **Teresa Swan, Senior Planner**
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Subject: **Chapter 90 KZC Amendments (Critical Areas Ordinance/Wetlands, Streams and Frequently Flooded Areas Regulations), File CAM15-01832, #3**

Please review the staff memo for the January 28, 2016 meeting for background information in advance of the meeting and bring the memo for reference.

This memo addresses the following key topics:

- Wetland Rating System and Buffer Width Standards
- Compensatory Mitigation Ratios for Wetland Modification
- Stream Classification and Buffer Width Standards
- Deviations from the Buffer Standards
  - Buffer Averaging for Wetlands and Streams
  - Buffers for Day lighted or Relocated Streams
  - Buffers Divided by Roads or Structures
- Measures to Minimize Impacts to Critical Areas
- Vegetative Buffer Standard
- Building Setback from a Critical Area Buffer
- Mitigation Sequencing for Wetland or Stream Modification
- Off-Site Mitigation
- Fish and Wildlife Conservation Habitat Areas
- Exempted Uses
- Permitted Uses with Standards
- Non-Conformances
- Reasonable Use Exception
- Maximum Development Potential
- Effect of Code Amendments on Prior Approvals and Pending Permits

I. RECOMMENDATION

Staff recommends that the Houghton Community Council reviews the direction from the Planning Commission on key issues outlined in the memo and provide comments to staff.

The memo is organized by each topic as noted above. The Planning Commission's direction on each topic is provided after each discussion.

II. BACKGROUND

On January 28, 2016, the Houghton Community Council held a joint study session with the Planning Commission. Staff and The Watershed Company (TWC), the City's consultant on the project, gave a presentation on the following:

- City's regulations must be updated under GMA and be consistent with BAS;
- Background information on wetlands, streams, rating system of the features, buffer widths, buffer reduction options, mitigation, wildlife habitat, and frequently flooded areas;
- Best Available Science Report (latest science on the protection of these sensitive area features and the condition of the city's sensitive area features) prepared by TWC; and
- Gap Analysis (general code amendments needed to meet BAS on wetlands and streams and Ecology's guidance on wetlands) prepared by TWC

As the Houghton Community Council considers the key issues in this memo for preparation of the revised Chapter 90 KZC, the goals, policies and actions in the **Environment Chapter** should be considered and supported in the revised chapter. Some of these goals and policies include:

- Actions: Restore our natural systems and critical areas including streams, wetlands, habitat areas and Lake Washington for maximum ecological value and functions.

- Goal E-2: Protect, enhance and restore trees and vegetation in the natural and built Environment.
    - Policy E-1.2: Manage activities affecting air, vegetation, water, and the land to maintain or improve environmental quality, to preserve fish and wildlife habitat, to prevent degradation or loss of natural features and functions, and to minimize risks to life and property.
    - Policy E-1.3: Manage the natural and built environments to achieve no net loss of the functions and values of each drainage basin; and proactively enhance and restore functions, values, and features.

Since the January 28, 2016 joint meeting, the **Planning Commission** held three study sessions on February 25, 2016, March 24, 2016, and April 28, 2016. This memo reflects the Planning Commission's discussions at these three study sessions and its direction for preparation of the draft revised Chapter 90 KZC. It also reflects consideration of public comment provided at the meetings and through emails.

Staff also briefed the **City Council** at its February 16th meeting.

As was indicated at the January 28, 2016 joint meeting, the **current Chapter 90** KZC has not been amended since it was adopted in 2002. However, since then **Best Available Science** (BAS) on critical areas has progressed and evolved based on extensive studies on the impacts of urban areas on wetlands and streams, including work done by the Department of Fish and Wildlife (WDFW) and Department of Ecology (Ecology). Ecology has issued a new **wetland rating system** in 2004 and then again in 2014 and guidance documents on **wetland buffers** and other topics. Also since adoption of Chapter 90 KZC, requirements were added to GMA for the protection of **Fish and Wildlife Habitat Conservation Areas** that address threatened, endangered and sensitive species listed by federal and state agencies. Thus, Chapter 90 KZC is not consistent with the Growth Management Act's requirements for the use of current BAS, the WAC requirements for **stream typing** and Ecology's standards. Follow this link to view the current Chapter 90 KZC regulations.

If the City chooses to not accept current BAS, it must do its own scientific research to develop a different approach. This would be very costly and time consuming with no guarantee of the outcome and the research and conclusions could be appealed by Ecology, other state agencies, environmental groups and other interested parties. According to Ecology, no jurisdiction has challenged current BAS before the Growth Management Hearings Board. One jurisdiction, Island County, looked at a different approach to BAS, but after tremendous cost and time has decided to use the current BAS.

The **State deadline** for updating Chapter 90 KZC is **June 30, 2016.** The City will not meet this deadline because of the considerable time and resources spent on the 2035 Comprehensive Plan Update, which was also a requirement of the State. The Comprehensive Plan Update was adopted in December 2015, at which time the Planning staff began a full time effort on Chapter 90 KZC. Our goal is to have a revised draft Chapter 90 KZC submitted by the deadline date to the State. This will show the City's efforts and intent to complete the revised Chapter 90 KZC as soon as possible.

III. WETLAND REGULATIONS

Attachment 1 contains a draft summary of the regulations for wetlands and their buffers.

A. Wetland Rating System.

1. Background:

The wetlands in Washington State differ widely in their functions and values. Some wetlands are part of a large drainage system, such as Yarrow Bay and Juanita Bay, while others are small isolated wetlands. Some are heavily disturbed while a few are still relatively undisturbed. All, however, provide some functions and resources that are valued. These may be ecological, economic, recreational, or aesthetic.

A rating system is needed to understand the functions and values of individual wetlands in order to protect them effectively. A rating system categorizes wetlands into categories based

on their sensitivity to disturbance, their rarity, the ability to replace them, and the functions they provide.

Rating categories are used as the basis for developing standards for protecting and managing the wetlands to reduce further loss of their value as a resource. Decisions that can be made based on the rating include the width of buffers needed to protect wetlands from adjacent uses, the amount of mitigation needed to compensate for impacts to the wetland, and permitted uses in wetlands.

The City's existing rating system is based on BAS of the mid 1990's. Since then, the understanding of wetlands and the impacts of adjacent development has expanded significantly such that the new rating system better reflects the range of characteristics and functions found in. Ecology adopted the *Washington State Wetland Rating Systems* in 2004 and then updated it again in 2014. The rating system is primarily intended for use with vegetated, freshwater wetlands using the U.S. Army Corps of Engineer's federal wetland delineation manual and applicable regional supplements (Chapter173-22-035 WAC).

Other local jurisdictions have either been using the 2004 rating system and now will be adopting the 2014 rating system or have already adopted the new rating system. The City is two cycles behind on the State rating system. **The City must use the 2014 wetland rating system.**

2. Planning Commission Direction:

Use the 2014 Washington State Wetland Rating System in the revised Chapter 90 KZC as required by Ecology and adopted by other local jurisdictions.

B. Wetland Buffer Width Standards.

1. Background:

As discussed at the January 28, 2016 meeting, a Buffers (which are protective setbacks from the edge of the wetland) reduce impacts to wetlands from adjacent land uses and activities. A buffer filters out negative nutrients, sediments and pollutants going into the wetland. It moderates the temperature of the wetland and it protects and provides habitat for wildlife. The physical characteristics of the buffers (slope, soils, vegetation and width) determine how well buffers reduce the various adverse impacts of adjacent uses on wetland functions.

Ecology has issued standards for urban wetland buffers based on BAS in both a guidance document and in a recommended model ordinance. The City's **current wetland buffer standards in Chapter 90 must be increased in width** and be more in line with the wetland buffer standards in Chapter 83 KZC (covering lands 200 feet from the lake and entire wetlands connected to the lake) adopted as part of the City's Shoreline Master Program update in 2010 and amended in 2011.

The standards based on Ecology guidance and BAS are reflected below. The width of the buffer standards assumes that the buffer is **well vegetated** and contains no lawn and little

invasive, ornamental species or fill. Ecology guidance for buffers that do not meet these standards are wider by one-third (1/3) in depth.

Recommended Wetland Buffer Standards

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

(Note: it is unlikely that Kirkland has a Category I Bog wetland)

Staff looked at the codes of other local jurisdictions and did find some variation in buffer standards compared to Ecology's buffer standards. Woodinville adopted the same wetland buffer standard above in March 2016. Redmond's standards were adopted several years ago and are slighter smaller for the habitat 5 score but much larger for the 3-4 and 8-9 habitat scores. Renton's standards are larger in one habitat score category and smaller in another category. Other local cities have not updated their rating systems to the new 2014 rating system yet so it is problematic to make an exact comparison (they do not use the habitat scoring system), but the buffer ranges are very similar.

As a comparison, the table below shows existing wetland buffer standards in Chapter 90 KZC and Chapter 83 KZC (shoreline area):

Chapter 90 KZC Current Wetland Buffer Width Standards

Wetland type	Buffer width for wetlands in primary basin (feet)	Buffer width for wetlands in secondary basin (feet)
1	100	75
2	75	50
3	50	25

Chapter 83 KZC Wetland Buffer Width Standards within Shoreline Jurisdiction

Wetland Category and Type[1]	Buffer width (in feet) based on habitat score		
	Less than 20	20-28	29-36
I: Bogs and wetlands of high conservation value	215		
I: All others	125	150	215
II	100	125	200
III	75	125	NA
IV	50		

The Planning Commission discussed the wetland buffer standards over several study sessions and considered what other local jurisdictions require. They also were concerned about making

many existing homes non-conforming with the increased buffer widths while recognizing the State requirement to increase the buffer width standards. The Planning Commission supports the new buffer width standards in conjunction with the recommended more **permissive approach to repair and maintenance, replacement and additions to nonconformances** compared to the current City code in Chapters 90 and 162 KZC. See Non-Conformances section below.

2. Planning Commission Direction:

Use the recommended Wetland Buffer Standards above in the revised Chapter 90 KZC. The standards are consistent with Ecology guidance and comparable to other jurisdictions and the City's Chapter 83 KZC (shoreline regulations).

C. Compensatory Mitigation and Ratios for Wetland Modification.

1. Background:

Compensatory mitigation standards are used to replace lost or impacted wetland and/or buffer functions. Compensatory mitigation is also required by state and federal agencies. The City's shoreline regulations include the same compensatory mitigation standards. All other local jurisdictions have adopted the use of compensatory mitigation.

2. Wetland Mitigation Options in Order of Preference:

Mitigation for lost or diminished wetland or buffers requires wetland compensatory mitigation based on the following **order of preference**:

1) **Re-establishment or rehabilitation**: returning a degraded or past wetland into its former condition through such measures as removing fill or removing a dike that holds back water. This measure does not add new wetland.

2) **Creation/establishment**: developing a new wetland where no wetland existed. This would require a water source, a certain slope design and other factors.

3) **Enhancement**: adding native plantings. This mitigation results in loss of wetland area when a wetland is being modified.

4) **Preservation:** protecting a high functioning at-risk wetland elsewhere, usually in conjunction with one or more of the mitigations noted above. This mitigation results in loss of wetland area when a wetland is being modified.

3. Wetland Mitigation Ratios:

Mitigation ratios are intended to replace lost functions and values of wetlands and the associated buffer from proposed adjacent developments based on the category of wetland and the type of mitigation. Ecology BAS standards for mitigation ratios are shown in the table below. Even though wetland enhancement/planting (far right column below) does

not replace loss wetland area, Ecology's guidance does allow enhancement but at a much higher ratio to mitigate for wetland.

Chapter 83 KZC (shoreline regulations) contain the same mitigation ratios. The ratios have also been adopted by other local jurisdictions and is the accepted approach to mitigation.

Recommended Mitigation Ratios for Wetland Modifications

Category of Wetland Impacted	Creation	Re-establishment-Rehabilitation Only	Creation and Rehabilitation	Creation and Enhancement	Enhancement Only
Category IV	1.5:1	3:1	1:1 C and 1:1 RH	1:1 C and 2:1 E	6:1
Category III	2:1	4:1	1:1 C and 2:1 RH	1:1 C and 4:1 E	8:1
Category II	3:1	6:1	1:1 C and 4:1 RH	1:1 C and 8:1 E	12:1
Category I: Forested	6:1	12:1	1:1 C and 10:1 RH	1:1 C and 20:1 E	24:1
Category I: Bog	Not possible	6:1 RH of a bog	Not possible	Not possible	Case-by-case
Category I: based on total functions	4:1	8:1	1:1 C and 6:1 RH	1:1 C and 12:1 E	16:1 E
Buffer					1:1

Legend: C = Creation, RH = Rehabilitation, E = Enhancement

4. Planning Commission Direction:

Use the recommended compensatory mitigation and mitigation ratios for the revised Chapter 90. These ratios are consistent with Ecology guidance, Chapter 83 KZC (shoreline regulations) and have been adopted by other local jurisdictions.

IV. STREAM REGULATIONS

Attachment 2 contains a draft summary of the regulations for streams and their buffers.

A. System Typing.

1. Background:

Stream typing was established in 2005 in Washington State under WAC 222-16-030. There are three stream types:

- Fish bearing streams that flow year round or part of the year
- Non fish bearing streams that flow year around
- Non-fish bearing steams that flow part of the year

The State stream typing system is provided in the table below and is similar to the stream typing used in Chapter 83 KZC (shoreline regulations) and is used by other local jurisdictions. **The City must use this stream typing system.**

Permanent Water Typing System (WAC 222-16-030)

Permanent Water Typing	Brief Description	Full Description
Type F	Fish bearing stream (may be perennial or seasonal)	Segments of natural waters other than Type S Waters *(streams of shoreline significance which Kirkland does not have)*, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat or are described by one of the following four categories: (a) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria: (i) The site must be connected to a fish habitat stream and accessible during some period of the year; and (ii) The off-channel water must be accessible to fish.
Type Np	Non-fish bearing perennial stream	All segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.
Type Ns	Non-fish bearing seasonal stream	All segments of natural waters within the bankfull width of the defined channels that are not Type F, or Np Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an above-ground channel system to Type F, or Np Waters.

2. Planning Commission Direction:

Use the stream typing above in the revised Chapter 90.

B. Stream Buffer Width Standards.

1. Background:

As discussed under the wetland section, a buffers reduce impacts to streams from adjacent land uses and activities. Similar to wetland buffers, stream buffers filter out negative nutrients, sediments and pollutants going into the wetland. It moderates the temperature of the stream and it protects and provides habitat for wildlife. The physical characteristics of the buffers (slope, soils, vegetation and width) determine how well buffers reduce the various adverse impacts of adjacent uses on stream functions.

As discussed at the January 28, 2016 meeting, the City's **current stream buffer standards in Chapter 90 must be adjusted** to meet BAS and to be more in line with the stream buffer standards in Chapter 83 KZC (shorelines regulations) as those were adopted based on BAS in 2010.

The standards based on BAS are reflected below. The width of the buffer standards assumes that the buffer is **well vegetated** and contains no lawn and little invasive or ornamental species and fill:

Recommended Stream Buffer Width Standard

Stream Type	Buffer Width
F (contain fish)	**100 feet**
Np (no fish: perennial)	**50 feet**
Ns (no fish seasonal)	**50 feet**

For the F stream type, Bellevue, Bothell, Kenmore, and Federal Way all require 100 feet – same as above. Redmond, Sammamish, Woodinville and King County have wider F stream type buffers.

For the Np stream type (year round stream with no fish), Bellevue, Kenmore, Federal Way all require a 50 foot buffer – same as above. Six other local jurisdictions have wider buffers than above, including Redmond and Woodinville.

For the Ns stream type (seasonal stream with no fish), Woodinville, Sammamish and Bothell all require a 50 foot buffer – same as above. Six local jurisdictions have a narrower buffer width requirements.

As a comparison, the **current Chapter 90 KZC stream buffer standards** are as follows:

Current Chapter 90 KZC Stream Class and Buffer Widths Standard

Stream Class	Buffer width for streams in primary basin (feet)	Buffer width for streams in secondary basin (feet)
A (contain fish)	**75**	**N/A**
B (no fish: perennial)	**60**	**50**
C (no fish: seasonal)	**35**	**25**

The **current Chapter 83 KZC (shoreline area) stream buffer standards** were adopted in 2010 as part of the Shoreline Master Program Update and are as follows:

Current Chapter 83 KZC Stream Type and Buffer Widths Standard

Stream Type	Buffer width for streams (feet)
A (contain fish)	**115**
B (no fish: perennial and seasonal)	**65**

2. Planning Commission Direction:

Use the recommended Stream Buffer Width Standards in the revised Chapter 90 KZC. The standards are consistent with BAS, and comparable to other jurisdictions and the City's Chapter 83 KZC (shoreline regulations).

V. DEVIATIONS FROM THE BUFFER WIDTH STANDARDS

A. Buffer Averaging for Wetlands and Streams.

1. Background:

Under Ecology guidance and BAS, the width of buffers may be **averaged** if it will improve the protection of the wetland or stream functions or it is the only way to allow for reasonable use of the parcel (see Reasonable Use Exception discussion below). Averaging a buffer means to **reduce the buffer width in one location and enlarge the width in another location on the property, but the total buffer area after averaging is equal to the area required before averaging.** The narrowest point of the buffer width using averaging cannot be less than **75%** of the standard buffer width. The critical area functions are improved with averaging by increasing the width of the buffer next to a higher functioning portion of the critical area while decreasing it next to the lower functioning portion of the area. An **illustration** of this option is provided in Attachment 3.

Buffer averaging provides an applicant with flexibility in designing the site. Local jurisdictions allow for buffer averaging as well as Chapter 83 KZC (shoreline regulations).

Note that BAS does not support an overall **reduction in buffer width** as illustrated in the graphic of Attachment 3 if the City uses the recommended (narrower) buffer standard. Most local cities allow for buffer averaging but not buffer reduction.

2. Planning Commission Direction:

Allow buffer averaging for wetland and stream buffers. The option is consistent with BAS, and other jurisdictions and the City's shoreline regulations permit the option.

B. Buffers for Daylighting or Changing Course of Streams.

1. Background:

The City encourages daylighting of streams that are in culverts to improve fish habitat. Also, in some cases an applicant wants to shift a stream course to stop erosion when no other option is available. Applicants sometime want to daylight a stream to improve the development potential of a site when the culverted stream crosses the middle of the site. However, in many cases the stream buffer cannot be provided along the entire new stream

course because of lack of space on-site and/or the buffer would extend onto adjacent properties imposing new buffers on that adjacent property.

The current regulations in both Chapter 90 KZC and Chapter 83 KZC may have an unintended consequence of discouraging or preventing the daylighting or changing the course because of lack of area for a buffer on-site or impacts on adjacent property. The current regulations say that if creation or expansion of a stream or its buffer affects another property, the other property owner must agree to it in writing. No one wants a new buffer or increased buffer on their property so the agreements do not get signed.

Planning staff contacted WDFW about these examples. Keith Folkerts, division head for SMA/GMA at WDFW responded that, for this type of restoration action, the buffer can "be determined at the site scale with room for agreeing upon what is a reasonable buffer under the circumstances."

The Planning Commission recognizes that there are limited situations where the buffer standards should be deviated in exchange for daylighting of a stream or reducing erosion by changing the course of stream. Vegetation in the buffer should be increased as mitigation when a buffer is reduced under this circumstances.

2. Planning Commission Direction:

Allow buffers to be determined on a base by case basis for daylighting a stream or changing a course of a stream provided if certain criteria are met, such as the action improves the overall function of the stream or reduces erosion. This provides flexibility for the applicant and can improve the function and values of a stream. Also, surrounding properties should be exempt from increased buffer requirement due to the daylighting or other stream modifications on the subject property.

C. Buffers Divided by Roads or Structures

1. Background:

There are some situations in the city where an existing public or private road, or a large structure, divides an existing wetland or stream buffer thus making one part of the buffer no longer ecologically connected to the critical area. Chapter 83 KZC (shoreline regulations) has a provision that a determination can be to waive the buffer requirement for the portion of the buffer not hydrologically connected to the critical area if certain criteria are met.

2. Planning Commission Direction:

Allow a waiver to the buffer standards when a portion of a buffer is divided by a road or large structure and that portion is not ecologically connected to the critical area and when certain criteria are met.

VI. VEGETATIVE BUFFER STANDARDS

A. Background Information.

The Planning Commission decided that a vegetative buffer standard for wetlands and stream buffers is needed to clarify what is a "well-functioning" buffer and to give applicants clear expectations of what the buffer must contain. The City's shoreline regulations have a specific required vegetative standard for the shoreline vegetative buffer next to the lake (Section 83.400 KZC). The standard has worked well with ease in administration and setting clear expectations for applicants.

The standard below reflects common riparian buffer performance standards with latitude to account for a range of potential existing vegetated conditions. An option for an applicant to propose an **alternative vegetation plan** will be available for unique site conditions meeting certain criteria based on a critical areas report that makes a case for the alternative planting plan.

Recommended Vegetation Standard

- Native cover of at least 80% on average throughout the buffer area with 2 out of 3 of the following strata of native plant species composing of at least 20% areal cover:
- Multi-age forest canopy (combination of existing and new vegetation)
- Shrubs
- Woody groundcover (such as kinickinick, salal and sword fern) or unmowed herbaceous groundcover
- Less than 10% noxious weeds cover using King County weed list (but require removal of knotweed which is very invasive)
- At least three native species each making up a minimum of 10% cover (for diversity)
- Removal of lawn (source of fertilizers, fecal coliform from pets and herbicides detrimental to wetlands and streams)

Other local cities require that buffers be vegetated with native plants. For example, Redmond requires that buffers be undisturbed areas of native vegetation and that degraded buffers be planted with native vegetation pursuant to an approved planting plan (Redmond Zoning Code 21.64.010.Q.1).

B. Planning Commission Direction*:*

Require the buffer vegetation standard above for wetland and stream buffers. This would provide applicants and the City with clear expectations and ensure that the buffers are well functioning.

VII. BUILDING SETBACK FROM WETLAND AND STREAM BUFFERS

A. Background.

The purpose of the **building setback** from a wetland or stream buffer is to allow access for maintenance and repair of the primary structure without disturbing the actual buffer. The buffer setback provides protection to the buffer from development activities, use, and routine maintenance occurring adjacent to the buffer (e.g. staging area for building construction, window washing, painting and other repair and maintenance activities). Therefore, buildings and other above ground structures need to be set back from the wetland or stream buffer.

Buffer setback and minor improvements are currently defined as:

- Buffer Setback: The existing regulations require a setback distance of **10 feet** from a designated or modified wetland or stream buffer within which no buildings or other above-ground structures may be constructed, except as provided in KZC 90.45(2) and 90.90(2). The buffer setback serves to protect the wetland or stream buffer during development activities, use, and routine maintenance occurring adjacent to these resources.

- Minor Improvements: Walkways, pedestrian bridges, benches, and similar features, as determined by the Planning Official, pursuant to KZC 90.45(5) and 90.90(5).

Width of the Setback from the Wetland or Stream Buffer:

As noted above, Chapter 90 KZC currently requires a 10' setback from the buffer. Some local cities require a 20' setback, but most require 10'. TWC recommendations and BAS both support continuing with the 10' setback. This width is sufficient for maintenance of the primary structure while allowing minor improvements (see below) into the 10' setback.

Decisional Criteria and Allowed Minor Improvements in Buffer Setback:

Under the current code, the Planning Official may approve minor improvements in the 10 foot wide setback area "*which would clearly have no adverse effect during their construction, installation, use, or maintenance, on fish, wildlife, or their habitat or any vegetation in the buffer or adjacent wetland or steam.*"

In addition to facilitating maintenance of structures, current Chapter 90 KZC decisional criteria require that the buffer setback also **protect fish, wildlife and their habitat. However,** this is not the intent of the buffer setback and is more restrictive than needed under BAS.

Based on this distinction, TWC supports allowing the following minor improvements outright in the buffer setback that can be maintained without disturbing the wetland and stream buffer areas. These are also the same minor improvements that the planners have been permitting as a matter of practice.

- Ground level decks, patios and railings
- Chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies
- Flag poles
- Benches, paths and pedestrian bridges
- Rockeries, retaining walls, maximum 4' high
- Driveways and parking areas
- Garden sculpture, light fixtures, trellises, and similar decorative structures,
- Non- native landscaping
- Stormwater conveyance that results in sheet flow such as rain gardens, and similar techniques

The following **more general list of minor improvements** would also be appropriate in the buffer setback because they can be maintained without impacting the buffer. These are minor improvements that are similarly permitted in **KZC 115.115, Required Yards**, to extend into the required front/rear/side yards. Some of the improvements below also include those listed above:

- Extending no more than **18 inches** into buffer setback - chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies, and decks above the ground floor.
- Extending no more than **5 feet** into buffer setback – minor improvements not more than 18 inches above finished grade, except those noted below.
- Extending no more than **9 feet** into the buffer setback – minor improvements not more 4 inches above finished grade, benches, paths and pedestrian bridges; garden sculpture, light fixtures, trellises, and similar decorative structures; landscaping; flag poles; stormwater conveyance that results in sheet flow such as rain gardens, and similar techniques; and rockeries and retaining walls not exceeding 4 feet above finished grade.

Other local jurisdictions currently allow these types of improvements in the buffer setback.

B. Planning Commission Direction:

Allow the listed improvements to encroach the recommended distances into the buffer setbacks and in addition allow play structures, since they too, can be maintained without impacting the buffer. Revise the definition of minor improvements.

VIII. MEASURES TO MINIMIZE IMPACTS ON WETLAND AND STREAMS

A. Background Information.

Ecology's guidance and BAS indicate a need to require the measures listed below to minimize impacts to critical areas. Vegetation within buffers alone does not mitigate all of the impacts of urban use and activities on critical areas. Other local jurisdictions require these measures to be implemented.

Measures to Minimize Impacts to Wetlands for Reduced Buffer Width

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland

Disturbance	Required Measures to Minimize Impacts
Noise	• Locate outdoor activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source
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 development adjacent to the site • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per Puget Sound Action Team publication on Low Impact Development techniques)
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 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
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

The Planning Commission raised a question about measures to minimize **noise** impact for residential and use of a back yard facing a critical area. Staff has looked at some other local regulations and spoke with Ecology on the intent of the noise impact measure and will expand on the specifics of the noise measure with the draft revisions to Chapter 90 KZC. The intent is not to infringe on a homeowner's use of their yard facing the critical area.

B. Planning Commission Direction.

Include the nine mitigating measures in the revised Chapter 90, but with further details on implementing measures for noise. This approach is consistent with Ecology guidance, BAS, and is used by other local jurisdictions.

IX. MITIGATION SEQUENCING FOR WETLANDS AND STREAMS

A. Background Information

Under BAS, when a critical area and its buffer is proposed to be modified, most proposals must first be reviewed through a series of steps knows as **mitigation sequencing** to reduce the severity of impacts from adjacent uses and activities.

This approach is used by state and federal agencies and local jurisdictions to analyze proposed impacts to wetlands. The same mitigation sequencing is also required in Chapter 83 KZC (shoreline regulations).

Mitigation sequencing steps in the **order of preference** are as follows:

(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 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/or

(6) **Monitoring the impact** and taking appropriate corrective measures.

In most cases, before a modification to a wetland, stream or buffer can be approved an applicant would need to provide an analysis of these steps to explain why the impact is necessary and is the only viable option based on the proposal. These steps are used to consider ways to reduce impacts on the wetlands and streams.

Avoiding an impact does not require that a proposal is to be denied or must be located on another site, but rather an analysis is done to see if there is a design or other measures that could avoid an impact. For example, if an applicant proposes to build a home on a lot, the City could not ask that an applicant to simply build on another lot to avoid the impact. The same rational applies to a transportation project where avoidance is not intended to preempt needed system improvements.

B. Planning Commission Direction.

Include mitigation sequencing in the revised Chapter 90. This approach is consistent with BAS, the City's shoreline regulations, and is used by federal, state and other local jurisdictions.

X. OFF-SITE MITIGATION FOR WETLAND OR STREAM MODIFICATIONS

A. Background.

The current Chapter 90 KZC requires that mitigation to off-set impacts to a wetland, such as fill, draining or reducing a wetland or culverting a minor stream, must occur **on the project site** or **in the same city drainage basin** as the project. Currently many sites are covered in wetlands or streams and/or buffers such that there is no space to do the

mitigation on site. Thus, on-site compensatory mitigation to mitigate for wetlands, streams and their buffer area loss is often not feasible, and alternative off-site locations are seldom available within the drainage basin where the proposal is located.

Since adoption of the City's Chapter 90 KZC regulations, several options for meeting wetland and stream mitigation have been accepted by Ecology and adopted by other local jurisdictions. The options are either mitigation in the City's greater drainage basin (the Cedar River/Sammamish River Watershed) or mitigation done in advance in the City.

1. Off-Site in Kirkland's Greater Watershed

- **The King County In-lieu fee (ILF) program** has been in effect since 2011. Administered by King County, it allows participation by both public and private projects. The permit applicant makes a single payment into the ILF program fund, which pools money for watershed-based projects. Funds are collected by the sponsoring agency or jurisdiction, which is responsible from that point forward for the completion and success of the mitigation, including ensuring that implementation takes place within three growing seasons of receiving funds. The applicant's fee is based directly on the project impact and includes all costs for the mitigation, including design, land acquisition, materials, construction, administration, monitoring, and stewardship. After paying the fee, the applicant has no further responsibility.

- **Wetland Banking** programs are administered by private parties or non-profits with oversight by Ecology, the Corps and other agencies. It has become more common, but Kirkland is outside the service area of any current banking programs. A new mitigation bank site, located in Redmond, (Keller Farm Mitigation Bank) is going through review by the Ecology and the Corps and its service area is expected to include Kirkland. Wetland banks are similar to ILF, except that wetland bank projects are generally improved in advance of impacts at established sites, while with ILF, the project is implemented after enough credits are pooled to purchase a mitigation site. Therefore ILF may result in more lag time between project and compensatory mitigation.

Both King County's ILF program and the Wetland Banking option are **mitigation alternatives** for applications where on-site mitigation is not feasible. The benefits to Kirkland of allowing permittees to use ILF include:

  - Providing predictability and consistency to the permitting process;
  - Reducing the need for applicants to design and implement mitigation;
  - Compensating for impacts by addressing the ecological needs of the watershed;
  - Targeting larger, more ecologically viable and sustainable projects than allowed by traditional mitigation; and
  - Providing a prioritization strategy for watershed-wide restoration sites and projects; and ensuring that mitigation projects function as intended in perpetuity.

Kirkland in particular could benefit from these options, as opportunities for worthwhile and meaningful on-site, and in the same basin area mitigation dwindle in the developing landscape.

2. Off-site Advance Mitigation done in the City

Another option is for Chapter 90 KZC regulations to allow the City to **use or purchase property** that can be utilized as a repository for future required mitigation as a result of City parks, streets and utilities projects. This is termed **advanced mitigation**. The City owned Forbes Creek or Juanita Bay wetlands may be candidate locations where restoration, creation or enhancement mitigation projects could be considered.

Although similar to mitigation banking, advance mitigation is different in several ways. Most important, advance mitigation cannot be bought and sold by a third party. The applicant seeking mitigation debits must be the same entity that created the advance mitigation credits.

The advance mitigation program is set up similar to a mitigation bank or ILF program but has less regulatory requirements that must be met to be certified by the interagency review team (Ecology, the Corps and other agencies). It is a simpler and less time intensive process to meet the regulatory standards for approval. The City could act on its own or through a third party to construct, maintain and monitor the mitigation but the **City is ultimately responsible for site performance**, unlike the in lieu fee or mitigation banking options. The mitigation must be implemented **prior to the completion** of the project being mitigated - otherwise it is considered concurrent mitigation rather than advanced mitigation. Advanced Mitigation may result in reduced mitigation ratios because it reduces the risk of temporal loss. The advantage to the City would be that they could mitigate more impacts in a smaller area.

The most challenging aspects are to develop and present a clear approach on **how mitigation will be calculated and accounted for over time**. There are two approaches to measure appropriate amount of mitigation – credit/ debit or mitigation ratios. Ecology guidance would be used as a guide to develop such a program. Ecology and the Army Corp of Engineers regulate and track advance mitigation associated with direct impact to wetlands. Therefore those agencies could administer the tracking and accounting for success for such projects. For projects only affecting buffers on the other hand, the City would be responsible for tracking and accounting success. The main potential **drawback is the additional administration** associated with tracking of credits and debits.

The **advantage** to the City of Advanced Mitigation over other off-site programs is that if the City owns a mitigation site, it avoids the ever increasing cost of land that is factored into the fee charged for in-lieu fee or mitigation banking programs. The **challenge** to the City is to allocate the funding for the mitigation project design, permitting and construction in advance of the need.

The Planning Commission decided that for now only the City should be allowed to do Advanced Mitigation for both wetlands and the buffers and not private individuals or other non-city public agencies until the approach and management requirements are better understood.

3. Other - Preference for Location of Mitigation

The Planning Commission also discussed whether to have a statement in Chapter 90 KZC that addresses the preferred location of mitigation.

Based on Ecology guidance, compensating for lost or degraded wetlands on-site is not always the best option. Preference should be given to a site that provides the highest ecological benefits, whether on-site, off-site, in-kind, or out of kind. Compensatory mitigation projects that contribute to the functioning of a larger landscape are preferable to simply replacing acreage at the site of impact.

In-kind means that the same functions that are lost are replaced. For example, if a wetland serves a storm water detention function, the mitigation site should also serve a storm water detention function. If a wetland serves a habitat function, the replacement mitigation should be designed to also serve that habitat function.

According to The Watershed Company, off-site mitigation should be allowed dependent on the wetland type and rating. It is not as important to mitigate for degraded wetlands on-site as it is for highly functioning wetlands. Wetlands that serve high value habitat and hydrology functions should be mitigated for on-site or at least within our city limits because otherwise these functions could be permanently lost. Small urban wetlands provide significant water quality functions and may be particularly important for controlling flooding in highly urbanized environments, such as in Kirkland. Urban wetlands also may provide recreational and educational opportunities and aesthetic values. Prioritization recognizes that once these functions are gone they will be difficult to replace because of the high price of land in Kirkland.

Therefore compensatory mitigation should be prioritized as follows:

1. On-site in-kind
2. Off-site in City in-kind
3. Off-site within watershed in-kind

Other local jurisdictions have similar preference statements in their wetland regulations.

B. **Planning Commission Direction.**

- *Allow the use of off-site mitigation through the in-lieu fee or mitigation banking programs respectively.*

- *Allow off-site Advanced Mitigation for City projects as an interim step before making it available to other applicants, in order to understand the complexity of administering this option.*
- *Prioritize other mitigation in the following order:*
    1. *On-site in kind*
    2. *Off-site in City in-kind*
    3. *Off-site within watershed in-kind*

XI. FISH AND WILDLIFE CONSERVATION HABITAT AREAS

Fish and Wildlife Habitat Conservation Areas are found in stream and wetland habitat areas for:

- **Federally endangered, threatened or sensitive species** as determined by U.S Fish and Wildlife Services (USFW) and National Marine Fisheries. These are fish and wildlife that are in danger of extinction or threatened to become endangered.

- **State designed endangered, threated and sensitive species** as identified by Washington Department of Fish and Wildlife (WDFW). These are fish and wildlife species native to Washington that are in danger of extinction or threatened to become endangered, vulnerable or declining in a significant portion of their range in the state.

- **Habitat and Species of Local Importance** as identified by a local jurisdiction or nominated by an individual or group and then accepted and adopted by that jurisdiction. These are habitat and species of importance due to their population status or sensitivity to habitat manipulation and need protection. These may include State Priority Habitats and Species identified for conservation and management as determined by Washington Department of Fish and Wildlife (WDFW). A priority habitat may have unique vegetation type of dominate plant species.

A. Endangered, Threatened or Sensitive Species.

1. Background:

   Under GMA, jurisdictions must have regulations that protect fish and wildlife habitat conservation areas and their buffers for endangered, threatened or sensitive species. Required buffer widths must reflect the sensitivity of the habitat and the type and intensity of human activity proposed to occur nearby consistent with the management plans issued by the Washington Department of Fish and Wildlife, United States Fish and Wildlife and National Marine Fisheries. These **management plans** vary by species and include a buffer zone, preservation of vegetation and/or habitat features, limit access to the habitat area including fencing, seasonal restrictions of construction activities, periodic review of mitigation activities and requirement of a performance bond to ensure completion and success of mitigation.

   Kirkland has two fish species that are endangered: **Chinook salmon** and **Steelhead** both listed as "threatened" under the federal listing as "candidate under state listing. Kirkland has one wildlife species: the **Bald eagle** listed as "sensitive" under the state

listing and as a "species of concern" under the federal listing (see Best Available Science Report). However, staff has been told by WDFW recently that even bald eagles will be de-listed as "sensitive" because their population has continued increased.

The Watershed Company has a correction for the BAS report, which is that the **pileated woodpecker** is not classified as a "sensitive species" but as a "candidate species" so it is not on the endangered, threatened or sensitive listing.

Local jurisdictions all have similar regulations that address endangered, threatened or sensitive species and that reference USFW and WDFW management plans. The jurisdictions require that a management plan be prepared as part of the **critical area report** or as a separate plan using WDFW and USDFW standards. They also require further mitigation beyond the local buffers if it is demonstrated that the buffer is insufficient to prevent habit degradation.

2. Planning Commission Direction:

Regulate habitat for endangered, threatened and sensitive species with a reference to state and federal management plans. This would be consistent with GMA and other local jurisdictions.

B. Habitat Associated with Species of Local Importance.

1. Background:

Under GMA, the City should have a listing of species of local importance or at least a nomination process. Implications of the list would mean that management plans for these species would need to be addressed in the critical area report and implemented, referencing WDFW management plans.

Redmond (Great Blue Heron), Bellevue (23 fish and wildlife species), Woodinville (20 fish and wildlife species) all have a **listing of local species of importance**. Kenmore specifically regulates blue heron rookeries and bald eagles. Kent also regulates blue heron habitat.

Redmond, Bellevue and Woodinville all have **nomination processes** using the Code Amendment process and having nomination criteria. In Bellevue and Woodinville, an individual or group can make a nomination. In Redmond, the City Council can nominate a species. All have criteria to ensure that the nominations have merit based on scientific documentation and are not used as a means to possibly stop or delay a development by filing a frivolous nomination.

For Kirkland, Best Available Science Report dated January 2016 identifies the following **Priority Fish and Wildlife Species in the city**:

Fish in Kirkland based on The Watershed Company's documentation:
- ✓ Coho salmon (federal species of concern)

- ✓ Sockeye/kokanee salmon (state concern status)
- ✓ Cutthroat trout (priority species, but no other state or federal status)

Priority Species in Kirkland mapped by WDFW:

- ✓ Pileated Woodpecker (candidate for priority species)
- ✓ Great Blue Heron (monitor for priority species)
- Purple Martin (candidate for priority species)
- Trumpeter Swan (no state or federal status)

Since it appears that the **Bald eagle** will be de-listed as a sensitive listing by the end of the year based on information from WDFW, the eagle should be listed as a species of local importance.

The Watershed Company recommends that the **Pileated Woodpecker** and the **Great Blue Heron**, along with the five fish, also be listed as species of local importance. The Pileated Woodpecker habitat is located within Finn Hill on properties already under the Holmes Point Overlay (which limits tree removal and grading) and in some of the City parks. The Great Blue Heron habitat is located in the city's Yarrow Bay Park. WDFW has established management plans for these two species which would be referenced in the critical area report for any development proposal that would occur within these habitat areas. In all cases, the required stream buffers will provide sufficient habitat for the five fish listed above and thus no increase to the buffer would be required.

These species are found on either or both of Bellevue and Redmond's local priority species lists.

TWC does not recommend the **Purple Martin** or the **Trumpeter Swan** since the Purple Martin has only one mapped occurrence (so it is unusual) and both species are only found in Juanita Bay, which is regulated under shoreline jurisdiction and not Chapter 90 KZC.

2. Planning Commission Direction:

   - *List the three priority fish and the three wildlife species, including the bald eagle, discussed above as species of local importance. This would show the City's support of protecting these species by requiring the WDFW management plans be implemented for the species.*

   - *Provide a nomination process with criteria for possible future local listing using a Process IV: Code Amendments. Chapter 90 would be amended if the nomination was approved. Use similar criteria adopted by other local cities to ensure that the nominations have merit based on scientific documentation and is not used as a means to possibly stop or delay a development by filing a frivolous nomination.*

XII. EXEMPTED USES AND ACTIVITIES

A. Background.

Current Chapter 90 KZC cites activities in critical areas or their buffers that are exempt from a permit, and called General Exceptions. Pursuant to Ecology guidance, exemptions are intended to be activities in wetlands or streams or their buffers that have little or no environmental effect on critical area conditions and functions (including its water, soil, or vegetation), are temporary, or are an emergency that threatens public health or safety.

Although a critical area permit is not required to perform these activities, prior authorization from the Planning Official is required, except for emergency actions. While these exempted activities would not be subject to mitigation sequencing, the exemptions should not be interpreted as permission to degrade a critical area or ignore risks from natural hazards.

Ecology and TWC recommend that regulations should be clear on what activities are exempt from needing a permit, but still must comply with the Code and City-approved best management practices (BMP's) to minimize temporary impacts (e.g. erosion control and water quality protection). Current regulations do not reflect Ecology guidance.

While some exemptions do contain standards to limit their impact on the critical area, they do not necessarily reflect current best management practices or current guidance from Ecology.

The surrounding cities of Renton, Bothell, and Bellevue note that the exempted activity is subject to administrative authorization, while Woodinville and Redmond do not specify an authorization process. All except Redmond provide BMP guidance.

B. Planning Commission Direction.

- *Add purpose section clarifying the exemptions are for activities that have little or no environmental impact, are temporary in nature, or emergencies.*
- *Clarify that the exemptions are subject to prior authorization by the Planning Official, except for emergency actions, and exempt activities are subject to BMPs.* ***(see C. below)***
- *Clarify what constitutes maintenance and repair.*
- *Clarify that existing facilities and new facilities may not expand into areas not previously disturbed.*
- *Establish a timeframe for restoration.*
- *Allow repair and maintenance of existing private driveways.*
- *Clarify that foundation replacement is considered under the nonconformance section, not as an exception to sensitive area permit.*
- *Require retroactive mitigation for emergencies.*
- *Consider new exemptions for maintenance of non-motorized Park trails, new non-motorized Park trails, and trails connecting to the Cross Kirkland Corridor and Eastside Rail Corridor.*
- *Consider new exemptions for other utility lines connecting to existing lines.*

This approach is consistent with Ecology guidance and other local jurisdictions.

C. Follow-up from Planning Commission meeting of April 28, 2016.

Since the Planning Commission in March, staff has done further research and recommends a two tier approach to exemptions as noted below. Both Ecology BAS and TWC support this approach:

1. The first tier are **activities and uses allowed outright** as long as they meet the listed criteria and best management practices. These will be called **exemptions**. While they are subject to restoration of any soil or vegetation disturbance as a result of the activity, they are not subject to mitigation sequencing nor compensatory mitigation. The only exception is for emergency work that must mitigate after the fact to compensate for lost functions and values. The draft list of exemptions is provided below.

2. The second tier are **activities and uses that may be permitted subject to administrative approval by the Planning Official**. These will be called **Permitted Activities Subject to Development Standards**. (See Section XI. below for further explanation.)

Exemptions
1. **Structures** - Repair and maintenance of existing structures. Examples include painting, replacing siding, windows and roofing.
2. **Public Streets** - Within existing improved rights-of-way, repair and maintenance and reconstruction of existing public streets, associated appurtenances, roads, bike lanes, sidewalks, and access easements.
3. **Public Utilities** - Within existing improved rights-of-way or existing improved utility corridors, repair and maintenance, reconstruction and new public utility structures and facilities, utility systems and their associated facilities, lines, pipes, mains, equipment and appurtenances. [3, 4, 6]
4. Repair and maintenance of existing non-motorized **public Park trails**.
5. Routine **landscape maintenance** of legally established lawns and gardens; including mowing, pruning, weeding, and planting; provided that such activities do not expand the area of permanent disturbance.
6. Addition of **HVAC equipment**, provided that there is no feasible alternative location available, it does not expand the area of permanent disturbance, it is as far as possible from the critical area, and that such equipment does not exceed nine (9) square feet.
7. **Site investigative work** and studies necessary for land use applications, including soils tests, water quality studies, wildlife studies, and critical area investigations; provided, that

Exemptions
any disturbance of the critical area or its buffer shall be the minimum necessary to carry out the work or studies and disturbed areas shall be immediately restored. Use of any mechanized equipment requires prior approval of the Planning Official. 8. **Educational activities**, scientific research, and passive outdoor recreational activities such as bird watching, fishing, and hiking, not including trail building or clearing. 9. **Emergency activities** necessary to prevent an immediate threat to public health, safety, or welfare. Alterations shall be reported to the City immediately. The impacted critical area and its buffer shall be fully restored in accordance with a critical area report and mitigation/maintenance plan.

XIII. PERMITTED USES SUBJECT TO STANDARDS

A. Background.

The second tier of uses and activities are **Permitted Uses Subject to Standards**. These uses and activities are subject to Planning Official review and approval to evaluate if they meet the requirements of mitigation sequencing. These activities are subject to restoration and/ or mitigation requirements to replace lost functions and values. Some activities are limited to critical area buffers while others may also be allowed in the critical area.

The Planning Official may require information to make an informed decision such as a wetland determination report classifying the critical area and providing a wetland delineation and survey, and a critical area report analyzing mitigation sequencing and identifying required restoration/mitigation, as appropriate. Applicant funded peer review of the required submittal information by the City's wetland consultant is required.

If a request is approved, a critical area authorization would be issued by the Planning Official. If the request is denied, the applicant may proceed to request a critical area permit.

Other jurisdictions have taken a similar two-tier approach in their codes.

Permitted Activities Subject to Development Standards	
Use/Activity:	**Standards:**
Private passive recreation structures: non-motorized trials, Stream crossings Benches Wildlife-viewing structures	Located in outer 25% of buffer, except at stream or lake access. No more than 5' wide, pervious Not located in Fish habitat conservation areas
Government facility or Public Utility	
1. Parks: Non-motorized pubic Park trails Stream crossings Benches Wildlife-viewing structures	Located in outer 25% of buffer, except at stream or lake access. No more than 5' wide, pervious Not located in Fish habitat conservation areas (Type F streams and buffers)
1. Public Utilities: **a. New Sewer and Water Lines**	Located in Category III and IV wetland buffers and Type NP and NS stream buffers Required for gravity flow Located as far as possible from critical area edge.
b. New Sewer and Water lines to connect to existing lines in buffers	Prohibited in Type F stream buffers No feasible alternative location No degradation to functions or values
c. Drilling for utilities under critical area	Entrance/exit portals completely outside of buffer. No interruption of groundwater or surface water to wetland.

Permitted Activities Subject to Development Standards	
d. Stormwater management Runoff treatment or flow control best management practices	No grading or maintenance required Vegetation compatible with buffer vegetation standards
Stormwater outfalls	Located in Category III and IV wetland buffers and Type NP and NS stream buffers when discharge outside buffer causes erosion or slope instability Located in Category I and II wetland buffers and Type F stream buffers only if adjacent to slopes greater than 30%
e. Cross Kirkland Corridor and Eastside Rail Corridors Construction of new public nonmotorized trails	No expansion of existing permanent disturbance area Pervious or other low-impact materials
Construction of new public nonmotorized trails connecting to either corridor	Located in III and IV wetland buffers and Type NP and NS stream buffers No more than 5' wide, pervious Not located in Fish habitat conservation areas (Type F streams and buffers)
Minor replacement or modification of existing facilities by a public utility in either corridor	No expansion of existing permanent disturbance area

B. Planning Commission Direction: *The Planning Commission has not seen the complete draft list of permitted uses or the list of exemptions, but will be reviewing them at their next study session.*

XIV. SINGLE FAMILY NONCONFORMANCES

To meet current BAS, buffer widths for most wetlands and many streams will need to be increased. While there are already many nonconforming structures in Kirkland due to current buffer and buffer setback requirements, the buffer increases will cause additional structures or portions of structures to become nonconforming.

When considering how to address such nonconformances, the Planning Commission considered the actions, goals and policies for critical areas adopted in the new **Environment Chapter** of the Comprehensive Plan listed at the beginning of the memo.

The challenge is to ensure implementation of these important goals and policies while not overly restricting existing, legal use of properties. It should be noted that nonconformance regulations address those activities that can be conducted without a request for buffer modification or averaging or through reasonable use provisions. Activities beyond what is allowed by nonconformance regulations may still be pursued through those other processes.

The City's current nonconformance provisions relating to wetlands and streams are found in KZC Chapter 90 (Drainage Basins) and in KZC Chapter 162 (Nonconformance). KZC Chapter 162 addresses nonconformance citywide unless a section in another chapter supersedes it, such as certain nonconforming provisions in Chapter 90. Staff intends to consolidate all regulations related to critical area nonconformances into either Chapter 90 or 162.

The table below is an overview of the different issues for nonconforming structures and the current applicable code section that are further discussed in the following sections.

Issues for Nonconforming Single Family Structures

Section Below	Action (in order of least impacting)	Current Regulations
A.	Maintenance and repair	Section 90.20.6 KZC **does** allow it
B.	• Reconstruction as part of maintenance of repair project • Reconstruction due to fire or acts of nature	• Section 162.35.13.a **does not** allow it • Section 162.30.1 **does not** allow if exceeds 50% of assessed value of improvement. Shoreline regulations do allow complete rebuild/restore
C.	Expansion of nonconforming structure that **does not increase** the degree of nonconformance	Section 90.20.6 **does** allow expansion of nonconforming structure if it does not increase nonconformance
D.	Expansion of nonconforming structure that **increases the degree of nonconformance**	Section 162.45 **does not** allow

A. Maintenance and Repair of Nonconforming Structures.

1. Background:

   Maintenance and repair to a nonconforming structure is allowed as an exemption under Section 90.20.6 KZC. All other **local jurisdictions** surveyed allow maintenance and repair of nonconforming structures.

   See illustration for Nonconformance – Maintenance and Repair on page 31.

2. Planning Commission Direction:

   Continue to allow maintenance and repair as an exemption under Chapter 90 for all structures and clarify definition.

B. Reconstruction of Nonconforming Structures.

1. Background:

   Maintenance and repair of nonconforming structures is currently limited to that which is "normal and routine". Reconstruction is not currently permitted in Chapter 90 KZC and Chapter 162 KZC. The City's existing regulations on structures damaged due to fire or nature are found in Section 162.30.1 KZC as follows:

   > *Special Provision for Damaged Improvements: If a nonconforming improvement is damaged by sudden accidental cause and the damage does not exceed 50 percent of the assessed or appraised value of that improvement, whichever is greater, the applicant may reconstruct that improvement. The reconstructed improvement may not be more nonconforming than it was immediately prior to the damage. A building permit to rebuild the nonconforming improvement must be applied for within six (6) months or the nonconformance shall be considered to be terminated and shall not be resumed.*

   Thus, a structure must be brought in conformance if a certain percentage of the structure must be replaced or restored due to the casualty damage.

   However, Section 83.550.4 for nonconformances under the shoreline regulations allow damaged structures to be replaced, provided that:

   a. *The permit process is commenced within 24 months of the date of such damage; and*
   b. *The reconstruction does not expand, enlarge, or otherwise increase the nonconformity, except as provided for in this section; and*
   c. *The reconstruction locates the structure in the same place where it was, or alternatively if moved, then the least environmentally damaging location relative to the shoreline and any critical areas;*

The 24 month timeline was established to allow for time to process insurance claims, get financing, design rebuild, and apply for building permit.

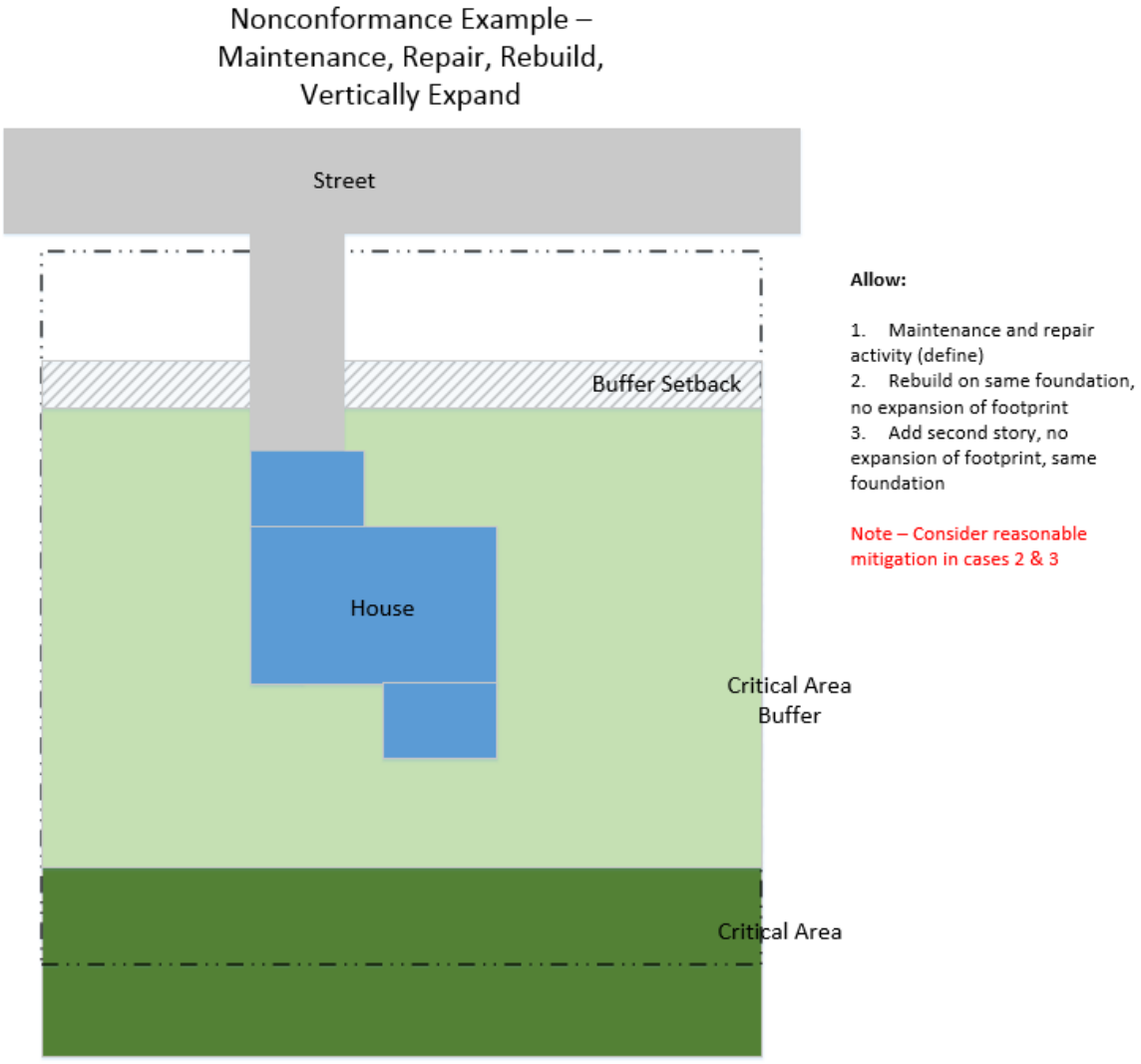
Most **local jurisdictions** appear to allow reconstruction of nonconforming structures subject to limitations, including no expansion of the existing footprint. Bellevue, Bothell and Woodinville also only allow reconstruction above the foundation (no replacement of the foundation itself). This limitation makes sense because if the foundation is being removed, the development should be subject to mitigation sequencing to consider other less impactful locations.

See illustration for Rebuild on page 31.

2. Planning Commission Direction:

*Allow reconstruction of primary structures, including garages provided there is **no expansion of the existing footprint** and the **reconstruction is built on the existing foundation** (no replacement of the foundation itself). Treat structures damaged by fire and natural causes in the same manner but require permits within 24 months consistent with City shoreline rules.*

Not included for replacement are accessory structures (such as sheds, play structures, gazebos,) in the buffer, or buffer setback. Accessory structures are not essential to the use of property and should be relocated out of the critical area, buffer and buffer setback.



C. Expansion of a Nonconforming Structure that Does Not Increase the Degree of Nonconformance.

1. Background:

   Currently, Section 90.20.6 allows the expansion of a nonconforming structure if the addition is outside of the buffer and buffer setback, and the expansion does not increase the degree of nonconformance.

   Section 90.20.6 KZC: General Exceptions: Normal and routine maintenance or repair of structures; provided, that such activities do not increase the previously approved structure footprint within a sensitive area or its buffer. Increases in structure footprint outside of such areas shall be allowed, even if all or a portion of the previously approved footprint is within such areas.

Many **other jurisdictions** simply allow expansions similar to Kirkland's existing regulations. A number of other jurisdictions (cities of Bellevue, Redmond and Federal Way) limit the exception by floor area or valuation.

2. Planning Commission Direction:

*Retain existing provision that allows the expansion of a nonconforming structure if the **addition is outside of the buffer and buffer setback**, and the expansion does not increase the degree of nonconformance in any way.*

D. Expansion a Nonconforming Structure that Does Increase the Degree of Nonconformance.

1. Background:

The City's current Section 162.45 KZC **does not permit a structure to be enlarged, altered or changed in any way that would increase the nonconformance**.

> *Section 162.45 Prohibition on Increasing Nonconformances: No nonconformance may in any way be enlarged, expanded, increased, intensified, compounded or in any other way made greater, except as permitted in this chapter.*

Thus, the City's current regulations do not allow a structure located in a buffer or buffer setback to be expanded in any direction into the buffer or buffer setback (see illustration on page 31).

Staff has discussed BAS options with the Department of Ecology. In general, BAS would suggest that structures are not to be expanded into the buffer, even if the existing structure is in the buffer. However, recognizing the constraints on existing nonconforming structures and the creation of additional nonconforming structures, the Department of Ecology has indicated that expanding a nonconforming structure further into the buffer is acceptable if the expansion occurs on the side opposite or furthest away from the wetland or stream and if the expansion is limited. They also recognize that it is a policy decision for each jurisdiction based on its goals and policies the extent of urban condition. The policy variability is evident in the range of approaches other jurisdictions have taken on this issue.

2. Other local jurisdictions:

The table included as Attachment 4 is a list of the regulations for local jurisdictions concerning expansion of nonconforming structures. As reflected in Attachment 4, jurisdictions vary between those that allow expansion of existing nonconformances and those that do not. Six of the jurisdictions surveyed do not allow expansions of the footprint. Five jurisdictions allow some limited expansion but no closer than the existing structure.

The more permissive regulations allow footprint expansions of up to 1,000 square feet. For Kirkland, that could result in homes that exceed what Kirkland would consider permissible under current reasonable use (typical 3,000 square foot maximum site disturbance). Bellevue has a more moderate approach for expansion of nonconformances that follows a mitigation sequencing rationale by requiring consideration of options with less impact (away from the critical area). For example, if the objective is to expand the kitchen and there is no feasible means to do this away from the critical area side of the home, then the expansion into the buffer could be approved. However, if the objective is to add a bedroom and this addition can be achieved on the side of the house opposite from the critical area, then that would be the preferred location for the expansion.

3. Discussion:

One approach to analyzing the different types of changes that would increase the degree of nonconformance is to assess them pursuant to the following four categories. This is most similar to Bellevue's approach:

a. **No impact:** No new permanent impacts to critical area, buffer or buffer setback
b. **Low impact:** New impacts to buffer or buffer setback located on the opposite side of the existing home from the critical area
c. **Moderate impact:** New impacts to buffer or buffer setback located no closer to critical area than existing home
d. **High impact:** New impacts to buffer or buffer setback located closer to critical area than existing home

Each of these types of impacts is assessed in the tables and in diagrams below on pages 36-38.

a. No impact improvements that increase the degree of nonconformance of the existing structure
• Changes within the existing footprint (fill the donut hole, add second story) • Expansion of existing footprint or additions outside the buffer or buffer setback • Minimal additions (bay window, eaves, etc.)

These improvements would have no new permanent impact on the functions and values of the critical area or its buffer.

b. Low impact improvements that increase the degree of nonconformance of the existing structure
• Expand footprint of structure into the building setback or buffer that is on the opposite side of the structure from the wetland or stream

These improvements would have relatively low permanent impact on the critical areas because the function of the buffer that is separated by the existing structure is of lesser value compared to the buffer between the structure and the wetland or stream.

c. Moderate impact improvements that increase the degree of nonconformance of the existing structure
• Expand structure into the building setback or buffer that is on the same side of as the wetland or stream

These improvements would have a permanent impact to the critical area since it additional encroachment into the buffer that is protecting the wetland or stream. Prohibiting encroachment of improvements and closer to the critical area than the existing home would constitute relatively moderate impacts. Construction disturbance and future maintenance and repair of the expansion would further increase the impact to the critical area.

d. High impact improvements that increase the degree of nonconformance of the existing structure
• Expand structure into the building setback or buffer that is on the same side of as the wetland or stream

These improvements would have a high permanent impact to the critical areas since it a reduction of the buffer that is protecting the wetland or stream. Construction disturbance and future maintenance and repair of the expansion would further expand the impact to the critical area.

4. Planning Commission Direction: (see pages 36-38 for illustrations)

*a. Allow outright **No impact** modifications to an existing nonconforming structure.*

- *Require native revegetation of disturbed area if the buffer is disturbed for construction of these improvements.*
- *Require the application to address any surface water issues*

*b. Allow, subject to review, **Low impact** modifications to an existing nonconforming structure.*

- *Only allow for those structures that have not received prior buffer modifications or reasonable use exceptions*
- *Limit to maximum footprint expansion to **1,000 square feet but not to exceed 50% of the assessed valuation of the structure***
- *Require 1:1 compensatory mitigation of remaining buffer area*
- *Require native revegetation of disturbed area if the buffer is disturbed for construction of these improvements*

*c. Allow, subject to review, **Moderate impact** modifications to an existing nonconforming structure*

- *Only allow for those structures that have not received prior buffer modifications or reasonable use exceptions*

- *Limit to maximum footprint expansion to **500 square feet but not to exceed 50% of the assessed valuation of the structure***
- *Require 1:1 compensatory mitigation of remaining buffer area*
- *Require native revegetation of disturbed area if the buffer is disturbed for construction of these improvements*

*d. Allow, subject to review, **High impact** modifications to an existing nonconforming structure*

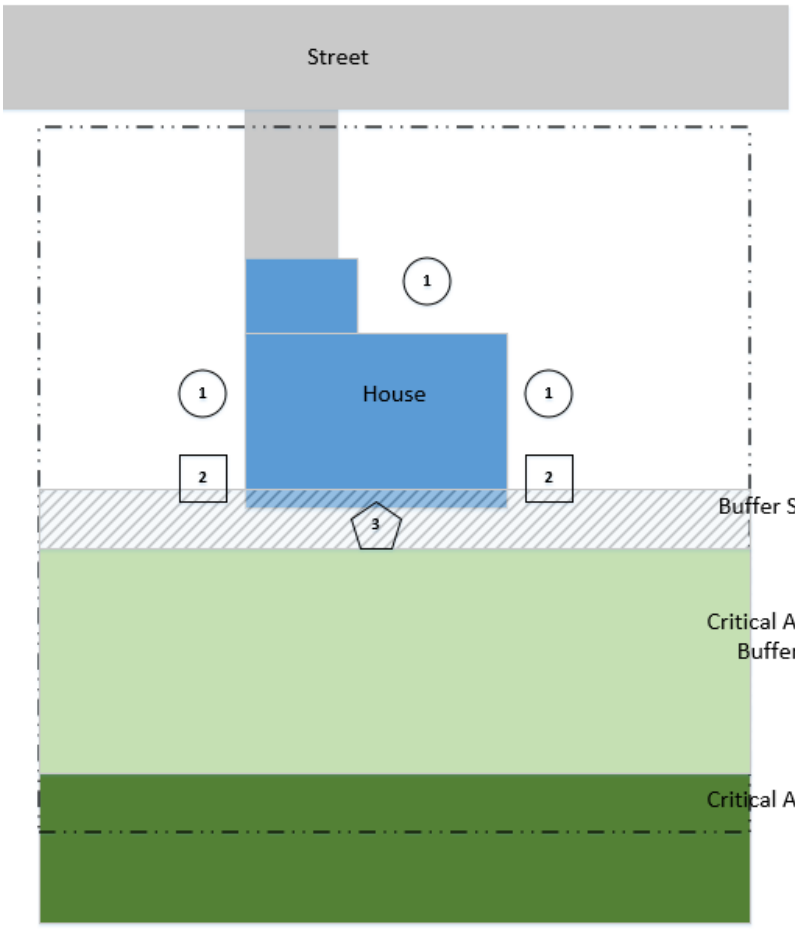
- *Only allow for those structures that have not received prior buffer modifications or reasonable use exceptions*
- *Limit to maximum footprint expansion to **250 square feet but not to exceed 50% of the assessed valuation of the structure***
- *Require minimum 1:1 compensatory mitigation of remaining buffer area. The 1:1 ratio may be appropriate if the expansion is into an existing disturbed area, but a higher ratio is appropriate if the expansion would disturb a forested buffer*
- *Require native revegetation of disturbed area if the buffer is disturbed for construction of these improvements*

*For b, c and d above, **mitigation sequencing** is required as diagrammed (see Illustrations on pages 35-37) below to ensure that less impactful alternatives are considered and that temporary and permanent impacts are mitigated.*

*For d – high impact above, establish a **minimum buffer width** to avoid impact at or near the edge of a stream of wetland.*

Below are examples of the various approaches described above.

Nonconformance Example – Buffer Setback

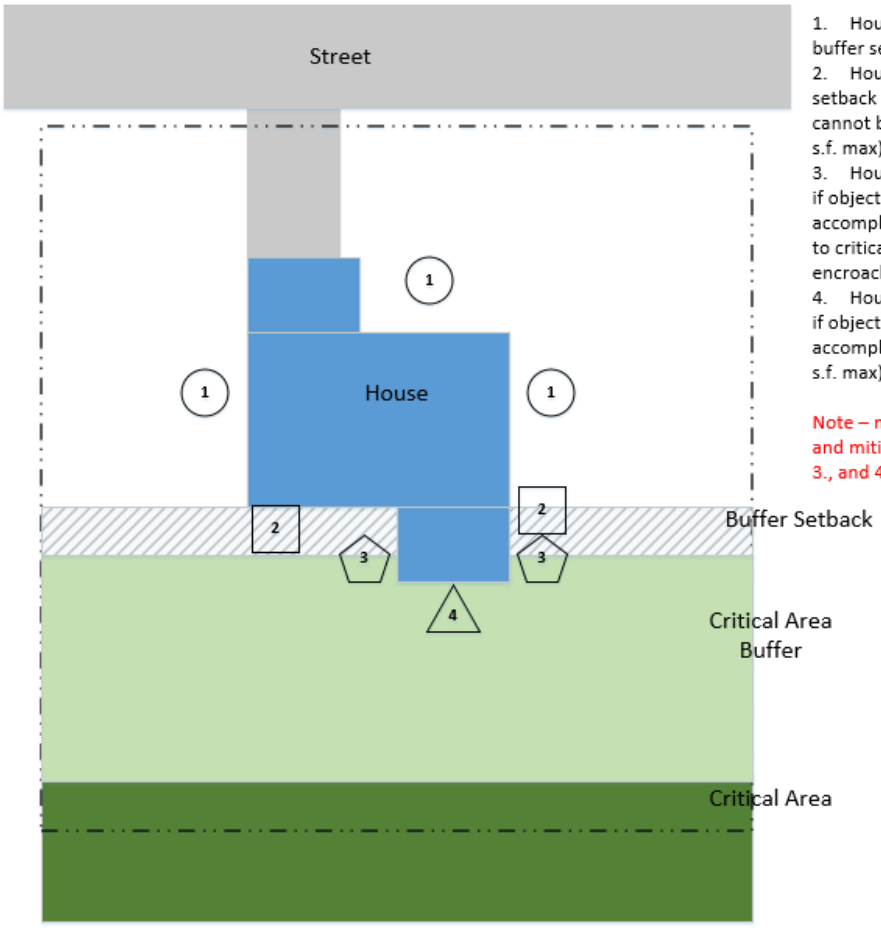


Order of preference when structure is located in <u>Buffer Setback</u>:

1. House expanded outside of buffer setback and buffer
2. House expanded into buffer setback only if objective of expansion cannot be accomplished with 1. No further than existing encroachment
3. House expanded into buffer setback only if objective of expansion cannot be accomplished with 1. or 2.

Note – 250 s.f. maximum footprint expansion is recommended in case 3. Above the limit should be subject to mitigation sequencing and/or reasonable use

Nonconformance Example – Partial Buffer

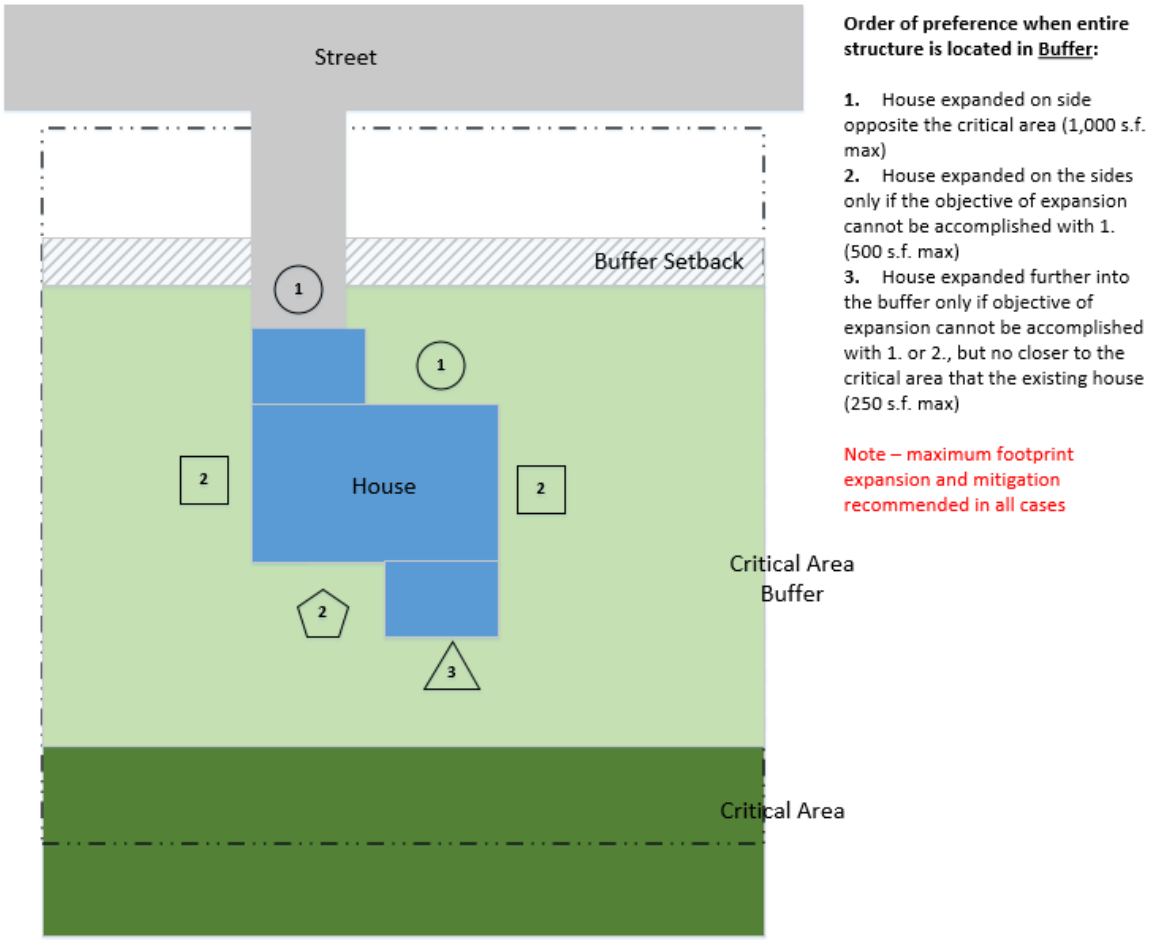


Order of preference when structure is partially located in Buffer:

1. House expanded outside of buffer setback and buffer
2. House expanded into buffer setback only if objective of expansion cannot be accomplished with 1. (500 s.f. max)
3. House expanded into buffer only if objective of expansion cannot be accomplished with 1. or 2. No closer to critical area than existing encroachment (500 s.f. max).
4. House expanded into buffer only if objective of expansion cannot be accomplished with 1., 2., or 3. (250 s.f. max)

Note – maximum footprint expansion and mitigation recommended for 2., 3., and 4.

Nonconformance Example – Full Buffer



XV. MAXIMUM DEVELOPMENT POTENTIAL

The table below lists the issues addressed in this section. For each issue noted in the table, the section provides background, a summary of other jurisdiction's regulations, and the Planning Commission direction.

Section Below	Issue	Current Regulations	Planning Commission Direction
A.	Clarify that after calculating maximum development potential, existing KMC 22.28 subdivision flexibility standards and cottage/carriage and two /three unit homes KZC regulations may increase	KZC 90.135.1 is **unclear** about applicability of KMC 22.28, and other zoning regulations to increase density/or lots.	**Clarify** that lot size, lot averaging, small lot single family and Low Impact Development (LID) **subdivision techniques** and cottage, carriage and two/three unit homes **regulations** are available to achieve increased density or number of lots.

	the number of lots or density		
B.	Provide some relief from dimensional standards.	Chapter 90 **does not** allow deviation from dimensional standards.	**Allow:** a. Minimum **required yards** • zero lot line from interior lot lines to achieve clustering between units, • front – 10 feet • Side and rear - 5 feet b. Minimum **parking pad** dimensions • width - 10 or 8.5 feet per required stall, • depth - 18.5 feet per required stall c. **Tandem parking** where stalls are shared by the same dwelling unit

Current regulations establish a formula for Maximum Development Potential (MDP). MDP is a calculation to establish the **maximum potential number of dwelling units that may be developed** on a site that contains a wetland, stream, or their buffers.

The calculation are as follows:

- Portion of site with no buffer, wetland or stream: counted at full density
- Portion of site containing a buffer: counted at a percentage of density based on a sliding scale
- Portion of site containing a wetland or stream: not counted for density

Based on a sliding scale, the more of a site that is encumbered by a critical area buffer, the greater the dwelling unit reduction. The dwelling units must be placed on the buildable area of the site and not in the buffer or critical area.

The MDP calculation was originally created in 1998 in response to several developments that transferred 100% of development potential of the gross area of a site to the buildable portion of a site – resulting in very small lots that are out of character with the surrounding neighborhood. An example of this is Trillium Court, a PUD developed prior to 1998, shown below in an aerial photo from the City's GIS mapping. The surrounding lots are zoned RS 7.2 and developed under current provisions for calculating MDP.

Trillium Court

Once the base dwelling unit count is calculated with the MDP formula, existing Subdivision and Zoning regulations may still allow the number of units to be increased. Various subdivision flexibility standards in the Kirkland Municipal Code (KMC 22.28) may be applied to increase the potential number of lots. These include size, lot averaging, small lot single-family, and low impact development (LID). Cottage development regulations (KZC 113), and LID provisions (KZC 114) also allow increased number of lots. All of these options would be reviewed concurrently with the subdivision process. These ways to increase density will continue to be available under the revised Chapter 90 KZC regulations.

The Gap Analysis Report and staff identified several issues associated with Maximum Development Potential to consider with revisions to Chapter 90 KZC.

A. <u>Clarify that existing subdivision and zoning provisions can be used to increase potential number of lots after calculating maximum development potential.</u>

1. <u>Background</u>: Clarify that **subdivision flexibility standards and cottage housing and LID zoning regulations** may be used to increase residential density. These techniques are available for all subdivision proposals, regardless of whether the subject property contains a sensitive area or buffer.

2. <u>Planning Commission Direction</u>:

   Clarify that the subdivision and zoning provisions can be used after calculation of the Maximum Development Potential to add to the base density.

B. Option to Reduce Dimensional Standards.

1. Background: In recognition of the greater buffer widths required with this update, some reductions of dimensional standards similar to those allowed with Low Impact Development (LID) should be allowed for development with critical area to offset the loss of development potential.

   Option to Reduction in Dimensional Standards:

   a. Minimum **required yards**
      - zero lot line for interior lot lines to achieve clustering between units
      - front – 10 feet
      - Side and rear - 5 feet
   b. Minimum **parking pad** dimensions
      - width - 8.5 feet per required stall
      - depth - 18.5 feet per required stall
   c. **Tandem parking** where stalls are shared by the same dwelling unit

   Some **jurisdictions** allow reductions in dimensional standards while others do not.

2. Planning Commission Direction:

   Allow the reduced dimensions noted above.

XVI. REASONABLE USE EXECEPTIONS

A. Background.

Reasonable use is a legal concept that has been articulated by federal and state courts in regulatory takings cases. In a takings case, the decision maker must balance the public benefit against the owner's interests by considering the nature of the harm the regulation is intended to prevent, the availability and effectiveness of alternative measures, and the economic loss borne by the owner. Public benefit factors considered are the seriousness of the harm of the impacts, the extent to which the land involved contributes to the harm, the degree to which the regulation solves the problem, and the feasibility of less oppressive solutions.

The City's existing Reasonable Use Exception (RUE) addresses the takings issues by allowing use of the land when strict application of KZC Chapter 90 would **deny all economically viable use of the property**. An application is eligible after it can demonstrate that even after proposing to reduce or alter the wetland or stream and its buffer to the maximum extent allowable under Chapter 90 KZC.

Under the City's RUE regulations, one **single family home** can be proposed in a **residential zone** and an **office building** can be proposed in a **commercial or industrial** zone. Development is limited to the following area of disturbance based on the total lot area of the property:

Lot Size	Area of Disturbance
Less than 6,000 sq. ft. lot	50% of the lot area can be disturbed
Between 6,000 and 30,000 sq. ft. lot	3,000 sq. ft. area can be disturbed
Larger than 30,000 sq. ft. lot	Between 3,000 sq. ft. area and 10% of the lot area can be disturbed, determined on a case by case basis.

RUE developments must meet all mitigation, maintenance and monitoring requirements of Chapter 90 KZC. Compensatory mitigation to achieve no net loss (creation or restoration and enhancement of the wetland or wetland or stream buffer) must be provided on site or within the city's drainage basin in which the property is located at the same compensatory ratios established for non-reasonable use proposals.

As previously discussed, compensatory mitigation for wetland fill is often impossible to achieve on-site since there is no remaining area beyond the allowed disturbed area and the wetlands, streams and/or the buffer area to add mitigation, particularly at the required compensatory ratios (see section above).

B. Issues.

1. Allow Reasonable Use Exceptions in Office and Institutional Zones:

   Like the rest of Chapter 90, the RUE section was adopted based on BAS information in the mid 1990's. Chapter 90 allows RUE's only in **Commercial, Industrial and Residential** Zones. Current BAS has found that urban uses have a similar range of impacts to wetlands and streams so there is no justification to limit RUE's to certain zones. The same wetland and stream area functions and values are present regardless of the zone and functioning buffers and other mitigating measures can protect these features. As Kirkland continues to infill, there is more pressure to maximize development regardless of zoning classification.

   Other local jurisdictions allow RUEs in a variety of zones.

2. Allow Limited Retail Use in Commercial zones and in Certain Office Zones:

   RUE provisions only allow **office uses in Commercial and Industrial zones**. At the time that the Chapter 90 KZC regulations were adopted, it was thought that an office use had significantly less impact than a commercial use on a wetland, stream or its buffer. Current BAS indicates that urban uses have a similar range of impacts on a wetland, stream or its buffer.

   The City has had a request to allow retail uses eligible for Reasonable Use Exceptions, but they are not eligible. Wayne Seminoff has submitted a letter (see Attachments 5 and 6) requesting to be able to apply for a RUE for a retail use in a commercial zone.

BAS identifies and requires measures that minimize impacts to wetlands and streams areas resulting from high intensity land uses whether they may be office or retail use (see Section VII above). Presumably, similar impacts resulting from either type of use would be minimized by requiring the same measures. The stormwater and toxic runoff from either use would impact the wetland or stream area similarly and measures to reduce these impacts would also be similar. However, certain types of retail uses, such as uses with drive through facilities or outdoor activities, would have greater impacts on wetlands than other types of retail uses.

Other local jurisdictions do not limit uses in RUE eligible zones.

C. Planning Commission Direction.

- *Allow RUE's in Office and Institutional Zones so that they are allowed in all zones*.
- *Allow limited retail to be eligible for RUE's in Commercial zones and in those Office zones where retail uses are allowed along with criteria on the types of retail eligible for RUE's*.

XVII. EFFECT ON CODE AMENDMENTS ON PRIOR APPROVAL AND PENDING PERMITS

Attachment 7 is a memo from Eric Shields, Director of Planning and Building Department, providing guidance on the effect of the upcoming code amendments on prior approvals and pending permits. The memo provides guidance relative to existing KZC provisions related to projects that have **approved** land use permits and references state statutes related to vesting of certain types of applications and pending **subdivisions** that have applications that have been **determined to be complete**. Needless to say, vesting is a very complicated and contentious issue and the City is limited in terms of providing legal advice to applicants. The clearest path to vesting under state law is a **complete building permit** application and staff is advising applicants accordingly. As evidenced by the current KZC section 90.165 discussed in the memo, the City may adopt local provisions that vest specific applications.

The Planning Commission, Houghton Community Council, and City Council should discuss the effective date of the new regulations for purposes of staff implementation and development predictability.

XVIII. NEXT STEP

In June, the Planning Commission will review a preliminary draft of Chapter 90 KZC based on its direction on the key issues. At that time staff will transmit the comments of the Houghton Community Council to the Planning Commission so that the Commission can consider the comments when reviewing the draft Chapter 90 KZC.

On June 21, 2016, the City Council will have a study session on the same issues that have been addressed in this memo.

The Planning Commission and the Houghton Community Council will hold a joint public hearing sometime this summer on the draft Chapter 90 KZC.

ATTACHMENTS:

1. Summary table of the draft Chapter 90 KZC wetland regulations
2. Summary table of the draft Chapter 90 KZC stream regulations
3. Illustration of Buffer Averaging
4. List of the regulations for local jurisdictions concerning expansion of nonconforming structures
5. Wayne Seminoff comment letter dated January 8, 2016, concerning reasonable use exception for retail uses
6. Wayne Seminoff comment letter dated February 12, 2016, concerning reasonable use exception for retail uses
7. Vesting memo: Effect of Code Amendments on Prior Approval and Pending Permits
8. Save Our Trail comment letter dated February 16, 2016
9. Raedeke Associates comment letter dated April 22, 2016
10. Brent Carson comment letter dated April 22, 2016
11. Stephen Haugen comment letter dated April 24, 2016

PRELIMINARY DRAFT

Table 90.__ - Wetlands and Associated Buffer Standards

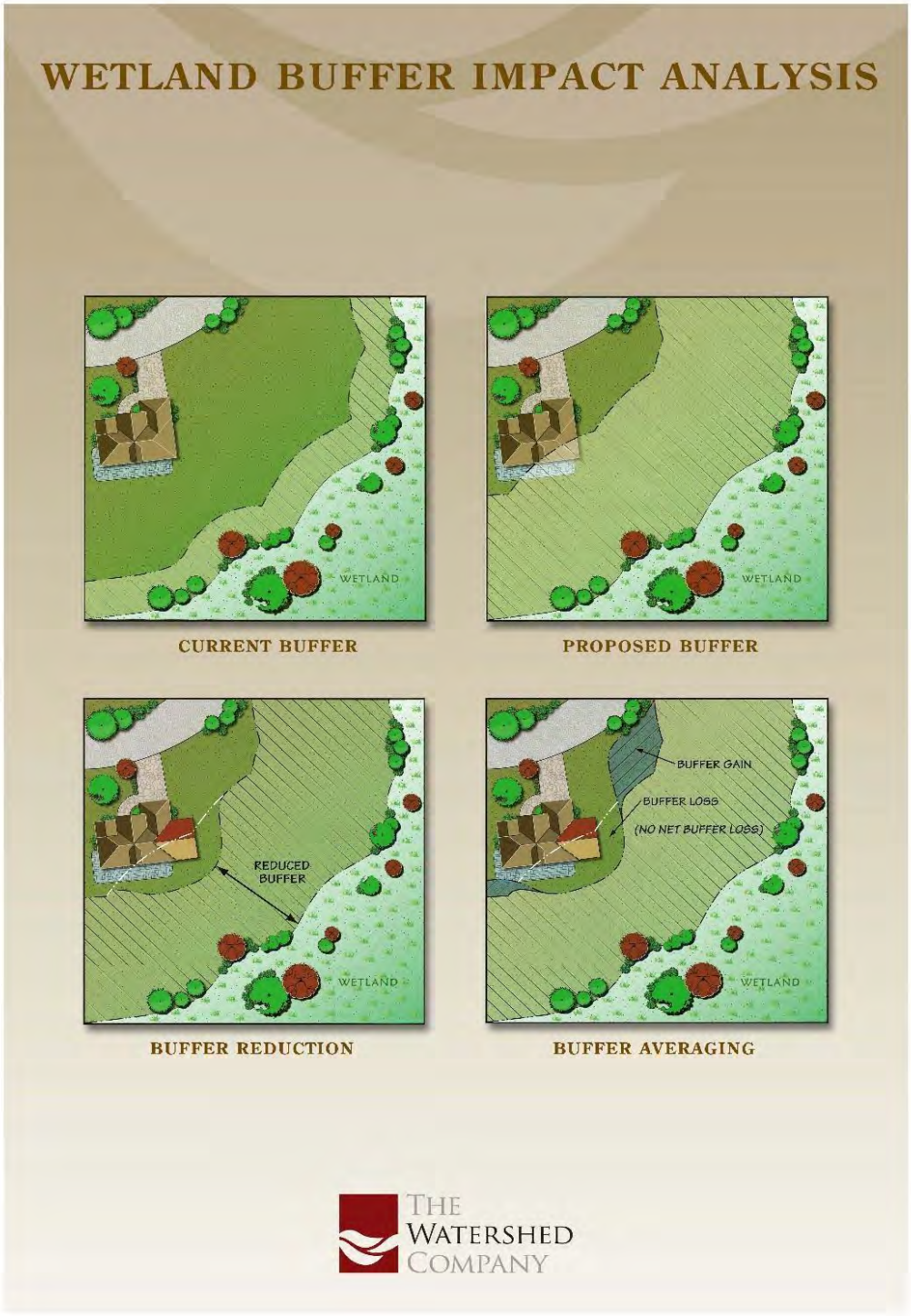
<table>
<tr><td>Wetland Determination and Delineation</td><td>In accordance with the approved federal delineation manual and applicable regional supplements described in WAC 173-22-035. The Planning Official makes final determination based on the delineation report.</td></tr>
<tr><td>Wetland Rating</td><td>2014 Department of Ecology Washington State Wetland Rating System for Western Washington, as revised.</td></tr>
<tr><td>Wetland Buffer Width Standard</td><td>Wetland Buffer Widths
<table>
<tr><th rowspan="2">Wetland Category</th><th colspan="4">Buffer width based on habitat points</th></tr>
<tr><th>3-4 habitat pts.</th><th>5 habitat pts.</th><th>6-7 habitat pts.</th><th>8-9 habitat pts.</th></tr>
<tr><td>Category I: Bogs High Conservation areas</td><td>190 feet</td><td>190 feet</td><td>190 feet</td><td>225 feet</td></tr>
<tr><td>Category I:Others</td><td>75 feet</td><td>105 feet</td><td>165 feet</td><td>225 feet</td></tr>
<tr><td>Category II</td><td>75 feet</td><td>105 feet</td><td>165 feet</td><td>225 feet</td></tr>
<tr><td>Category III</td><td>60 feet</td><td>105 feet</td><td>165 feet</td><td>225 feet</td></tr>
<tr><td>Category IV</td><td colspan="4">40 feet</td></tr>
</table></td></tr>
<tr><td>Building Setback from Buffer</td><td>10 foot wide building setback is required from upland edge of the entire buffer. Certain minor improvements listed in KZC 90.__ are permitted in the setback</td></tr>
<tr><td>Other Standards</td><td>• Increased buffer width may be required if wetland or its buffer is adjacent to land with slopes greater than 30 percent or severe erosion, used by certain species as described in KZC 90.__ or frequently flooded area exceeds required wetland buffer width at which point the buffer shall extend to the outer edge of the flooded area.
• Buffer must meet the Vegetative Buffer Standards found in KZC 90.__.
• Nine minimizing impact measures must be implemented found in KZC 90.__.
• Buffer averaging is permitted if criteria are met. See KZC 90.__. The Planning Official makes final decision based on an approved critical areas report found in KZC 90.__.
• Fencing is required along the entire upland edge of buffer both during construction and upon completion of the project based on standards in KZC 90.__.
• For mandatory restoration or voluntary restoration or enhancement of wetland and/or buffer, see KZC 90.__.</td></tr>
<tr><td>Alternative Buffer Standard</td><td>• Applicant can choose to not meet the vegetative buffer standards and the nine mitigating measures by increasing buffer width by 33%. Buffer averaging is permitted. See KZC 90.__.</td></tr>
<tr><td>Exempted and Permitted Uses and Activities</td><td>• Activities and uses shall be prohibited within wetlands and the associated buffers, except those exempted, or as permitted if certain standards are met. See KZC 90.__.</td></tr>
<tr><td>Modification to Wetlands</td><td>• Modification to wetlands requires a critical areas permit pursuant to Process I, Chapter 145 KZC, mitigation sequencing and compensatory mitigation. See KZC 90.__.
• Offsite mitigation may be an option based on criteria. See KZC 90.__
• Buffer standard may not be modified, including through a reduction, other than as part of a wetland modification or for a divided buffer approved by the Planning Official if the criteria found in KZC 90.__ are met.
• For emergencies activities for public health, safety and welfare, KZC 90.__.</td></tr>
</table>

PRELIMINARY DRAFT

Table 90. __ - Streams and Associated Buffer Standards

<table>
<tr><td>Stream Classification</td><td>In accordance with WAC 222-16-030, as amended. The Planning Official makes final determination based on stream classification report.</td></tr>
<tr><td>Stream Buffer Width Standard</td><td>Stream Buffer Widths
<table>
<tr><th>Stream Type</th><th>Buffer Width</th></tr>
<tr><td>F (Fish bearing)</td><td>100 feet</td></tr>
<tr><td>Np (Perennial non-fish bearing)</td><td>50 feet</td></tr>
<tr><td>Ns (Seasonal non-fish bearing)</td><td>50 feet</td></tr>
</table></td></tr>
<tr><td>Setback from Buffer</td><td>10 foot wide setback is required from upland edge of the entire buffer. Certain minor improvements listed in KZC 90.__ are permitted in the setback.</td></tr>
<tr><td>Other Standards</td><td>• Increased buffer width may be required if stream or buffer is adjacent to land with slopes greater than 30 percent or has severe erosion, used by certain fish and wildlife species, or is located in frequently flooded area. See KZC 90.__.
• Buffer must meet the vegetative buffer standards. See KZC 90.__.
• Nine minimizing impact measures must be implemented found in KZC 90 __.
• Buffer averaging is permitted if criteria are met. See KZC 90.__. The Planning Official makes final decision based on an approved critical areas report found in KZC 90.__.
• Fencing is required along the entire upland edge of buffer both during construction and upon completion of a project based on standards in KZC 90.__.
• For mandatory restoration or voluntary restoration or enhancement of steam and/or buffer, see KZC 90.__.</td></tr>
<tr><td>Alternative Buffer Standard</td><td>• Applicant can choose to not meet the vegetative buffer standards and the nine mitigating measures by increasing the standard buffer width by 33%. Buffer averaging is permitted if criteria found in KZC 90. __ are met and approved by the Planning Official.</td></tr>
<tr><td>Exempted and Permitted Uses and Activities</td><td>• Activities and uses shall be prohibited within streams and associate buffers, except those exempted or as permitted if certain standards are met in KZC 90.__, or those approved under a review process in KZC 90.__.</td></tr>
<tr><td>Modifications to Stream and buffer</td><td>• Modifications to stream and related impacts to buffers require a critical areas permit pursuant to Process I, Chapter 145 KZC, an approved critical areas report, mitigation sequencing and mitigation described in KZC 90.__ and__ if criteria in KZC 90.__ are met. Stream modifications include crossing, culverting, changing stream courses or relocating of a stream.
• Stream channels may be stabilized if criteria in KZC 90.__ are met. The Planning Official makes decision on stabilization based on an approved critical areas report.
• Daylighting of streams is encouraged. The Planning Official makes decision if criteria in KZC 90.__ are met based on an approved critical areas report.
• Buffer standards may not be modified or reduced, except as part of a stream modification in KZC 90.__, for a divided buffer as approved by the Planning Official if criteria found in KZC 90.__ are met, and for daylighting a stream in KZC 90.__.
• For emergencies activities for public health, safety and welfare, KZC 90.__.</td></tr>
</table>

ILLUSTRATIONS OF BUFFER WIDTH AVERAGING AND BUFFER WIDTH REDUCTION



Expansion of Nonconforming Single Family Structures into Buffers

Jurisdiction	Single Family	Standards if any
Kirkland Chapter 162	No nonconformance may be enlarged, expanded, increased and intensified in any away made greater.	
Bellevue	Expansion maximum of **500 square foot footprint** (over the life of the structure) only if no other feasible location based on functional use of the expansion.	Permit and mitigation. Preference diagrammed & criteria established to assess alternatives and minimize impact
Bothell	Cannot further alter or increase the adverse impact	
Burien	Cannot enlarge footprint	
Federal Way	Cannot enlarge footprint	
Kenmore	Expansion of **500 square foot footprint** for structures that existed before 1990. No closer to the critical area than existing structure.	
Kent	Cannot enlarge footprint	Exceptions require a variance
King County	Expansion of **1,000 square foot footprint.** No closer to the critical area than existing structure. Location has least impact.	Mitigation required. Reasonable use and buffer average structure not eligible
Lake Forest Park	10% or **250** square feet, whichever is less. No closer to the critical area than existing structure.	
Newcastle	Expansion of **1,000 square foot footprint.** No closer to the critical area than existing structure	
Redmond	Cannot enlarge footprint	
Renton	Cannot enlarge footprint	
Sammamish	• Expansion of **1,000 square foot footprint** (one time only) • If intervening home or ADU between the wetland and the interviewing structures, may add, replace or modify but no closer than 50' of wetland or stream	Required critical area study showing net improvement through enhancement
Woodinville	Expansion of **1,000 square foot footprint**. No closer to the critical area than existing structure. Expansion cannot exceed 50% of the assessed valuation of the structure.	Mitigation required

Teresa Swan

From: Wayne Seminoff <wayne@isomedia.com>
Sent: Friday, January 08, 2016 11:49 AM
To: Teresa Swan
Cc: Eric Shields
Subject: how can I help zone change?

Hi Theresa,

Eric Shields said that I might be able to help in some way to influence the proposed zoning change on the property I just purchased across from Costco, the Nienaber wetland and property and house on 120th Ave NE.

The change proposed is to allow a reasonable use exception to allow for retail use on that site. It currently only allows for office use even though the parcel is zoned full commercial like the Rose Hill shopping center.

Please put me on any notice list so I can keep up with the process.

Thanks,

Wayne

Wayne Seminoff
P.O. Box 956
Kirkland, WA 98083

Teresa Swan
City of Kirkland
123 5th Avenue
Kirkland, WA 98033

RE: Code Change Request

February 12, 2016

Dear Teresa,

I am writing to you to request a code change to the City of Kirkland's Drainage Basin Chapter (KZC 90) that affects parcel number 1238500100 located at the address 8734 1120th Avenue Northeast in the City of Kirkland, Washington. There is a glitch in the current code that prohibits any kind of retail use to be located within a retail zone under the Reasonable Use Exception pertaining to wetlands properties.

The information published by the City of Kirkland about this property on the King County Department of Assessment's website is shown in the Drainage Basin Chapter. The site describes the current land zoning code to be RH 1B and the current property zoning code to be "C", both of which indicate this parcel being a retail zoned property. Some corrections are needed on the department website that state that no delineation study has been completed to date although a study took place in 2014. Also, the percentage deemed "unusable" is zero percent.

I recently purchased this property with the understanding that I could conduct a retail business on property that was zoned accordingly. If the minor change in the Reasonable Use Exception is not corrected, this will be a tremendous hardship for me and my family.

It appears that the retail-use was inadvertently left off when someone wrote this exception for the reasonable use for wetland properties only.

Please consider changing the reasonable use portion of the code affecting parcel number 12385001000 so that I may run a retail business on this property as the property is zoned for retail use by the City of Kirkland.

Thank you in advance for your consideration.

Sincerely,

Wayne Seminoff

CITY OF KIRKLAND
PLANNING AND BUILDING DEPARTMENT
123 FIFTH AVENUE, KIRKLAND, WA 98033
425.587.3225 - www.kirklandwa.gov

MEMORANDUM

DATE: **FEBRUARY 18, 2016**

TO: **INTERESTED PARTIES**

FROM: **ERIC SHIELDS, AICP**
DIRECTOR, PLANNING & BUILDING DEPARTMENT

SUBJECT: **DIRECTOR GUIDANCE – CRITICAL AREAS ORDINANCE AMENDMENTS AND PRIOR APPROVALS**

The City of Kirkland is currently working on updates to Kirkland Zoning Code (KZC) Chapter 90, which includes City regulations for streams and wetlands. The amendments are required by the Growth Management Act and must be based on "best available science" (BAS). Because Kirkland's regulations have not been substantially updated since 1999, we know that our current buffering standards for streams and wetlands generally are not consistent with BAS and will need to be increased. The City anticipates adoption of new regulations sometime after August 1, 2016.

Applicants have requested guidance on how the Planning and Building Department will process applications that are pending or approved prior to adoption of the new regulations. The guidance provided in this memo is primarily based on existing City regulations. Vesting ("grandfathering") provisions from State statutes are also noted.

Applicable City Regulations

KZC Chapter 90 currently contains the following provision:

> 90.165 Setbacks and Buffers Required by Prior Approvals
> If, subsequent to October 2, 1982, the City approved a variance, planned unit development, rezone, or zoning permit through Processes I, II, IIA, or IIB, as described in Chapters 120, 125, 130, 145, 150, and 152 KZC, respectively, and/or a subdivision or short subdivision for the subject property with established setbacks or buffers on the subject property from a stream or wetland, those setbacks or buffers shall apply to the original construction on the subject property. All of the provisions of this chapter which do not directly conflict with the previously imposed setback or buffer requirements shall fully apply to the subject property.

Guidance on Frequently Asked Questions

Based on KZC 90.165, the Department provides the following guidance to current and potential applicants:

1. What if I have an application that is currently approved or will be approved prior to adoption of the update?

For any of the application types noted in KZC 90.165 that are approved prior to adoption of the updates, the approved buffers (either those that meet the buffer standards in effect at the time of approval or have been approved at a width less than the standard buffer) apply to original construction. Note that all permit approval types noted in KZC 90.165 have specific lapse of approval dates and KZC 90.165 does not apply to lapsed (expired) approvals. Any permit that has lapsed would be reviewed pursuant to the regulations in effect at the time of a new application.

2. What does "original construction" mean?

"Original construction" refers to construction of the specific development/construction that was approved by the land use permit. It also means that the approved buffer only applies to that specific construction and not to future additions, modifications, expansions, etc. For approved subdivisions where specific homes were not part of the approval, "original construction" refers to construction of a home (or homes) on the lots that were approved subject to the buffers that were approved. After original construction has been completed, any future construction would be subject to regulations are in effect at the time of that future construction.

3. Will the City approve my land use application prior to the effective date of the new regulations?

If you intend to apply for one of the land use applications noted in 90.165, please be aware of the following timeframes.

- A presubmittal meeting is required prior to submittal of a land use application. Presubmittal meetings are scheduled at least two weeks out from the date of application.
- The KZC provides that the City has 28 days after submittal to determine whether an application is complete.
- After being determined to be complete, most land use applications take at least four months to receive an approval.
- While staff does not currently know specifically when the KZC update will be finished or what the effective date will be, we can say that the earliest effective date would be early August 2016.

If you have a pending application with the City, please discuss the project timing with your assigned planner. You may wish to submit a complete building permit application (see reference to State laws below) even if your land use permit is not approved.

4. What if I don't have an approved land use application prior to the effective date of the new regulations?

KZC 90.165 only pertains to approved applications. Additional rules related to vested rights may be found in State law. While City staff is not in a position to provide you with legal advice, we can direct you to the relevant Washington State statutes that specifically address vesting with respect to complete building permit applications and complete subdivision applications:

- RCW 19.27.095 provides that "A valid and fully complete building permit application for a structure, that is permitted under the zoning or other land use control ordinances in effect on the date of the application shall be considered under the building permit ordinance in effect at the time of application, and the zoning or other land use control ordinances in effect on the date of application." Please reference the complete statute to understand the requirements contained therein.

- RCW 58.17.033 provides that "A proposed division of land, as defined in RCW 58.17.020, shall be considered under the subdivision or short subdivision ordinance, and zoning or other land use control ordinances, in effect on the land at the time a fully completed application for preliminary plat approval of the subdivision, or short plat approval of the short subdivision, has been submitted to the appropriate county, city, or town official." Please reference the complete statute to understand the requirements contained therein.

Beyond this direction, you may wish to discuss your situation with private legal counsel.

5. If my application is not approved prior to the effective date, can the City adopt updated regulations that contain similar provisions to the current KZC 90.165?

The City could adopt provisions similar to KZC 90.165 with the updates to KZC Chapter 90. If you are interested or concerned about an application, you are encouraged to participate in the process to let the Planning Commission and City Council understand your interests.

Conclusion

Existing City regulation KZC 90.165 provides some certainty around how approved applications will be treated. Additional guidance is found in State statutes that address complete building permit and complete subdivision applications. If your application does not fall into one of these areas prior to adoption of the updated regulations, the City's position is that the application would not be vested and would be subject to the updated regulations. If you need additional advice, we encourage applicants to consult with their legal counsel.

Please get involved in the process to update the regulations by visiting the project webpage and signing up for E-mail alerts at:

www.kirklandwa.gov/depart/planning/Code_Updates/Projects/Wetlands_and_Streams_Code_Amendments.htm

Date: February 16, 2016

SaveOurTrail.org

For Distribution to: City of Kirkland Council Members

With Copies to: City Manager, Kurt Triplett
Public Works Director, Kathy Brown
Planning & Building Director, Eric Shields
Parks & Community Service Director, Jennifer Schroder

We are presenting you with a letter this evening to document environmental issues associated with your proposed transit development on the Cross Kirkland Corridor Trail (the Trail).

In response to recent wetland notices and environmentally sensitive area signage along the Trail, we were prompted to look into these issues further.

What we found was eye opening and disturbing.

Based on the City GIS maps, a July 2013 study by Widener & Associates and a January 2016 report by the Watershed Company, both commissioned by the City, it was found that many wetlands, salmon-bearing streams and other wildlife habitats exist within, near, or under the Trail. The last report even identified fish species that are considered 'threatened' and 'species of concern' under the Federal Status.

On January 20, 2016, a letter was sent to the Planning Commission and Houghton Community Council from members of the City's Planning and Building Department saying that per Chapter 90 KZC Amendments, which are regulations for Critical Area Ordinance/Wetlands, Streams and Frequently Flooded Areas, the City must comply with new WA Department of Ecology guidance. The new guidance resulted in wider required critical area buffers and more restrictive buffer reduction allowances. The City now has until this June to update its wetland regulations and rating system to comply with DOE's current guidance.

The current KZC 90 clearly preserves environmentally sensitive areas like we have along the Trail and restricts incompatible land uses. It further states that construction of public, non-motorized trails is exempt from preservation of the trail whereas construction of a motorized trail is not exempt and CANNOT be built in a wetland or its buffer zone. Based on the updated guidance, large areas of the Trail could not even be touched.

Modifications are allowed ONLY if there is no feasible alternative. However, in this case a clear alternative does exist and that is E-02, BRT on I-405. This not only parallels the Trail, but also crosses it at 116th Street and includes a stop in Totem Lake. Based on the current and updated regulations, the building of motorized transit on the Trail would clearly be outside the spirit and intent of the law.

Save our Trail has always been about preserving the precious natural environment that exists along the Cross Kirkland Corridor Trail. It's now clear that the City's own existing and updated regulations enforce this preservation. We look forward to hearing the City's approach to the updated guidance rules later this evening.

In light of this information presented by the City's own staff, we urge you, the City Council, to reconsider your support for mass transit on the Trail.

Thank you, *Save Our Trail Organization*

(Note: This letter will be distributed to over forty jurisdictions, organizations and individuals that we believe should be made aware of our concerns.)

Documented Wetlands, Streams and Wildlife in the Cross Kirkland Corridor

February 16, 2016
Save our Trail, Kirkland WA

This letter was prepared by the Save Our Trail citizen group in Kirkland to ensure all parties are aware of environmental obstacles that may hinder the construction of the proposed E-03a (Light Rail) and E-06 (Bus Rapid Transit) Sound Transit 3 projects as designed on the Cross Kirkland Corridor (CKC) Trail. It is not intended to be a comprehensive examination of the full gamut of environmental challenges, but rather a compendium of concerns identified to date.

Summary

- 3rd party wetland, stream and wildlife inventory studies commissioned by the City of Kirkland, and published as recently as January 2016, have documented many wetlands, jurisdictional drainage, salmon-bearing streams and other wildlife habitats within the CKC.
- Current and planned updates (due by June 30, 2016) to Kirkland's wetland and stream protection regulations indicate that substantial portions of the CKC are incompatible with any type of motorized transit development. In fact, there are multiple locations where wetlands surround both sides of the trail, creating buffers that are in excess of the 100-foot wide corridor.
- Mandatory mitigation sequencing regulations specifically state that avoidance of modifications of wetlands and streams is the primary guiding principle, and not allowed if a "practicable or feasible alternative" is available, such as Sound Transit's E-02 Bus Rapid Transit on I-405 proposal.

Introduction

Along the CKC, many signs are posted that indicate Environmentally Sensitive Areas. As residents of Kirkland and regular users of the CKC, we wanted to understand the implication of these signs.

We observed bodies of water, including wetlands and streams, surrounding the trail and crossing under it. We also heard from people living near the trail, where many properties have recorded documents identifying wetlands and streams with property title restrictions to perpetually protect and preserve these sensitive areas. Those restrictive covenants were imposed on past, current, and future owners in perpetuity with no provisions for termination.

We then reviewed the City of Kirkland GIS maps (Attachment A). This map clearly shows that the stretch of the CKC slated for development as a bus or rail route is encumbered by several wetlands and streams. Some of the streams are identified in red, signifying their importance as fish bearing streams.

We were then made aware of a wetland and stream inventory developed in July 2013 for the City of Kirkland Public Works Department by Widener & Associates ("Wetland Investigation and Delineation Report Cross Kirkland Corridor Project" - Attachment B). The report was part of the trail building project when the BNSF rails were removed and a soft surface trail was constructed. It lists most of the wetlands and streams shown on the City GIS map (Attachment A), plus additional wetlands and streams not documented on the map. This report concluded that the majority of the wetlands and streams were determined to be "jurisdictional," and therefore subject to the Clean Water Act. It also documented multiple palustrine forested wetlands. While they were not rated, these would likely rate as Category II wetlands and would require a 50' or 75' buffer.

In 2015, as part of the City of Kirkland's process to adopt amendments to its Critical Areas Ordinance by the state deadline of June 30, 2016 (Wetlands, Streams and Frequently Flooded

Areas, known as KZC 90 - Kirkland Zoning Code Chapter 90), the City employed the services of the Watershed Company, a wetlands consulting company. The January 2016 report ("City of Kirkland Critical Areas Regulations Technical Report"), along with the City memorandum explaining the need to update the regulations, is included as Attachment C.

This report further identifies multiple wetlands and streams within, near, or under the CKC, as well as fish species in streams that cross the CKC that are considered "Threatened" and "Species of Concern" under Federal Status.

How Do the Current and Future Kirkland Zoning Codes Apply to the CKC?
Given all the 3rd party information, we looked into how the KZC 90 applied to the CKC.

The current KZC 90 clearly forbids development in wetlands, streams, lakes, and their buffers and in frequently flooded areas. These regulations were adopted by the City of Kirkland in compliance with the Clean Water Act, the Department Of Ecology, the Growth Management Act, and other local, state, and federal laws.

It is important to note that these regulations are 14 years old and must be updated by the City of Kirkland by June 30, 2016. As the Watershed Report states about the original regulations, "*Since then Ecology adopted a new wetland rating system in 2004 and then updated it again in 2014. Wetland buffers under the new Ecology guidance are greater than the City's current buffer widths and the rating system is more detailed and uses different criteria. The City must now bring its wetland regulations and rating system in line with Ecology's guidance to be consistent with GMA.*" It is important to note that, as the Watershed Company report states, "*Most if not all jurisdictions in King County have revised their regulations to comply with these requirements.*" The new regulations, as described on the City of Kirkland web page, will:

- Increase buffer widths required next to wetlands and streams where new development cannot occur;
- Use mitigation sequencing: first avoid, then minimize before buffer reduction can be proposed;
- Impose smaller percent of buffer reduction; and
- Require greater ratio of required mitigation to area disturbed.

Even the current regulations clearly state the need for protecting wetlands, streams, lakes and frequently flooded areas:

90.10 PURPOSE

THESE REGULATIONS WERE PREPARED TO COMPLY WITH THE GROWTH MANAGEMENT ACT, CHAPTER 36.70A RCW. THE PURPOSE OF THESE REGULATIONS IS TO PROTECT THE ENVIRONMENT, HUMAN LIFE, AND PROPERTY. THIS PURPOSE WILL BE ACHIEVED BY PRESERVING THE IMPORTANT ECOLOGICAL FUNCTIONS OF WETLANDS, STREAMS, LAKES, AND FREQUENTLY FLOODED AREAS. THE DESIGNATION AND CLASSIFICATION OF THESE SENSITIVE AREAS IS INTENDED TO ASSURE THEIR PRESERVATION AND PROTECTION FROM LOSS OR DEGRADATION, AND TO RESTRICT INCOMPATIBLE LAND USES.

SENSITIVE AREAS PERFORM A VARIETY OF VALUABLE BIOLOGICAL, CHEMICAL, AND PHYSICAL FUNCTIONS THAT BENEFIT THE CITY AND ITS RESIDENTS.

There are certain activities that are exempt from this chapter. However, a motorized trail is not one of those activities:

90.20 GENERAL EXCEPTIONS

THE FOLLOWING ACTIVITIES OR CONDITIONS SHALL BE EXEMPT FROM THIS CHAPTER:

5. CONSTRUCTION OF PUBLIC NON-MOTORIZED TRAILS WITHIN THE CROSS KIRKLAND CORRIDOR AND EASTSIDE RAIL CORRIDOR; PROVIDED, THAT (1) THE TRAIL IS LOCATED IN A MANNER THAT, TO THE EXTENT FEASIBLE, AVOIDS AND MINIMIZES IMPACTS TO SENSITIVE AREAS AND BUFFERS SUCH AS PLACEMENT ON PREVIOUSLY DISTURBED AREAS, (2) THE TRAIL PROJECT INCLUDES ON-SITE OR OFF-SITE MITIGATION OF NEW IMPACTS TO AFFECTED SENSITIVE AREAS AND BUFFERS, AND (3) PERVIOUS OR OTHER LOW-IMPACT MATERIALS ARE USED WHERE PRACTICAL.

The zoning regulation clearly states that wetlands and streams are to be preserved and protected with significant buffers. It is fair to assume that these buffers will increase based on the updated regulations from surrounding King County cities.

90.45 WETLAND BUFFERS AND SETBACKS

1. NO LAND SURFACE MODIFICATION OR TREE REMOVAL SHALL OCCUR AND NO IMPROVEMENT MAY BE LOCATED IN A WETLAND OR ITS BUFFER, EXCEPT AS PROVIDED IN THIS SECTION THROUGH KZC 90.70. SEE ALSO KZC 95.23(5)(D)(2), TREES IN CRITICAL AREAS OR CRITICAL AREA BUFFERS; AND KZC 95.50(11), INSTALLATION STANDARDS FOR REQUIRED PLANTINGS – MITIGATION AND RESTORATION PLANTINGS IN CRITICAL AREAS AND CRITICAL AREA BUFFERS. REQUIRED, OR STANDARD, BUFFERS FOR WETLANDS ARE AS FOLLOWS:

WETLAND TYPE	PRIMARY BASIN	SECONDARY BASIN
1	100 FEET	75 FEET
2	75 FEET	50 FEET
3	50 FEET	25 FEET

The current regulations state that modification of a wetland (stream) is allowed only if no feasible alternative is available (Similar language is used for stream protection, buffer size, modification of streams and modification of stream buffers. Please see KZC 90.90, 90.95, 90.100):

90.55 WETLAND MODIFICATION

J. THERE IS NO PRACTICABLE OR FEASIBLE ALTERNATIVE DEVELOPMENT PROPOSAL THAT RESULTS IN LESS IMPACT TO THE TYPE 1 WETLAND AND ITS BUFFER.

90.60 WETLAND BUFFER MODIFICATION

9) THERE IS NO PRACTICABLE OR FEASIBLE ALTERNATIVE DEVELOPMENT PROPOSAL THAT RESULTS IN LESS IMPACT TO THE BUFFER.

In this case, there is a documented Sound Transit alternative with E-02 (Bus Rapid Transit on I-405), which not only parallels the CKC, but also crosses it at 116th Street and includes a stop in the same location (Totem Lake). This alternative was identified by the City of Kirkland in the letter of January 20, 2016 to Sound Transit.

In Attachment D ("Wetland and Stream Buffers on the CKC Map") we tested the application of the following parameters on the trail:

1) The CKC right of way is at its optimal width of 100 feet;

2) There is only one stream on one side of the trail;

3) The stream is assumed to have the lowest classification, and thus the lowest buffer width of 25 feet.

Using these parameters, Attachment D clearly demonstrates that the CKC's useable width would be reduced from 100 feet to less than 25 feet. By applying the same parameters to other segments of the CKC where wetlands and streams exist on both sides, and where the classifications of both bodies of water are higher, it becomes clear that, in many cases *the entire width of the CKC is encumbered by buffers*.

Furthermore, If one applies the new regulations' increased buffer width requirements, then even more of the CKC becomes incompatible with the ST3 E-03a and E-06 proposals.

Conclusion:

Save Our Trail believes that, based on 3rd party evaluations (City GIS, City codes, and studies commissioned by the City of Kirkland) of the wetlands, streams, and wildlife habitats on the CKC, it would clearly be outside the spirit and intent of the law to build motorized transit on the CKC as described in E-03a and E-06. Furthermore, given the clearly documented alternative of E-02 (BRT on 405), mitigation is not an alternative.

SIGNED BY SAVE OUR TRAIL COMMITTEE on February 16, 2016

Signature	Printed Name
Santos Contreras	Santos Contreras
	Shawn Etchevers
	Lucas R. Tourdot
	DAVID GRESCHLER
Jan Young	Jan Young
Rose M. Dennis	Rose M. DeNNIS
Frank Dennis	F.L. DeNNIS
Rich Jones	Rich JoNes
Sue Contreras	Sue Contreras
Neil Ichiki	Neil Ichiki
Sharon Riddle	Sharon Riddle

Raedeke Associates, Inc.

Wetland & Aquatic Sciences
Wildlife Ecology
Landscape Architecture

TECHNICAL MEMORANDUM

March 24, 2016

To:	City of Kirkland Planning Commission
From:	William J. Taylor M.S., Aquatic Scientist Christopher Wright, Soil and Wetland Scientist Raedeke Associates, Inc.
RE:	Kirkland Stream Buffer Code Update Recommendations Current Science on Stream Buffer Policy

The following technical assessment of stream buffer best available science is intended to support a code modification that would recognize more appropriate stream buffer designations in highly urbanized environments to better attain the environmental goals of such environmental protection policies.

Buffer Widths for Urban Stream Buffers: The challenges and policy alternatives for urban environments

The Challenge in the Use of Fixed Width Buffers within Highly Urbanized Basins

Riparian buffer have been used as an environmental policy measure to protect stream shorelines, their receiving waters, and associated aquatic organisms for many decades. Stream buffers provide ecologically beneficial functions to mitigate land use impacts through filtering of land surface runoff to improve water quality, providing infiltration to support local ground water levels, providing shade for temperature control, and contributing organic inputs to the food web (Polyakov et al. 2005). However these benefits have been documented principally for large scale areas where the extended continuity of buffers both laterally and longitudinally provide continuous buffers that will have a landscape-scale cumulative and even synergistic effect on stream benefits, such as in large agricultural or silvicultural settings.

However, in highly developed urban settings the degree of impact to streams becomes acute and extensive through conversion of permeable soil surface to impervious surfaces (asphalt, concrete, and roofs). These land surface conversions not only collect

contaminated storm drainage and deliver it directly to stream channels resulting in channel erosion and incision and exposure to pollutants, but vegetative buffers are either eliminated where the stream is fully piped or greatly reduced where channels do remain. The combined effects of hydrologic change, runoff of toxic substances, and the loss of riparian cover among other urban environment impacts all become a compounded and even synergistic set of impacts to urban streams resulting in what is now called the "urban stream syndrome" (Walsh et al. 2005).

In an attempt to reverse these impacts, stream buffers can be applied as one element of a stream recovery or protection measure in a multifaceted prescription across the basin (along with other commonly used measures such as green stormwater management practices, channel bed control, culvert daylighting, and eliminating sources of toxic substance). However, the overall success of these combined prescriptions must also be on a scale "that match the scale of the problem" to be successful (Hughes et al. 2014a). Even with potential extensive application on a basin-wide scale, the implementation of such broad scale measures can become economically untenable (Polyakov et al. 2005).

Within heavily urbanized stream basins, then, application of standardized uniform stream buffer widths become a fragmented attempt to apply the known benefits of buffers to small localized conditions where the added benefits pale in comparison to the cumulative combination of multiple impacts continuing from upstream. Wahl et al. (2013) conclude from their findings in Western Washington that patchy riparian forests did not improve stream conditions in heavily degraded streams, and:

> "These patterns are consistent with results from other studies where stream community composition was best predicted by land use at larger spatial scales and add to the growing literature suggesting that small-scale riparian restoration can be inadequate to improve biotic conditions in heavily impacted streams."

Effectiveness of Fixed Buffer Widths versus Variable Buffer Widths

The intended beneficial feature of riparian buffers is to allow upland surface water runoff to pass through a vegetated and permeable soil surface before reaching the stream channel, thereby using the processes of filtration and infiltration to better control instream flow regimes, and reduce contaminated runoff entering the channel. The use of buffers to mitigate water quantity and quality impacts of runoff to stream habitats is highly variable due to the common concentration of flow that short circuits and bypasses the filtering and infiltrating processes of riparian soils (Polyakov et al. 2005).

The process of bypassing riparian buffers can predictably be more acute in urban environments where various small scale impervious areas (e.g. lawns, driveways, and roof downspouts) are isolated from each other yet discharge more or less directly to a stream, resulting in such localized concentrated flows. Much of these localized impervious flows are directed to storm drainage systems in the first place, which are in fact designed to bypass intervening ground surfaces and deliver the flows directly to the stream. The result can easily be very little of local runoff effectively being treated by riparian buffers.

As an alternative to the use of increased buffer widths that may not function effectively as a result of localized concentrated flows, green stormwater treatment designs for urban development purposefully directs localized stormwater runoff from residential and commercial development to dispersed infiltration features to facilitate infiltration and reduced runoff volumes. Municipalities in the Puget Sound Basin are now required to implement such stormwater management techniques for new and redevelopment, resulting in a more direct mitigation of this primary source of impact to urban streams. Essentially, direct reduction of the source of flows through infiltration, retention and detention is more effective than depending on flows to be uniformly passed through buffers.

As yet another riparian buffer policy approach, "precision conservation" takes into account "spatial and temporal variability across landscapes" when prescribing conservation measures such as buffers, and take into account local landscape and hydrologic conditions that would be served by wider or narrower buffer widths (Berry et al. 2003). This approach would prescribe variable buffer widths that are targeted to protect areas where the buffers would have greater effect on the resulting local and downsteam environments of biological significance, bringing to bear information using remote sensing and GIS tools.

The Watershed Company (2016) report on best available science to the City of Kirkland recognize much of the best available science comes from non-urbanized environments, and consequently, the importance of local municipal conditions when applying best available science:

> "The review of science acknowledges several limitations of applying the results of primary scientific literature to policy decisions. In particular, it is important to recognize the setting of scientific investigations, as management recommendations differ between undeveloped forested environments and highly developed urban areas. For example, in urban areas, it is important to account for the presence of engineering and public works projects, such as surface water detention facilities that may alter hydraulic conditions and sediment transport, or stormwater routing,

> which may cause runoff to bypass riparian areas altogether. Another consideration when evaluating primary literature is that scientific references commonly evaluate the effects of a single set of conditions, or in some cases several specific conditions. Depending on the specific conditions and function tested, outcomes may vary. Thus, although stream and riparian conservation measures should be based in BAS, some level of policy interpretation must be made by each local jurisdiction based on local conditions."

Washington State Department of Ecology (2013) has also recognized the need for variable buffer widths as related to wetland guidance rather than stream buffers, but the principals behind the need for variable buffers remain the same:

> "Fixed-width buffers may not adequately address the issues of habitat fragmentation and population dynamics. Several researchers have recommended a more flexible approach that allows buffer widths to be varied depending on site-specific conditions.
>
> Update: A request for a more flexible approach is a common theme among recent articles (42, 62, 67, 95). The research reinforces the fact that buffers and fragmentation are only two of many variables that affect the dynamics of wildlife populations. Other factors that have been found to affect the survival of wetland-dependent species are surrounding land use, the structure of the plant community, and the intensity of human disturbance. If buffers are to be used to protect the water quality in wetlands, the factors that need to be considered are slope, soil chemistry, soil structure and the plant community."

Booth (2005) notes "changes in flow regimes, in particular, are an important pathway by which urbanization influences biotic conditions. Precision (variable) riparian buffers would especially prioritize targeting hydrologic source areas that are not otherwise controlled (Qui 2009). It would also be consistent with the priority actions for urban rehabilitation recommended in Hughes et al. (2014a) to:

> "(1) protect upstream high-quality catchments and habitats and (2) reestablish ecosystems processes and connectivity in the altered places (especially water quality and hydrological regime), before attempting to rehabilitate specific sites lower in the watershed."

This is in contrast to cases where:

> "well-meaning mitigation projects are implemented at the site or reach scale in streams, lakes, and rivers when many of the limiting factors are occurring at the watershed scale." (Hughes et al. 2014a)

This latter comment would apply equally to implementation of ineffective or poorly targeted uniform buffer widths.

Variable buffer widths would also help target longitudinal buffer continuity in higher priority basins where existing buffers may have greater existing continuity. The Watershed Company (2014) recognized:

> "Longitudinal continuity of buffers along streams is also an important factor determining the effectiveness of buffers at improving channel conditions. Riparian continuity is correlated with abundance and diversity of sensitive invertebrates (Wooster and DeBano 2006) and metrics of physical stream conditions (McBride and Booth 2005). On the other hand, fragmented riparian zones may not be sufficient to improve degraded instream habitat conditions." McBride and Booth (2005) likewise note "physical conditions can improve downstream from degraded stream reaches if the riparian zone is substantially forested and devoid of road crossings."

Variable buffer widths are also in line with concentrating development as a means of reducing impervious area at the catchment scale as recommended by Hughes et al. (2014b). This results in reducing development pressure in prioritized basins where the existing degree of impact is currently more manageable. Allowing reduced buffer widths where existing basins are highly impacted by existing development infrastructures would, to that degree of concentrated development, reduce sprawl in underdeveloped basins.

The use of variable buffer widths indicates there are locations in a stream length where the local landscape conditions and receiving water will benefit from a wider buffer width, and other areas where increased buffer widths will have a highly diminishing benefit and the receiving waters will equally not benefit substantially from increased buffer widths. As noted by McBride and Booth (2005):

> "policies and management strategies for protecting stream integrity in developing areas can be improved. With more robust knowledge the landscapes can be modified to preserve those streams or stream segments

that still function while targeting rehabilitation efforts to those degraded portions of streams that have realistic chances for improvement."

The application of fixed, one size fits all, buffers to streams within an urban environment fails to meet the goal of environmental protection, circumvents the objectives of sustainable growth management, and increases financial burdens on citizens without providing the improvement to streams that they are intended to provide.

The application of precise, site specific buffers as well as appropriately designed and implemented stormwater controls would provide greater environmental protection and habitat improvement than the proposed code changes will.

Raedeke Associates, Inc. would welcome the opportunity to meet with the City of Kirkland staff and their consultants to discuss ways to implement a variable buffer width policy.

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Teresa Swan

From: Paul Stewart
Sent: Friday, April 22, 2016 1:19 PM
To: Oskar Rey; Kevin Raymond
Cc: Teresa Swan; Eric Shields; Joan Lieberman-Brill
Subject: FW: Proposed Changes to Chapter 90 - Critical Area Ordinance

FYI

From: Brent Carson [mailto:brc@vnf.com]
Sent: Friday, April 22, 2016 12:15 PM
To: Planning Commissioners <PlanningCommissioners@kirklandwa.gov>
Cc: Eric Shields <EShields@kirklandwa.gov>; Jeremy McMahan <JMcMahan@kirklandwa.gov>
Subject: Proposed Changes to Chapter 90 - Critical Area Ordinance

Planning Commission Members,

Most of you know that I am a land use attorney with several development clients in Kirkland. I am writing to suggest the inclusion of two important provisions in the City's proposed revisions to Chapter 90 – Critical Areas Ordinance (CAO).

The CAO update is likely to include a significant expansion of wetland buffers and other provisions that could dramatically increase regulatory burdens under the new CAO. Many projects have been built in Kirkland or are in the planning or application stages that were or are being designed based on the buffers and other requirements in the existing CAO. In the interest of fairness, I would encourage you to consider inclusion of the following two provisions in the new CAO.

First, I would ask you to include a grandfathering provision within Chapter 90 that would allow applicants that have submitted, prior to adoption of the new CAO, a complete application for a planned unit development, subdivision, short subdivision, Binding Site Plan, or a zoning permit, to be subject to the provisions of Chapter 90 in effect upon submittal of the complete application. As you may know, common law vesting has been the subject of significant litigation recently and is in a state of flux. This uncertainty regarding vesting creates a real and significant impact on the development community. Some jurisdictions, such as Snohomish County, have adopted broad new vesting rules, which we certainly would encourage in Kirkland. Many local governments have also included specific grandfathering provisions in new land use ordinances when the new ordinance imposes significant regulatory changes that would cause hardship to those applicants who are not legally vested but who have already submitted detailed land use applications in reliance on existing codes. I encourage the Planning Commission to include in your proposed CAO changes a provision that would assure that the new CAO not be imposed on anyone who has filed a complete land use application prior to the date of adoption for the new CAO.

Second, I would ask you to include an express provision in the new CAO that addresses legally authorized or established breaks in a stream and wetland buffer. The Shoreline Master Program was adopted with the following language in KMC 83.500.4:

> *Modification to Buffer for Divided Wetland Buffer – Where a legally established, improved public right-of-way, improved easement road or existing structure divides a wetland buffer, the Planning Official may approve a modification of the required buffer in that portion of the buffer isolated from the wetland by the road or structure, provided the isolated portion of the buffer:*
>
> *1) Does not provide additional protection of the wetland from the proposed development; and*

2) Provides insignificant biological, geological or hydrological buffer functions relating to the portion of the buffer adjacent to the wetland.

This or similar language should be included in the new CAO. This is different from the nonconformity discussion you have had at your previous meeting. This provision is needed to address the situation where an existing wetland or stream buffer is crossed by a legally established road or structure, effectively cutting off the functions and values of that stream or wetland buffer beyond the road or structure. A new development proposed beyond the road or structure, which would otherwise be within the buffer area, should be able to demonstrate that the buffer in the location of the new development no longer serves any value.

I will be unable to attend your meeting on Thursday but would appreciate your discussion of these issues.

Brent Carson | Partner

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Teresa Swan

From: Jeremy McMahan
Sent: Monday, April 25, 2016 7:52 AM
To: Teresa Swan
Subject: FW: Comments regarding the Proposed Wetlands & Streams Code Amendments

From: Stephen Haugen [mailto:haugensd@outlook.com]
Sent: Sunday, April 24, 2016 2:55 PM
To: Jeremy McMahan <JMcMahan@kirklandwa.gov>
Subject: Comments regarding the Proposed Wetlands & Streams Code Amendments

My wife and I spoke to you before the last commission meeting. I sent my comments to the commissioners in an email. I am sharing this with you also. Thanks for taking the time to talk with us and read my comments. Steve Haugen

As a home owner with property that is adjacent to a stream, I will be affected by your proposed wetlands and streams code changes. I have attended two previous public meetings regarding this issue. At these meetings I have heard a wide range of ideas for the final buffer and buffer requirements and how this would affect the future development of an existing home owners property. The current staff proposal that will be reviewed on April 28th has made changes from previous versions, but as an affected home owner I still have concerns.

First, in an urban developed residential area, to now increase a buffer zone along a stream will have little impact to improving the health of the stream while having potential major impact to the existing or future home owner. A wider buffer zone for streams should have been considered before development occurred. Once a home owner has bought the property at a comparative price to a home not in an affected area, the home owner should have the right to develop their property in the same consistent way that any other home owner in the same neighborhood can. To change the development rights of an existing home owner that is in the proposed buffer zone will ultimately decrease the resale value of the home and minimize what improvements the current or future home owner can make to the property that they own. This is the equivalent of a land grab without giving compensation for the diminished use or valuation.

Second, the proposed code change is completely non enforceable unless a home owner comes to the city for a construction permit. Home owners will continue to do improvements or alterations with potential negative actions to the stream quality, either out of disregard of the code or lack of understanding. There is no way that the city has staff potential to enforce actions taken by home owners along every stream in Kirkland. The home owner's action may be as simple as using fertilizer or pesticides that would be undetectable and unenforceable.

Third, commissioner Mike Miller spoke at a prior meeting about how does having the buffer 100 feet instead of 50 feet in a developed residential area improve the quality of the stream. His point, if I am correct is that most of the impact from these developed properties is already done and to add an increased buffer, unnecessarily places a burden an potential financial impact to the home owner with minimal improvement to the health of the stream. As an affected home owner a 50 foot buffer, even for a fish bearing stream would effect way less home owners than the proposed 100 feet for a fish bearing stream.

Fourth, being personally concerned about the stream and it's health, over the last 30 plus years I have made significant improvements to the greenbelt buffer and stream area behind my property. These changes would all comply with your current vegetation requirements and all have improved the buffer zone and stream protection

for the area behind my household. As new code is being proposed and written now, should there be a provision for buffer improvements that a home owner has already made and should this not help to minimize the proposed buffer zone. My efforts to protect the health of the stream should be acknowledged and provide less limited use impact to the property that I own.

Lastly, thank you for reading and considering my comments. I would hope that you would consider fairness for the home owners that will be affected by this proposed code change as you finalize the policy regarding streams. The majority of the home owners that will be affected by these changes, I believe have no knowledge that this process is under way by the city. Many of these home owners will have potential consequences to their property without providing their input. Again, commissioner Mike Miller spoke to this issue at a previous meeting. There should be some additional consideration given to how the city could reach out to the affected home owners.

Steve Haugen