
Planning Commission Meeting Date: October 1, 2015

Agenda Item

PLANNING COMMISSION AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Public Hearing on Critical Areas Ordinance Update - continuation

DEPARTMENT: Planning & Community Development

PRESENTED BY: Juniper Nammi, AICP, Associate Planner
Paul Cohen, Planning Manager

Public Hearing **Study Session** **Recommendation Only**
 Discussion **Update** **Other**

INTRODUCTION

The purpose of this meeting is a continuation of the September 17, 2015, public hearing on the proposed amendments to the Shoreline Municipal Code (SMC) in:

- Chapter 20.80, Critical Areas (CAO);
- Related sections of Division I, Title 20, Development Code; and
- Shoreline Master Program, (SMP) Division II, Title 20.

The amendments are proposed to meet the State of Washington Growth Management Act (GMA) requirement to periodically review and, if necessary, update the critical area regulations for consistency with best available science (BAS). Staff is also proposing changes that will add clarity and predictability to administration of these regulations. Incorporation of the updated critical areas regulations into the SMP is recommended by staff to replace the 2006 CAO and related critical area regulations in the SMP, but not required by the GMA.

The purpose of this public hearing is to:

- Review the proposed amendments to the critical area ordinance (CAO), SMP, and related chapters in Title 20;
- Respond to questions regarding the proposed amendments;
- Gather public comment;
- Deliberate and, if necessary, ask further questions of staff; and
- Make a recommendation to forward to Council.

Amendments to the SMC Title 20, Development Code, are processed as legislative decisions. Legislative decisions are non-project decisions made by the City Council under its authority to establish policies and regulations. The Planning Commission is the review authority for legislative decisions and is responsible for holding an open record Public Hearing on the official docket of proposed Development Code amendments and making a recommendation to the City Council on each amendment.

Approved By: **Project Manager** _____

Planning Director _____

BACKGROUND

The staff report provided for the September 17, 2015, Planning Commission meeting includes the background for this project and a detailed summary of the changes proposed.

September 17, 2015 – Critical Areas Ordinance and SMP Limited Amendment Public Hearing
<http://www.shorelinewa.gov/Home/Components/Calendar/Event/8105/182?toggle=allpast>

Links to the staff reports for the five study session held with Planning Commission on this topic are also available in the September 17 meeting staff report.

At the September 17 public hearing, Planning Commission decided to continue the public hearing until the October 1, 2015, Commission meeting in light of the new information and public comment received that day. This continuation adds an additional two weeks to the official comment period for the public hearing. The SEPA checklist and notice of determination were revised and published again in response to changes proposed to the original draft regulations and the SEPA comment period was extended to October 1, 2015.

City Council is now scheduled to discuss the CAO update on October 26 and November 2 with adoption scheduled for December 7, 2015. This revised schedule allows a total of five additional weeks for public comment through the City Council processes for study sessions and adoption decision meetings.

Additionally, the limited amendment to the SMP would not go into effect until approved by the Washington State Department of Ecology (Ecology) which will be approximately 2-6 months after Council approval of the ordinances. Ecology will have its own 30-day comment period on the SMP limited amendment and may require additional changes for the critical area regulations to be incorporated into the SMP.

PROPOSAL & ANALYSIS

The CAO update project includes changes to the critical area regulations in SMC Chapter 20.80, other Title 20 chapters that reference or relate to critical areas, and a limited amendment to the SMP in order to incorporate the updated SMC Chapter 20.80 Critical Areas. To facilitate incorporation of the CAO into the SMP, the proposed Development Code amendments are organized into three ordinances:

- Ord. No. 723 - Critical Areas Ordinance (CAO) update
- Ord. No. 724 - Miscellaneous Title 20 Development Code amendments related to CAO
- Ord. No. 725 - Shoreline Master Program (SMP) Limited Amendment related to CAO

All three ordinances are provided in clean copy and legislative (strikethrough and underline) formats with the September 17 Commission meeting packet.

Please refer to the September 17 and earlier project staff reports for the analysis of the proposed changes to the critical areas regulations, related development code provisions, and limited amendment to the SMP.

RESPONSE TO PUBLIC COMMENT

The City received a number of specific comments on the draft regulations prior to or during the September 17 public hearing. Staff responses to most of these comments are included below. Staff is prepared to answer any questions Commission may have about the comments that are not directly addressed in this staff report. Specific recommendations for substantive code changes are included when applicable.

Changes to Ord. No. 723 - Critical Areas Ordinance (CAO) update:

20.50.350 Development standards for clearing activities. (E) Cutting and Pruning of Protected Trees.

Public comment stated that the proposed revisions to the provisions for Pruning of Protected Trees (SMC 20.50.350(J)) is too narrow to allow for the view preservation required in some Shoreline neighborhoods. The new language proposed in SMC 20.50.350(E), together with changes to SMC 20.80.030(J) *Normal maintenance*, allows for pruning, without a permit, of protected trees for view enhancement in ways that will not be detrimental to the health of the trees being pruned. Staff recognizes that this does not address all view issues, nor is it intended to. These changes are only intended to clarify and expand the management of trees that are protected, which can be undertaken with direction by a qualified arborist without review by the City or other qualified professionals. Alterations of buffer vegetation, such as nonhazardous tree removal, can still be considered through permit review processes with mitigation depending on the sensitivity of the critical area.

Staff does not recommend any additional changes to this section.

20.80.030 Exemptions. (G) Nonimminent Hazard Trees.

The comment stated that the proposed regulations would unnecessarily subject hazard tree exemptions to expensive third party review. However, provisions allowing for third party review by the City's qualified professional are original to the 2012 adoption of this code section. The code revisions proposed by staff to this section primarily replace outdated terms with the current terms, such as replacing "risk assessment form" with "tree evaluation form" or replacing "peer review" with "third party review."

The two substantive changes to this section include provisions 6 and 7. Provision 6 puts into the regulations the current practice by the City when applying SMC 20.50.360(F) to hazard tree removal requests. Provision 7 adds specific

circumstances under which the City will require a qualified professional to review the proposed tree removal and require mitigation similar to existing provision 3.

Changes to implementation of the third party review process, such as maintaining active contracts with qualified professionals for all identified critical area categories, should help to expedite third party review when needed quickly. Additionally, the City may be able to utilize State agency technical assistance, when available, for quicker guidance on how best to mitigate for impacts to wildlife. Keep in mind that these provisions do not apply to active and imminent hazard tree removal, only to hazards that are less immediate.

Staff does not recommend any additional changes to this section.

20.80.085 Pesticides, herbicides and fertilizers on City-owned property.

This comment asserts that allowing for pesticide use on a limited basis was not necessary and that wildlife was too sensitive to these chemicals to allow their use. The staff proposed change to this section allows for use of pesticides or herbicides when the best available science indicates that it is the best method to be used for the specific species and location being controlled. Nonchemical methods can also be significantly damaging to a critical area, such as when root systems need to be dug out resulting in areas of land disturbance requiring re-stabilization. All federal, state, and local regulations for use of pesticides and herbicides as well as protection of water quality must be followed. Staff believes that this provision, when combined with other existing regulations, will allow for the best management of invasive species, while taking into consideration site specific concerns such as proximity to a wetland. Best practices do include measures such as injection or painting the herbicide on instead of generalized spraying.

Staff does not recommend any additional changes to this section.

20.80.220 GEOLOGIC HAZARDS – Classification.

(A) Landslide Hazard Areas. and (B) Landslide Hazard Area Classification.

Concern was raised over whether defining a distinct topographic break as “extending at least fifteen feet horizontally” as arbitrary and not supported by BAS. Staff asked Todd Wentworth, AMEC Foster Wheeler, to revise the Shoreline Geologic Hazards – Best Available Science memo to better articulate the basis for this definition. The revised memo was provided to Planning Commission and the public via email and as part of the Commission’s desk packet on September 17. Staff has reviewed both the public comments and the revised memo and recommends making a change to the current draft based on the following:

- Defining the width of a distinct topographic break was intended to facilitate easier identification of landslide hazard areas generally and very high risk landslide hazard areas specifically;

- The basis for a 15-foot minimum for a distinct break is the current minimum allowed buffer for very high risk landslide hazard areas;
- The buffer width is supported by BAS, but the use of this width for defining a distinct break is not directly supported by BAS;
- Planning Commission revisions to the proposed CAO now allows for development in very high risk landslide hazard areas so the distinction between moderate to high risk and very high risk is related to the standards and requirements that apply to a project rather than whether or not a project can be permitted at all;
- Averaging the slope over 10 vertical feet should result in similar classifications as were anticipated using the original definition of a distinct break being at least 15 feet wide; and
- The analysis required by the qualified engineer should adequately assess for the total slope stability, even when there are mid-slope benches, under the requirements for both classifications of landslide hazard areas.

Based on these findings, staff recommends the following substantive changes to this section:

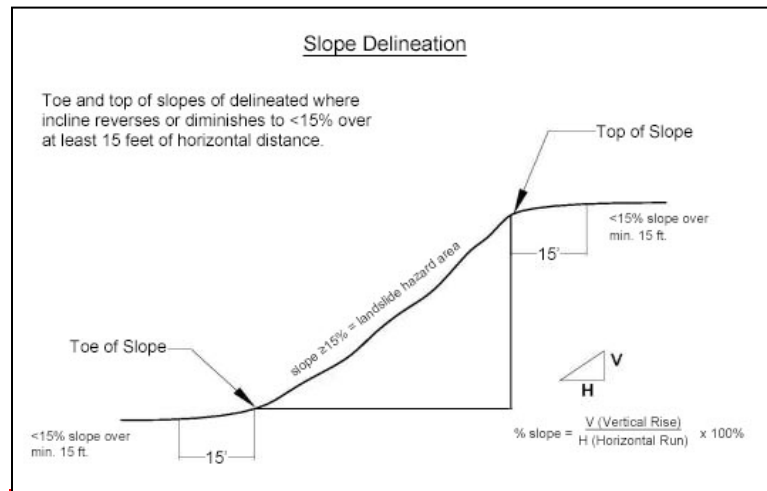
20.80.220 GEOLOGIC HAZARDS - Classification.

Geologic hazard areas shall be classified according to the criteria in this section as follows:

A. **Landslide Hazard Areas.** Landslide Hazard Areas are those areas potentially subject to landslide activity based on a combination of geologic, topographic and hydrogeologic factors as classified in SMC 20.80.220(B) with ~~Those areas in the City of Shoreline on slopes 4015 percent or steeper within a vertical elevation change of at least 10 feet or all areas of prior landslide activity regardless of slope. A slope is delineated by establishing its toe and top, and is measured by averaging the inclination over at least 10 feet of vertical relief (see Figure 20.80.220(B)). The edges of the geologic hazard are identified where the characteristics of the slope cross section change from one landslide hazard classification to another or no longer meet any classification. For the purpose of this definition:~~

A1. ~~The toe of a slope is a distinct topographic break in slope which separates slopes inclined at less than 4015 percent from slopes above that are 4015 percent or steeper when measured over 10 feet of vertical relief. Where no distinct break exists, the toe of a steep slope is the lower most limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet. A distinct topographic break is an area that extends at least 15 feet horizontally away from the slope and that slopes less than 15 percent;~~ and

B2. ~~The top of a slope is a distinct topographic break in slope which separates slopes inclined at less than 4015 percent from slopes below that are 4015 percent or steeper when measured over 10 feet of vertical relief. Where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet. A distinct topographic break is an area that is at least 15 feet horizontally away from the slope and that slopes less than 15 percent.~~



[Figure to be edited and replaced consistent with the text edits proposed]

Figure 20.80.220(A): Illustration of slope calculation for determination of top and toe of landslide hazard area.

~~3. Landslide hazard area classifications differentiated based on percent slope shall be delineated based on topographic change that extends at least 15 feet horizontally away from the slope and that slopes less than 40 percent, as determined by two (2) foot contour intervals, not averaging over the full landslide hazard area.~~

B. Landslide Hazard Area Classification. Landslide hazard areas are classified as follows:

1. ~~Moderate to High Risk Hazard:~~

a. ~~Areas with slopes between 15 percent and 40 percent and that are underlain by soils that consist largely of sand, gravel or glacial till that do not meet the criteria for Very High Risk areas in (3) below.~~

2. ~~High Hazard:~~

b. ~~Areas with slopes between 15 percent and 40 percent that are underlain by soils consisting largely of silt and clay; and do not meet the criteria for Very High Risk areas in (3) below; and~~

c. ~~All slopes of 10 to 20 feet in height that are 40 percent slope or steeper and do not meet the criteria for Very High Risk in (3)(a) or (3)(b) below.~~

3. ~~Very High Risk Hazard:~~

a. ~~Areas with slopes steeper than 15 percent with zones of emergent water (e.g., springs or ground water seepage);~~

b. ~~aAreas of landslide deposits activity (scarps, movement, or accumulated debris) regardless of slope; and~~

c. ~~aAll steep slopes hazard areas sloping that are 40 percent or steeper and more than 20 feet in height. Very high risk landslide hazard areas shall include mid-slope benches that do not meet the criteria for a top or toe of slope in SMC 20.80.220(A) when slope is averaged over 10 vertical feet of relief. Slope height shall include all areas greater than 40 percent slope that are not separated by breaks greater than 15 feet wide (horizontal run) less than 40 percent slope, as illustrated in Figure 20.80.220(B).~~

~~[place holder for cross section and plan view illustrations differentiating Moderate to High, and Very High risk landslide hazard areas]~~

[revise draft figures provided in the revised Shoreline Geologic Hazards – Best Available Science memo for consistency with the proposed changes to this section]

Figure 20.80.220(B): Illustration of landslide hazard area delineation.

(C) Seismic Hazards Areas.

Staff received an inquiry from a Planning Commissioner asking about the distance of the South Whidbey fault to Shoreline and the potential risk from this fault to north Shoreline neighborhoods.

The Shoreline Geologic Hazards – Best Available Science memos do not mention this fault specifically. Todd Wentworth, AMEC Foster Wheeler, responded to this question with the following information:

“The South Whidbey Island Fault extends from Victoria, BC, through South Whidbey Island, passes between Mukilteo and Edmonds, and continues southeast for an unknown distance, possibly to eastern Washington.

King County indicates (Map 11-3) that if a large earthquake occurred on the fault, Shoreline would experience Moderate Damage (Mercali Scale VII). This is the same estimate as for a large earthquake on the Seattle Fault (King County Map 11-2). For the 100 year probabilistic earthquake (King County Map 11-1) only parts of Shoreline will have Moderate Damage. The King County hazards maps were published in May 2010.

USGS recognizes the South Whidbey Island Fault as a potential hazard, but it needs more study; more is known about the Seattle Fault.

In summary, less is known about the South Whidbey Island Fault, but for the City of Shoreline, the hazard could be similar to the Seattle Fault.”

Seismic hazard area evaluation in critical area reports should take this fault into consideration when assessing geologic hazards. Staff does not recommend any additional changes to the Geologic Hazards provisions classifying seismic hazards or to the provision regulating alterations in these areas based on this information.

20.80.224 GEOLOGIC HAZARDS – Development standards.

(G) Additional Requirements for Alteration of Very High Risk Landslide Hazard Areas.

Concern was raised that the requirement, in provision 4, for a Geotechnical Special Inspector during the construction process goes beyond what other cities, such as Seattle, require. Concern was also raised regarding the requirement that the special inspector insure (or ensure) development is occurring as permitted, suggesting instead the use of the word verify.

Staff revisited the City of Seattle landslide and steep slope hazard regulations that were used as a starting point for most of the additional requirements included in this section. Staff also reviewed the City's existing provisions for special inspections under the International Building Codes and construction management by the qualified professional required under the proposed mitigation performance standards and requirements in SMC 20.80.250(C).

Building code special inspection requirements would be required for buildings and other structures proposed within the very high risk landslide hazard areas where continuous inspection during a stage of construction or specialized expertise is needed for verification of the construction methods and materials. Where nonstructural projects are proposed, staff believes that the construction management provided by the qualified professional proposed in SMC 20.80.250(C)(10) will be sufficient when combined by the discretion allowed to the building official to stop a project and require a letter of certification from the qualified geotechnical engineer when an emergency situation is identified per SMC 20.80.250(G)(5) and (6).

In response to these comments and staff analysis the following substantive changes and clarifying edits are proposed:

20.80.224 GEOLOGIC HAZARDS – Development standards.

G. Additional Requirements for Alteration of Very High Risk Hazard Landslide Areas.

- ~~4.—During permitted construction on Very High Risk Landslide Hazard Areas and buffers a qualified professional Geotechnical Special Inspector shall be a third party contractor and authorized as a deputy of the building official to insure that the development is built as permitted and to insure that slope safety problems are prevented.~~
- ~~54.~~ If the building official has reasonable grounds to believe that an emergency exists because significant changes in geologic conditions at a project site or in the surrounding area may have occurred since a permit was issued and these changes increase, increasing the risk of damage to the proposed development, to neighboring properties, or to the drainage basin nearby surface waters, the Director-building official may by letter or other reasonable means of written notification suspend the permit until the applicant has submitted a letter of certification.
- ~~6.—The building official may require a~~ letter of certification shall be based on such factors as the presence of known slides, indications of changed conditions at the site or the surrounding area, or other indications of unstable soils and meet the following requirements:-
- a. The letter of certification shall be from the current project qualified professional geotechnical engineer of record stating that a qualified professional geotechnical engineer has inspected the site and area surrounding the proposed development within the sixty (60) days preceding submittal of the letter; and that:
- bi. In the project geotechnical engineer's professional opinion no significant changes in conditions at the site or surrounding area have occurred that render invalid or out-of-date the analysis and recommendations contained in the technical reports and other application materials previously submitted to the City as part of the application for the permit; or that
- eii. In the project geotechnical engineer's professional opinion, changes in conditions at the site or surrounding area have occurred that require revision to project criteria and that all technical reports and any necessary revised drawings that account for the changed conditions have been prepared and submitted.

5. The letter of certification and any required revisions shall be reviewed and approved by the City's third party qualified professional, at the applicant's expense, before the building official may allow work to continue under the permit.

20.80.274 FISH AND WILDLIFE HABITAT – Development standards.

20.80.280 FISH AND WILDLIFE HABITAT – Required buffers. and

20.80.324 WETLANDS – Development standards.

Public comment received expresses concerns that the restrictions on vegetation management in certain stream and wetland buffers in these three sections is over broad and not supported by BAS. Suggestion made by the public to add “limited tree removal/replacement and other vegetation management pursuant to an approved buffer enhancement plan on previously developed or development restricted lots” in the allowed activities provisions of these sections or to include limited tree removal as minor conservation and enhancement under SMC 20.80.030(E).

Vegetated buffers are one of the important tools used to protect critical area functions and values. They were the primary focus of the BAS update completed by Ecology for wetlands in 2013. The findings in the original Wetlands in Washington State publications from Ecology and the updated synthesis of literature in 2013, support the restriction and management of vegetation removal in wetland buffers. Some of the research reviewed for effectiveness of buffers can also be applied to streams because some of the literature reviewed, for the effectiveness at protecting water quality, was done in the buffers of streams and rivers. Findings and conclusions that are particularly relevant to limiting vegetation removal and modification include:

- The types of plants present and how they are managed is one of the factors that contributed to the effectiveness of a buffer regarding phosphorus removal.
- Types of vegetation (trees, grasses, trees + grasses) are significantly correlated with removing pollutants.
- Wildlife preferences for types of vegetation in a buffer are very species specific.
- Humans can reduce the effectiveness of buffers in the long term through removal of buffer vegetation, soil compaction, sediment loading, and dumping of garbage.
- The composition of plants in buffers and core habitats is an important factor in protecting wetland-dependent wildlife species.

Management recommendations in Wetlands in Washington State - Volume 2 (pg. 8-41) states that:

“Generally, buffers should be maintained in vegetation,” and “any use that results in the creation of impervious areas, clearing of vegetation, or compaction of soils will be incompatible with buffer functions. Typically, buffers need to be densely vegetated with appropriate native vegetation to perform water quality and habitat-related functions.”

The BAS memos from other cities, reviewed for this update project and included in the records as BAS references, all address the need for undisturbed vegetative buffers for wetlands, streams, and other fish and wildlife habitat conservation areas. These memos include numerous references to studies identifying vegetation characteristics as critical factors in the function of stream and wetland buffers.

Both the existing regulations and the proposed regulations, in SMC 20.80.090, require that buffers be maintained as undisturbed native vegetation or if disturbed be revegetated pursuant to an approved plan. New or revised provisions in SMC 20.80.274, 20.80.280, 20.80.324, and 20.80.330 that regulate vegetation removal and replacement within fish and wildlife habitat conservation areas and wetland buffers are consistent with the general provision in SMC 20.90.090 that applies to all buffers and are consistent with the BAS that is well documented within the record. The regulations do allow for vegetation enhancement or mitigated removal of vegetation when the alteration cannot be avoided and when consistent with an approved mitigation or enhancement plan. Tree removal and other vegetation removal can cause harm to critical areas and is a known disturbance that does contribute to cumulative impacts to critical areas.

Staff believes current provisions are supported by BAS, allow for most vegetation management needs through limited exemptions or approved mitigation or enhancement plans reviewed under permit and consistent with the provisions of this Chapter. Staff does not recommend any changes to these sections due to lack of support by BAS.

The City Attorney's Office review of the draft code did identify a few places in these sections where the wording of provisions has included buffers where the regulation should only apply to the critical area itself. The following technical changes are recommended to correct these mistakes:

20.80.060 Best available science.

A. Protect Functions and Values of Critical Areas With Special Consideration to Anadromous Fish.

Critical area reports and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical areas ~~and required buffers~~ and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish, such as salmon and bull trout, and their habitat, where applicable.

C. Characteristics of a Valid Scientific Process. In the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions, and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas ~~and buffers~~. To determine whether information received during the permit review process is reliable scientific information, the Director shall determine whether the source of the information displays the characteristics of a valid scientific process. Such characteristics are as follows:

20.80.274 FISH AND WILDLIFE HABITAT - General development standards.

C. Activities Allowed in Fish and Wildlife Habitat Conservation Areas. These activities listed below are allowed in fish and wildlife habitat conservation areas subject to applicable permit approvals. Additional exemptions are listed in the provisions of SMC 20.80.030 and 20.80.040. These activities

do not require the submission of a critical area report and are exempt from monitoring and financial guarantee requirements, except where such activities result in a loss of the functions and values of a fish and wildlife habitat conservation area ~~or related buffer~~. These activities include:

F. Approvals of Activities. The Director shall condition approvals of activities allowed within or adjacent to a habitat conservation area ~~or its buffers~~, as necessary to minimize or mitigate any potential adverse impacts. Conditions shall be based on the best available science and may include, but are not limited to, the following:

During review of the comments on the fish and wildlife habitat conservation area development standards, it came to the attention of staff that both the existing (SMC 20.80.290) and proposed (SMC 20.80.74(A) and (B)) standards for development in FWHCAs prohibit development except through a critical area reasonable use or critical area special use permit process. In comparison, the specific habitat standards in SMC 20.80.276 do not require critical area reasonable use or critical area special use permits except for the most sensitive stream categories.

Staff is asking for direction from Planning Commission on whether to revise these provisions so that a critical area reasonable use or critical area special use permit is not required in most FWHCAs when development may be able to coexist with the wildlife if mitigation measures are implemented.

20.80.324 WETLANDS – Development standards.

(D) Category II and III Wetlands.

Revisions to the standards for alteration of wetlands is worded as a prohibition on alteration of Category II and III wetlands, while existing regulations allow for alteration of Type II, III, and IV wetlands. Comments expressed concern that this prohibition did not appear to take into account the unique aspects of developing linear transportation systems. Both provisions have criteria that have to be met before alteration can be approved. The intent of this language is that where impacts to Category II and III wetlands cannot be reasonably avoided and meet all the criteria listed, then alterations can be permitted.

Consistent with the existing regulations alteration can be permitted without the critical area reasonable use or critical area special use permit processes, unless the strict application of the regulations denies reasonable use or unreasonably denies the provision of public services. Projects like the light rail extension through Shoreline may require review under a Critical Area Special Use application.

Staff does not recommend any additional changes to this section.

20.80.330 WETLANDS – Required buffer areas.

(A) Buffer Requirements.

(5) Increased Wetland Buffer Area Width

Concern was raised that the increased buffer width requirement in this provision can be problematic in situations where site constraints limit the width available for a buffer. The example of a wetland located within a highway interchange was given.

Staff believes that buffer width requirements that are not feasible because of existing or necessary physical separations that result in functional isolation of the buffer from the wetland are addressed when buffer width requirements are combined with proposed provision 20.80.330(H)(10) that allows for areas determined by a qualified professional to be functionally isolated, consistent with the criteria of this provision, to be excluded from the required buffer area.

(C) Measurement of Wetland Buffers.

Public comment indicated that proposed changes to the language originally found in SMP section 20.230.030(C)(4)(c) makes this provision more confusing rather than clearer, as intended by staff. The sentences in question are struck through in the following code excerpt:

C. **Measurement of Wetland Buffers.** All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.

Staff originally proposed deleting these sentences because provision 20.80.330(A)(5) and 20.80.330(H)(10) address how to treat buffer areas when the existing condition is something other than undisturbed native vegetation or the buffer area is physically separated and functionally isolated from the wetland it is supposed to protect. Staff recommends keeping this code section as currently drafted, without the struck through sentences as these conflict with or are replaced by the sections mentioned.

20.80.350 WETLANDS – Compensatory mitigation performance standards and requirements.

(D) Type and Location of Compensatory Mitigation.

Staff explained at the June 4 Planning Commission meeting and again at the August 20 meeting the basis for not recommending provisions to allow the use of in-lieu fee programs or mitigation banks. Projects that cannot do on-site compensatory mitigation can work with the City, through applicable land use review and permit processes, to identify off-site mitigation locations within the same sub-basin as the proposed impacts.

Staff does not recommend any additional changes to these sections.

Prior draft section (F) on Timing of Compensatory Mitigation

The wetlands section on timing of compensatory mitigation, originally moved from SMP section 20.230(C)(6), was relocated to the general provisions in section 20.50.053(D) as applicable to mitigation for alterations to any type of critical area. The relocated and revised language still requires that mitigation occur prior to the activities that will disturb the critical area or immediately following disturbance and prior to use or occupancy of the development. Delayed mitigation is an option with an explanation from the qualified professional with the rationale for the delay.

Staff does not recommend any additional changes to these sections.

Changes related to Shoreline Master Program (SMP) Limited Amendment:

Staff received a number of comments from the Washington State Department of Ecology that are required to be addressed in order to receive Ecology approval of the proposed SMP Limited Amendment. These were provided to Planning Commission in the September 17 desk packet and are included for the record in **Attachment A**. City staff will work with Ecology over the next few weeks to work out how best to address comments where there is a difference in position between the City and Ecology. The changes needed to successfully incorporate the updated CAO into the SMP are primarily related to:

- excluding sections that conflict with the SMA rules on exemptions and shoreline variances,
- revisions to effectively incorporate the Flood Hazard regulations that have a different review and permitting process that conflicts with the SMP requirements,
- removing conflicts between language required under the GMA for reasonable use and requirements in the SMA for the shoreline variance process, and
- ensuring that standards required in the SMP for monitoring are not replaced by conflicting standards in the general CAO.

Ecology also wants the term “stream” to be replaced with “waters” in the sections that add the state water typing system for stream classification. The state water typing system includes marine waters and Ecology is asking that standards for marine waters be included in the fish and wildlife habitat conservation areas standards. Staff believes it would be confusing to use more generic terms and regulations for marine waters to the City-wide critical area regulations when marine waters are only regulated within the shoreline jurisdiction. Staff will work with Ecology to try and identify an alternative way to address Ecology’s requirements while not imposing new buffers for marine waters or generalizing the stream regulations so much that they are not understandable when applied to the rest of the City. Recommendations on this issue will be addressed in the Council Study sessions and will determine at that time if additional public review is needed.

SCHEDULE

The current schedule for City Council study and adoption of the CAO update is:

- October 26 – Study Session 1
- November 2 – Study Session 2
- December 7 – potential Adoption

Due to the complexity of the proposed CAO changes, staff is recommending a delayed effective date for this ordinance of two months after adoption – approximately February 1, 2016. This would allow time for staff training, update of forms and handouts, and

adjustment of projects being planned but not yet submitted. The proposed delayed implementation would be compatible with the GMA compliance requirements and could coincide with the earliest delayed effective date of the SMP limited amendment.

PUBLIC NOTICE

Public notice of the proposal, public hearing, SEPA Determination and SMP limited amendment was provided on July 29, 2015. The notice was posted in the Seattle Times, on the City's website, on Shoreline Area News, and emailed to Parties of Record. Emails and Alert Shoreline notifications were sent to distribution lists on July 28, August 14, and August 28, 2015, letting people know that the SEPA checklist and Notice of Determination of Non-Significance were available at <http://www.shorelinewa.gov/government/departments/planning-community-development/land-use-action-and-planning-notices>, and about the public hearing and subsequent Council study and potential adoption.

A revised SEPA checklist and Notice of Determination of Non-Significance was published on September 10, 2015 and the SEPA comment period was extended to October 1, 2015. Additionally, at the September 17 public hearing, Commission continued the public hearing by two weeks, until October 1, 2015. Public hearing comments are now due October 1, 2015, and will be provided to Commission via Plancom or in a desk packet.

RECOMMENDATION

Staff recommends the Commission amend if necessary and forward a recommendation to the City Council to adopt the following proposed Development Code amendment ordinances with an approximate two month delay to the effective date:

- Critical Areas Ordinance (CAO) update (Ord. No. 723);
- Miscellaneous Title 20 Development Code Amendments related to CAO (Ord. No. 724)
- Shoreline Master Program (SMP) Limited Amendment related to CAO (Ord. No. 725).

ATTACHMENTS

Attachment A – Shoreline Draft SMP Changes 9/16/2015 email from Ecology and attached documents.

Please refer to the September 17 staff report attachments for the public hearing draft ordinances in legislative and clean copy formats.

From: [Juniper Nammi](#)
To: [Lisa Basher](#)
Subject: FW: Wetland and FWHCA comments on City of Shoreline SMP-CAO
Date: Thursday, September 17, 2015 11:23:47 AM
Attachments: [Shoreline Draft SMP changes table PA City Response draft 9-16-2015.docx](#)
[Flood Hazard Management Sections of the Cities Shoreline Inventory and Characterization.docx](#)

For inclusion in the desk packet.

Juniper Nammi, AICP
Associate Planner
P: (206) 801-2525

From: Blair, Misty (ECY) [mailto:mbla461@ECY.WA.GOV]
Sent: Wednesday, September 16, 2015 6:31 PM
To: Juniper Nammi
Cc: Anderson, Paul S. (ECY)
Subject: RE: Wetland and FWHCA comments on City of Shoreline SMP-CAO

Juniper,

Thank you for providing the Department of Ecology SEA Program with additional opportunities to review and comment on this proposed Shoreline Master Program Limited Amendment before local adoption. I have attached an updated comment matrix from Paul Anderson including CAO and SMP comments. I have also added a few of my own SMP comments in an attempt to help connect that table to the comments and concerns you will find listed below by topic.

General SMP

1. In addition to the CAO provisions already excluded from the SMP in your August 2015 draft, the following provisions should also be excluded as they are not consistent with the RCW 90.58 or WAC 173-26:

20.80.224.B Geologic Hazards Allowed Activities w/out critical areas report

20.80.274.C Activities Allowed in Fish and Wildlife Habitat Conservation Areas

20.80.274.K.3 Subdivision and short subdivision of land in FWHCA and associated buffers.-
See additional comments below._

20.80.280.D Stream Buffer Allowed Uses and Alteration

20.80.324.B Activities Allowed in Wetlands

20.80.324.F Small, hydrologically isolated Category IV wetlands –See additional comments
below._

20.80.330.H Allowed Wetland Buffer Uses

2. There is a lot of “reasonable use” type language used throughout the CAO, so I would

recommend adding “any” reasonable use or special use provisions, including but not limited to the provisions of SMC 20.30.333 and 20.30.336.

3. Maybe consider adding something similar to Whatcom County SMP 23.10.06
References to Plans, Regulations or Information Sources

A. The Whatcom County Critical Areas Ordinance, WCC 16.16 (Ordinance No. 2005-00068, dated Sept 30, 2005, and as amended on February 27, 2007) is hereby adopted in whole as part of this Program, except that the permit, non-conforming use, appeal and enforcement provisions of the Critical Areas Ordinance (WCC 16.16.270-285) shall not apply with shoreline jurisdiction. All references to the Critical Areas Ordinance WCC 16.16 (CAO) are for this specific version.

4. As you pointed out SMC 20.220.040.E mistakenly appears to state that a Critical Areas Reasonable Use Permit and a Shoreline Variance could be required. When in fact only a Shoreline Variance should be processed. This should be corrected.

Floodplain Management - I am coordinating additional review of this section with our Floodplain Manager, David Radabaugh. We will hopefully have additional comments and suggestions for you soon.

My initial concern with removing the Policy and Regulation sections of the SMP related to Floodplain Management is that they are curtailed to the needs of the Shoreline environment and specifically address the requirements of the SMA. See RCW WAC 173-26-211(3) that don't appear to be mirrored within 13.12.

Additional considerations include:

1. Flood Hazard Management Sections of the Cities Shoreline Inventory and Characterization, at 117-118 (see attachment).
2. Consider leaving the existing policies and regulations within SMP and referencing that additional City review will occur as part of the Floodplain Development Permit process under 13.12.
3. Consider the possibility of adding additional clarification within the SMP to address how shoreline permits will incorporate the floodplain review referenced within 13.12 Floodplain Management considering these provisions are under the authority of the Public Works Department.
4. If 13.12 is incorporated, administrative process, definitions and review authority will need to be clarified within the SMP. David and I are looking for some examples, but I don't think this approach is very common.

Wetlands

1. **Remove SMC 20.80.324.F from the CAO or exclude from the SMP.** Small hydrologically isolated category IV wetlands are not exempt from meeting any of the critical area provisions of WAC 173-26. [WAC 173-26-221\(2\)\(c\)\(i\)\(C\)](#) **Alterations to wetlands.** Master program provisions addressing alterations to wetlands shall be consistent with the

policy of no net loss of wetland area and functions, wetland rating, scientific and technical information, and the mitigation priority sequence defined in WAC [173-26-201](#) (2)(e). SMC 20.80.324.F skips the first step in mitigation sequencing, avoidance. WAC 173-26-221(2)(c)(i)(F) Compensatory mitigation, provides that compensatory mitigation is allowed only after mitigation sequencing is applied.

2. **SMC 20.80.276.D.3** – contains a typo that references wetland acreage and functions within a stream provision.

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Fish and Wildlife Habitat Conservation Areas (FWHCAs)

1. SMC 20.80 does regulate your marine waters as a fish and wildlife habitat conservation area. Implementing regulations for the protection of these FWHCA are not located elsewhere in the SMP and should currently be implemented through the integrated CAO. However, the FWHCA section of the existing and proposed CAO is lacking specifics related to marine FWHCAs. You may want to change stream to waters as Paul has recommended or add a critical salt water habitat/marine waters section within SMC 20.80.290 & 20.80.300.
2. **Remove SMC 20.80.274.K.3 from the CAO or exclude from the SMP.** Impacts associated with providing plat access or routing subdivision utilities through the FWHCA or its buffer could always be avoided by not subdividing the property. This provision is not consistent with the mitigation sequencing requirements.

Geologically hazardous areas

Geologically hazardous areas requirements of WAC 173-26-211(2)(c)(ii) appear to be sufficiently addressed by the CAO incorporation along with the existing SMP Shoreline Modification Policies and Regulations.

Thank you for your efforts to create a better SMP. I look forward to working on this further with you as your local adoption process moves forward.

Misty Blair | Regional Shoreline Planner | S.E.A. Program | Northwest Regional Office | [WA Department of Ecology](#) | P 425-649-4309 | misty.blair@ecy.wa.gov

This communication is public record and may be subject to disclosure as per the Washington State Public Records Act, RCW 42.56.

From: Juniper Nammi [<mailto:jnammi@shorelinewa.gov>]
Sent: Tuesday, August 25, 2015 4:43 PM
To: Blair, Misty (ECY)
Cc: Anderson, Paul S. (ECY)
Subject: RE: Wetland and FWHCA comments on City of Shoreline SMP-CAO

City draft responses added to Paul’s comment table and are attached.

Misty’s comments were in a PDF so the City’s draft responses are listed here:

1. Retained policy sections for Floodplains and Wetlands in B and C, but would appreciate direction on how these can be simplified if possible.

Need specific language for the policy language you think may need to be added. Did not completely understand the direction except that “policies are required.” There is also a lot of existing policy language in 20.30.020 that seems related.

2. 20.230.030 - Need direction on how to demonstrate how policies are being incorporated and reflect the results of the inventory and characterization. Do not understand this comment.

See opening statement in 20.210.010. Definitions in Title 20.20 are incorporated so duplicates (related to critical areas regulation) are proposed for deletion.

3. Chapter 20.80 does not regulate marine environment (except for coastal flood zone). These regulations are all in other parts of the SMP. No changes proposed. Adding this term/definition or related regulations to the critical areas regulations for the rest of the City does not make sense. If something is missing from the 2013 update, let me know.

4. Revised Ordinance reference and added exclusions for conflicting sections.

Need direction on how to update the Appendix.

5. Added language indicating that TUP does not apply in the shoreline jurisdiction.

6. Drafted change to address how Subsection A pertains to SMP, but not sure if I understood this comment correctly.

7. This section only indicates that buffers may be MORE not less than standard based on critical area report. No buffer reduction per in this general provisions section. Revisions were made in response to other comments received. It may clarify/fix this section.

I still need to revise the draft regulations to address some of your comments were I have questions. Also, I need to review the critical area report and mitigation plan requirements for each type of critical area to delete redundancy where general provisions are sufficient.

To help your review, I am attaching the current working drafts for ALL the proposed changes.

They are now in three sections – Chapter 20.80 changes (the CAO), SMP changes, and related Title 20 changes (Chapters 20.20, 20.30, 20.40, and 20.50). You can see retained language moved as different from new language (double underline/double strike through) if you turn the markup off under the review tab. I now have comments noting where provisions were moved from/to.

I need to finalize revised drafts by Thursday so that they can be shared with Planning Commission and the public for the upcoming public hearing. I will send you updated versions at that time, but hope to have more direction from you tomorrow so these revised drafts can include as many of the needed changes as possible.

Thank you for your assistance on this.

Juniper Nammi, AICP
Associate Planner
P: (206) 801-2525

From: Blair, Misty (ECY) [<mailto:mbla461@ECY.WA.GOV>]
Sent: Friday, August 21, 2015 5:11 PM
To: Juniper Nammi
Cc: Anderson, Paul S. (ECY)
Subject: FW: Wetland and FWHCA comments on City of Shoreline SMP-CAO

Juniper,

Paul Anderson's initial CAO comments are detailed below with DRAFT required and recommended changes from each of us attached.

Please note that Paul and I would be happy to meet with you to discuss these items in greater detail.

Misty Blair | Regional Shoreline Planner | S.E.A. Program | Northwest Regional Office |
[WA Department of Ecology](http://WA.Department.of.Ecology) | P 425-649-4309 | misty.blair@ecy.wa.gov

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From: Anderson, Paul S. (ECY)
Sent: Friday, August 21, 2015 2:20 PM
To: Blair, Misty (ECY)
Subject: Wetland and FWHCA comments on City of Shoreline SMP-CAO

Misty:

Sorry I haven't gotten my comments to you on the City of Shoreline's SMP update. I know that Juniper is eager to hear back from us, but, unfortunately, there are a number of issues with the current CAO and I haven't yet completed my review. I have completed my review of the general sections, definitions, FWHCA, and am about half-way through the wetlands

section (which will complete my review).

I hope to finish my review of the CAO later today. In the interest of getting something to Juniper, I have attached my table of required and recommended changes. I have not added any comments on the SMP itself in the attached table and you will need to scroll down to the CAO comments.

As a general statement, I have the following observations about the CAO:

1. As you know, within shoreline jurisdiction the standard to be met is no net loss of ecological function. In addition to complicating the SMP statutory and policy requirements, ecologically, I am concerned that there are simply too many exemptions and options for alternatives from the standard critical area buffers and mitigation requirements. I don't see how no net loss can be achieved with all of the listed exemptions/exceptions. Also, reducing the number of these special allowances will greatly simplify critical areas protections within the SMP, which should make for easier interpretation and implementation by City staff.
2. I am very unclear (confused) as to what the correct definitions are. The most recent submittal seems to have many fewer definitions than the previous draft. There are a number of definitions that I feel need to be in the SMP that I don't see (shorelands, shorelines, shorelines of statewide significance).
3. The FWHCA section describes critical habitats that includes marine waters, yet there are little or no protection standards for marine habitats and their associated buffers. Most if not all of the FWHCA buffer and development standards refer to streams and not marine waters, which will need to be corrected in the SMP.

I would be happy to talk to Juniper about the changes listed in the attached table and will get the completed comments to you once I finish my review.

Thanks for your patience with me on this.

Paul

Paul S. Anderson, PWS
Wetlands/401 Unit Supervisor
Washington State Department of Ecology
3190 - 160th Ave. SE
Bellevue, WA 98008
Phone: (425) 649-7148
Cell: (425) 765-4691
Fax: (425) 649-7098
Email: Paul.S.Anderson@ecy.wa.gov

City of Shoreline Revised Draft Shoreline Master Program Update, Dated August 28, 2015

Ecology Recommended and Required Changes – September 16, 2015

The following changes are required to comply with the SMA (RCW 90.58) and the SMP guidelines (WAC 173-26, Part III):

ITEM	Draft SMP Provision (Cite)	TOPIC	RECOMMENDED AND REQUIRED FORMAT CHANGES	DISCUSSION/RATIONALE
1	SMP § 20.230.030.C.1	Environmentally sensitive areas within the shoreline Wetlands	Required: m. Applicants should develop comprehensive mitigation plans to ensure long-term success of the wetland restoration, creation, or enhancement project. Such plans should provide for sufficient monitoring and contingencies to ensure wetland persistence. <u>Mitigation projects shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five (5) years nor less than ten (10) years when the project includes planting of trees or shrubs.</u>	[9-16-15 PAAN] To ensure the long-term success of mitigation, particularly where shrubs and trees are planted. Also, will provide more efficiency for applicants since these are the required standards for state and federal permitting (see p. A-22, Small Cities Guidance; pp. 6-29, 6-52 Wetlands in Washington; p. 27, Mitigation Guidance). Same comment for mitigation monitoring in FWHCA.
Comments on Chapter 20.80 - CRITICAL AREAS REGULATIONS 8-28-15 drafts)				
2	CAR § 20.80.082	Mitigation plan requirements	Required: D. Monitoring Program ... A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years 0 [as-built], 1, 3, 5, and 7 after site construction), The mitigation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five (5) years <u>nor less than ten (10) years when the project includes planting of trees or shrubs.</u>	[9-16-15 PAAN] Mitigation monitoring standards in shoreline jurisdiction (20.230.020) should be more specific and include the required minimums (5 years for herbaceous, 10 years for woody species) to ensure successful mitigation and no net loss of ecological function.
3	CAR § 20.80.276	FWHCA Specific habitat development standards	Required: D. Streams. Activities, uses and alterations of streams shall be prohibited subject to the reasonable use provisions (SMC 20.30.336) or special use provisions (SMC 20.30.333), unless otherwise allowed by the exemptions or allowed activities provisions of this Title, or subject to the provisions of the Shoreline Master Program, SMC Title 20, Division II.	Clarification and Consistency
4	CAR § 20.80.280	FWHCA Required buffer areas	Required: C. Standard Required Stream Buffer Widths. Buffer widths shall reflect the sensitivity of the stream <u>water</u> type, 1. The following buffers are established for streams <u>waters</u> based upon the Washington State Department of Natural Resources water typing system... Table 20.80.280(1) Stream <u>Water</u> Type Standard Buffer Width (ft) [The science clearly shows that marine riparian buffers provide important functions to the marine nearshore and are essential to achieving no net loss of shoreline ecological function. The protection standards in the CAO/SMP should apply to marine waters in addition to lakes and streams (see Brennan, J.S., and H. Culverwell. 2004. <i>Marine Riparian: An Assessment of Riparian Functions in Marine Ecosystems</i> . Published by Washington Sea Grant Program, UW Board of Regents, Seattle, WA. 34 p.; <i>Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho</i> , Federal Register, 70, No. 170, September 2, 2005)] D.6 Stormwater Management Facilities. The establishment of stormwater management facilities,	Clarification and Consistency [9-16-15 PAAN] I do not see FWHCA regulatory standards in the SMP. When we met on 9-2, we discussed adding a footnote to Table 20.80. 280 that marine waters are Type S waters and the standard buffer in the table would apply. SMP [9-16-15 MB] The existing Native Vegetation Conservation buffer/setback (Table 20.230.082) may have been intended to meet this FWHCA buffer requirement, but that is not clear. May want to cross reference Shoreline Environment Designation setback provisions here. [9-16-15 PAAN] Comment on stormwater

			<p>limited to outfalls, pipes and conveyance systems, stormwater dispersion outfalls and bioswales, may be allowed within stream buffers; provided that:</p> <p>e. Stormwater dispersion outfalls, bioswales, bioretention facilities, and other low impact facilities may be allowed anywhere within stream buffers when determined by a qualified professional that the location of the facility will enhance the buffer area and protect the stream;</p>	<p>management facilities still applies</p> <p>SMP [9-16-15 MB] Mitigation sequencing is still applicable to stormwater management facilities and should only be placed within buffers after avoidance, and minimization has been applied.</p>
5	CAR § 20.80.290	FWHCA Critical area report requirements	<p>Required: A. Preparation by a Qualified Professional. A critical areas report for a habitat conservation area shall be prepared by a qualified professional who is a biologist. Third party review by a qualified professional under contract with the City will be required, at the applicant’s expense in any of the following circumstances:</p> <p>2. Mitigation is required for impacts to Type S, Type F, or Type Np streams <u>waters</u> and/or buffers; or</p> <p>3. Mitigation is required for impacts to Type Ns streams <u>waters</u></p> <p>C. Habitat Assessment</p> <p>D. Additional Technical Information Requirements for Streams <u>Waters</u>. Critical area reports for streams <u>waters</u> must be consistent with the specific development standards for stream in SMC 20.80.276 and 20.80.280 and may be met through submission of one or more specific report types. If stream buffer enhancement is proposed to average stream buffer width, a stream buffer enhancement plan must be submitted in addition to other critical area report requirements of this section. If no project impacts are anticipated and standard stream FWHCA buffer width are retained, a stream delineation report, general critical areas report or other reports alone or in combination may be submitted as consistent with the specific requirements of this section. In addition to the basic critical area report requirements for fish and wildlife habitat conservation areas provided in subsections (A) through (C) of this section, technical information on streams <u>waters</u> shall include the following information at a minimum:</p> <p>a. Stream-Survey showing the <u>field delineated</u> ordinary high water mark(s);</p> <p>b. Standard stream FWHCA buffer boundary;</p> <p>c. Boundary for proposed stream buffers averaging, if applicable</p>	<p>[9-16-15 PAAN] Comment on replacing “streams” with “waters” or “FWHCA” in shoreline jurisdiction still applies; perhaps should include language in SMP that within shoreline jurisdiction, CAO FWHCA standards (buffers, mitigation, habitat assessments, etc.) apply to marine waters. As currently written in the CAO, a development proposal on Puget Sound would only need to comply with the standards in § 20.80.290.D.6 for streams and not include marine waters, which will not adequately protect shoreline resources.</p> <p>SMP [9-16-15 MB] This is the only place for specific FWHCA report requirements, so it should include requirements associated with all FWHCA development proposals (not just streams). If you don’t want to change streams to Waters, there needs to be additional sections added to address marine or other FWCHA reporting requirements such as OHWM determinations, eel grass surveys, spawning surveys, proposed fish windows...Another option would be to include these regulations within the SMP.</p>
6	CAR § 20.80.300	FWHCA Mitigation performance standards	<p>Required:</p> <p>I. Monitoring Program and Contingency Plan. A monitoring program shall be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met. The monitoring program will be established consistent with the guidelines contained in SMC 20.80.350(G). <u>The mitigation site shall be monitored for a minimum of five (5) years where mitigation plantings are limited only to herbaceous species and ten (10) years where shrubs or trees are planted. Monitoring should include an as-built report (Year 0) with scaled drawings that show the completed mitigation site grades, plantings, any habitat features and the associated buffer.</u></p>	<p>[9-16-15 PAAN] Comment on FWHCA mitigation monitoring standards still applies.</p>
7	CAR § 20.80.324	WETLANDS – Development standards	<p>Required:</p> <p>D. Category II and III wetlands. Development activities and uses that result in alteration of Category II and III wetlands is prohibited, unless the applicant can demonstrate that <u>full compensation for the loss of acreage and functions of wetland and buffers due to unavoidable impacts shall be provided in compliance with the mitigation performance standards and requirements of these regulations;</u></p>	<p>SMP [9-16-15 MB] This sounds like a reasonable use allowance. Within the Shoreline the bulk and dimensional</p>

		<p>1. The basic project proposed cannot reasonable be accomplished on another site or sites in the general region while still successfully avoiding or resulting in less adverse impact on a wetland; and</p> <p>2. All on-site alternative designs that would avoid or result in less adverse impact on a wetland or its buffer, such as a reduction to the size, scope, configuration or density of the project are not feasible.</p> <p>F. Small, hydrologically isolated Category IV wetlands. The Director may allow small, hydrologically isolated Category IV wetlands to be exempt from the avoidance sequencing provisions of SMC 20.80.055 and SMC 20.80.324(D) and allow alteration of such wetlands provided that a submitted critical area report and mitigation plan provides evidence that all of the following conditions are met:</p> <ol style="list-style-type: none"> 1. The wetland is less than one thousand (1,000) square feet in area; 2. The wetland is a low quality Category IV wetland with a habitat score of less than 3 points in the adopted rating system; 3. The wetland does not contain habitat identified as essential for local populations of priority species identified by the Washington Department of Fish and Wildlife or species of local importance which are regulated as fish and wildlife habitat conservation areas in Chapter 20.80, Subchapter 3; 4. The wetland is not associated with riparian areas or buffers; 5. The wetland is not part of a wetland mosaic; and [Typo; two No. 5.] 5. A mitigation plan to replace lost 	<p>standards (buffers/setbacks/height) are met or a Shoreline Variance is required.</p> <p>[9-16-15 PAAN] § 20.80.324.F not listed as exempted in SMP; current draft of CAR does state a mitigation plan is required.</p> <p>SMP [9-16-15 MB] This should be removed. Section F, is not consistent with mitigation sequencing as required for both SMA and GMA compliance. Not clear how this type of approval would be administered within the shoreline. It is very difficult to replace the lost function and value of a filled wetland. Keep in mind that any wetland within the Shoreline jurisdiction is within 200 feet of the marine water which has a riparian area.</p>
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Flood Hazard Management Sections of the Cities Shoreline Inventory and Characterization, at 117-118:

Flood Hazard Areas

Flood hazard areas are defined in the Shoreline *Comprehensive Plan* as “those areas within the floodplain subject to a one percent or greater chance of flooding in any given year” (City of Shoreline, 2005a). These areas are typically identified on the Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRM) as the 100- year floodplain. The 100-year floodplain is regulated by two chapters of the SMC: Chapter 16.12, Flood Damage Prevention, and Chapter 20.80.380-410 of the CAO.

Portions of the shoreline in Segment B, C, D, and E are mapped as a 100-year floodplain on the King County FIRM series, Panels 20, 40, 310, and 330 (FEMA, 1995). Flood hazards for Segment A (Point Wells) are mapped on Snohomish County FIRM series and include panels 1294 and 1292 (FEMA, 1999). The stream corridor of Boeing Creek (Segment E) is also mapped as a 100-year floodplain (FEMA, 1995), but the stream is not large enough itself to be a shoreline of the state and only the mouth of the stream is located within the marine shoreline. The King County Sensitive Area Map Folio (King County iMAP, 1991) shows only the Boeing Creek stream corridor within Segment E as being a potential flood hazard area (see Map 4 in Appendix C). Typically, the areas south of stream mouths and the marine shoreline below the OHWM are indicated as flood hazard areas. Following the recommendations made in the Snohomish County FIRM series, Base Flood Elevation for shoreline in all Segments (A, B, C, D, and E) will be 10 feet National Geodetic Vertical Datum (NGVD).

Several existing houses are within the shoreline of Puget Sound along 27th Avenue NE in Segment B (see Map 4 in Appendix C). Most of the homes are protected by bulkheads, with the exception of those on the south end, which, based on a conversation in March 2006 between Juniper Nammi (City of Shoreline Planner) and Chuck Steele (Ecology Floodplain Specialist), were reported to have had flooding in the past (Chuck Steele, personal communication, 2008). The existing lots within the flood hazard areas along 27th Avenue NE are fully developed, therefore flood regulations in the SMC would be applied primarily to remodel and rebuilding on these sites.

Industrial facilities and a large dock associated with Point Wells exist within the shoreline of Puget Sound in Segment A. Portions of these facilities are within the mapped flood hazard area (see Map 4 in Appendix C). Flood regulations in the SMC would be applied to replacement or rebuilding of industrial facilities and to shoreline restoration projects. If the property were to be rezoned in the future, flood regulations in the SMC would be applied to platting, subdivision, and new construction on the site.

Shoreline Modifications

Three white papers prepared in recent years summarize the current knowledge and technology pertaining to marine and estuarine shoreline modifications in the Puget Sound. These papers are: *Overwater Structures: Marine Issues* (Nightingale and Simenstad, 2001); *Marine and Estuarine Shoreline Modification Issues* (Williams and Thom, in King County Department of Natural Resources and Parks [KCDNRP], 2001); and *Beaches and Bluffs of Puget Sound* (Johannessen and MacLennan, 2007). These documents, along with *Reconnaissance Assessment of the State of the Nearshore Report: Including Vashon and Maury Islands (WRIAs 8 and 9)* (KCDNR, 2001) and the Washington Department of Natural Resources ShoreZone Inventory (2001) were summarized and incorporated into this section. A field visit in September 2003 verified modifications along portions

of the shoreline providing public access. Table A-2, Appendix A contains additional information regarding shoreline modifications within the planning segments.

Shoreline modifications refer to structural alterations of the shoreline's natural bank, including levees, dikes, floodwalls, riprap, bulkheads, docks, piers or other in-water structures. Such modifications are typically used to stabilize the shoreline and prevent erosion. Shoreline armoring (i.e. riprap, bulkheads, and other shore parallel structures) is the most common type of shoreline modification. Shoreline armoring impedes sediment supply to nearshore habitats, and this sediment starvation can lead to changes in nearshore substrates from sand or mud to coarse sand, gravel, and finally hardpan. This may, in turn, decrease eelgrass and increase kelp abundance, as well as forage fish spawning habitats. Armoring also alters natural process dynamics by blocking or delaying the erosion of upland areas and bluffs that replenish the spawning substrate. Beach narrowing and lowering and decreased driftwood abundance also result from shoreline armoring (Johannessen and MacLennan, 2007).

Construction of shoreline armoring may cover or destroy eelgrass meadows, and overwater structures may deprive eelgrass of light. Dredging can excavate eelgrass or cause excessive turbidity and permanent filling of eelgrass meadows (KCDNR, 2001).

Bulkheads and piers may also affect fish life by diverting juvenile salmonids away from shallow shorelines into deeper water, thereby increasing their potential for predation (Nightingale and Simenstad, 2001). Piers also alter wave energy and current patterns and obstruct littoral drift and longshore sediment transport (Williams and Thom, 2001). Sewer outfalls introduce nutrients and pollutants to the nearshore area altering current cycles and food web interactions.

Shoreline Armoring

Approximately 97 percent of the City's shoreline adjacent to Puget Sound is modified with riprap and bulkheads (WDNR, 2001). The majority of this armoring is associated with the BNSF railroad bed (Map 12 in Appendix C).