

## Exhibit A to Resolution 1154

**Section 1. Amendment of table of contents.** The table of contents of Chapter 16.08 SMC and Ordinance 1494 §2(part) are each amended to read as follows:

### Chapter 16.08

#### SHORELINE MASTER PROGRAM

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- 16.08.030 Purpose
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- 16.08.900 Dredging & Dredge Spoil Disposal
- 16.08.910 Fill & Grading
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**Part 7 – Appendix**

Appendix A – Critical Areas Ordinance (Steilacoom Municipal Code Chapter 16.16), effective ~~September 28, 2012~~ July 18, 2017, consisting of Ordinance ~~4308-1380~~, adopted October 5, 2004 and amended by Ordinance ~~4646~~ 1450, adopted January 6, 2009, ~~and Ordinance 1485, adopted September 18, 2012, Ordinance 1541, adopted February 16, 2016, Ordinance 1562, adopted February 7, 2017, and Ordinance 1567, adopted July 18, 2017.~~

**Section 2. Amendment of section 16.08.520.** Section 16.08.520 SMC and Ordinance 1494 §2(part) are each amended to read as follows:

**16.08.520 Critical Areas – General**

Critical areas include the following areas and ecosystems: wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.

**A. Policies**

- (1) Regulation of critical areas within the shoreline jurisdiction should be consistent with the goals and policies of the Shoreline Management Act and this Master Program.

(2) Regulation of critical areas within the shoreline jurisdiction should provide a level of protection that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.

#### B. Regulations

(1) Subject to the exceptions listed below, the Town's Critical Areas regulations in Chapter 16.16 SMC, codifying Ordinance 4308 1380, adopted October 5, 2004 and amended by Ordinance ~~4646~~ 1450, adopted January 6, 2009, and Ordinance 1485, adopted September 18, 2012, Ordinance 1541, adopted February 16, 2016, Ordinance 1562, adopted February 7, 2017 and Ordinance 1567 adopted July 18, 2017 are incorporated by reference, except that permit, nonconforming, appeal and enforcement provisions shall be governed by this Master Program and not Chapter 16.16 SMC.

(2) In the event development or performance standards in Chapter 16.16 SMC are inconsistent with standards and requirements in this Master Program, the provisions most protective of the resource shall govern.

(3) Development applications that are processed according to the Public Agency and Utility exceptions under SMC 16.16.130 or the Reasonable Use Exception of SMC 16.16.140 shall be processed as a shoreline variance according to the provisions of this Master Program and WAC 173-27.

(4) Development activities that would otherwise qualify for an exemption from a critical areas permit under SMC 16.16.120 shall comply with this Master Program. Such activities may require a Shoreline Substantial Development Permit, Shoreline Variance, or Shoreline Conditional Use Permit unless specifically exempt from Shoreline Substantial Development Permits under this Master Program and RCW 90.58.030(3)(e).

(5) Applications for variances under SMC 16.16.300 and SMC 16.16.680 shall be processed as shoreline variances according to the provisions of this Master Program and Chapter 173-27 WAC.

(6) The provisions of Chapter 16.16 SMC shall apply to any use, alteration, or development within the shoreline jurisdiction whether or not a shoreline permit or written exemption is required.

(7) Within the shoreline jurisdiction, the regulations of Chapter 16.16 SMC shall be liberally construed together with this Master Program to give full effect to the objectives and purposes of this Master Program and the Shoreline Management Act.

(8) In order to ensure consistent treatment of critical areas, lands necessary for buffers of critical areas within the shoreline jurisdiction shall be included within the Town's shoreline jurisdiction pursuant to RCW 90.58.030(2)(d)(ii).

(9) Applicants for shoreline permits and exemptions shall demonstrate, through best available science, how their proposed activity will protect hydrologic connections between water bodies, water courses, and associated wetlands.

**Section 3. Amendment of Appendix A.** Appendix A of Ordinance 1494 §2(part) is amended to read as follows:

### Chapter 16.16

### CRITICAL AREAS

**Articles:**

(A) The purpose of this chapter is to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.

(B) This Chapter is to implement the goals, policies, guidelines, and requirements of the Town of Steilacoom Comprehensive Plan and the Growth Management Act.

(C) The Town of Steilacoom finds that critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the Town of Steilacoom and its residents, and/or may pose a threat to human safety or to public and private property. The beneficial functions and values provided by critical areas include, but are not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation of flood waters, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical, archaeological, and aesthetic value protection, and recreation. These beneficial functions are not listed in order of priority.

(D) By limiting development and alteration of critical areas, this Chapter seeks to:

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

(2) Maintain healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;

(3) Direct activities not dependent on critical areas resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas; and

(4) Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas.

<b>Article I</b>	<b>General provisions</b>
<b>Article II</b>	<b>Wetlands</b> <i>amended by Ordinances 1541 and 1567</i>
<b>Article III</b>	<b>Critical aquifer recharge areas</b>
<b>Article IV</b>	<b>Frequently flooded areas</b> <i>as amended by Ordinance 1562</i>
<b>Article V</b>	<b>Geologically hazardous areas</b>
<b>Article VI</b>	<b>Fish and wildlife habitat conservation areas</b> <i>amended by Ordinance 1541</i>
<b>Article VII</b>	<b>Definitions</b> <i>amended by Ordinances 1541 and 1562</i>

## **Article I General Provisions**

### **Sections:**

- 16.16.010 Purpose.**
- 16.16.020 Authority.**
- 16.16.030 Relationships to other regulations.**
- 16.16.040 Administrative procedures**
- 16.16.050 Fees and costs.**
- 16.16.060 Severability.**
- 16.16.070 Interpretation.**
- 16.16.080 Jurisdiction – Critical areas.**
- 16.16.090 Protection of critical areas.**
- 16.16.100 Best available science.**
- 16.16.110 Applicability.**

- 16.16.120 Exemptions.
- 16.16.130 Exceptions – Public agency and utility.
- 16.16.140 Exceptions – Reasonable use.
- 16.16.150 Allowed activities.
- 16.16.160 Critical area pre-application meeting.
- 16.16.170 Review.
- 16.16.180 Mapping.
- 16.16.190 [Reserved]
- 16.16.200 Critical area report – Requirements.
- 16.16.210 Critical area report – Modifications to requirements.
- 16.16.220 Mitigation requirements.
- 16.16.230 Mitigation sequencing.
- 16.16.240 Mitigation plan requirements.
- 16.16.250 Innovative mitigation.
- 16.16.260 Permit.
- 16.16.270 Review criteria.
- 16.16.280 Coordination with other permits.
- 16.16.290 Appeals.
- 16.16.300 Variances.
- 16.16.310 Unauthorized critical area alterations and enforcement.
- 16.16.320 Critical area markers and sign.
- 16.16.330 Recorded Notice.
- 16.16.340 Native growth protection areas.
- 16.16.350 Building setbacks.
- 16.16.360 Security to ensure mitigation, maintenance, and monitoring.
- 16.16.370 Critical area inspections.
- 16.16.380 [Reserved]
- 16.16.390 [Reserved]

**16.16.010 Purpose.**

(A) The purpose of this Chapter is to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.

(B) This Chapter is to implement the goals, policies, guidelines, and requirements of the Town of Steilacoom Comprehensive Plan and the Growth Management Act.

(C) The Town of Steilacoom finds that critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the Town of Steilacoom and its residents, and/or may pose a threat to human safety or to public and private property. The beneficial functions and values provided by critical areas include, but are not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation of flood waters, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical, archaeological, and aesthetic value protection, and recreation. These beneficial functions are not listed in order of priority.

(D) By limiting development and alteration of critical areas, this Chapter seeks to:

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

(2) Maintain healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;

(3) Direct activities not dependent on critical areas resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas;

(4) Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas; and

(5) Reduce the cost of flood insurance and minimize public and private losses due to flood conditions in specific areas by provisions designed to; protect human life and health; minimize expenditure of public money and costly flood control projects; minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; minimize prolonged business interruptions; minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard; help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; ensure that potential buyers are notified that property is in an area of special flood hazard; and ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

(E) The regulations of this Chapter are intended to protect critical areas in accordance with the Growth Management Act and through the application of the best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals.

(F) This Chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this Chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property or to prevent the provision of public facilities and services necessary to support existing development and planned for by the community without decreasing current service levels below minimum standards.

(G) The Town's enactment or enforcement of this Chapter shall not be construed for the benefit of any individual person or group of persons other than the general public. (Ord. 1616 §1, 2009; Ord. 1380 §2 (part), 2004).

#### **16.16.020 Authority.**

(A) As provided herein, the Town Administrator is given the authority to interpret and apply, and the responsibility to enforce this Chapter to accomplish the stated purpose. The Town Administrator may delegate these functions and duties to appropriate Town personnel.

(B) The Town of Steilacoom may withhold, condition, or deny development permits or activity approvals to ensure that the proposed action is consistent with this Chapter. (Ord. 1380 §2(part), 2004).

#### **16.16.030 Relationship to other regulations.**

(A) These critical areas regulations shall apply as an overlay and in addition to zoning, subdivision, building codes and other regulations adopted by the Town.

(B) Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection to the critical areas involved. When any provision of this Chapter or any existing regulation, easement, covenant, or deed restriction conflicts with this Chapter, that which provides more protection to the critical areas shall apply.

(C) These critical areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as adopted by the Town. Conditions required pursuant to this Chapter may be included in the SEPA review and threshold determination.

(D) Compliance with the provisions of this Chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Shoreline Substantial Development Permits, Hydraulic Permit Act (HPA) permits, Section 106 of

the National Historic Preservation Act, Army Corps of Engineers Section 404 permits, National Pollution Discharge Elimination permits). The applicant is responsible for complying with these requirements, apart from the process established in this Chapter. (Ord. 1380 §2(part), 2004).

**16.16.040 Administrative procedures.** Critical area permits shall be processed as administrative approvals with notice in accordance with SMC 14.20.020. (Ord. 1380 §2(part), 2004).

**16.16.050 Fees and costs.**

(A) The Town Council shall establish fees for critical area permits and processes by resolution.

(B) Unless otherwise indicated in this Chapter, the applicant shall be responsible for the initiation, preparation, submission, and expense of all required reports, assessment(s), studies, plans, reconnaissance(s), peer review(s) by qualified consultants, and other work prepared in support of or necessary to review the application. (Ord. 1380 §2(part), 2004).

**16.16.060 Severability.** If any clause, sentence, paragraph, section, or part of this Chapter or the application thereof to any person or circumstances shall be judged by any court of competent jurisdiction to be invalid, such order or judgment shall be confined in its operation to the controversy in which it was rendered. The decision shall not affect or invalidate the remainder of any part thereof and to this end the provisions of each clause, sentence, paragraph, section, or part of this law are hereby declared to be severable. (Ord. 1380 §2(part), 2004).

**16.16.070 Interpretation.** In the interpretation and application of this ordinance, the provisions of this Chapter shall be considered to be the minimum requirements necessary, shall be liberally construed to serve the purpose of this ordinance, and shall be deemed to neither limit nor repeal any other provisions under state statute. (Ord. 1380 §2(part), 2004).

**16.16.080 Jurisdiction – Critical areas.**

(A) The Town regulates all uses, activities, and developments within, adjacent to, or likely to affect, one or more critical areas, consistent with the best available science and the provisions herein.

(B) Critical areas regulated by this Chapter include:

- (1) Wetlands as designated in Article II.
- (2) Critical aquifer recharge areas as designated in Article III.
- (3) Frequently flooded areas as designated in Article IV.
- (4) Geologically hazardous areas as designated in Article V, and
- (5) Fish and wildlife habitat conservation areas as designated in Article VI.

(C) All areas within the Town of Steilacoom meeting the definition of one or more critical area, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.

(D) To support the intent of this Chapter and ensure protection of the functions and values of critical areas, the Town regulates all uses within 300 feet of, or that are likely to affect, one or more critical areas, consistent with the best available science and the provisions herein. (Ord. 1380 §2(part), 2004).

**16.16.090 Protection of critical areas.** Any action taken pursuant to this Chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science. All actions and developments shall be designed and constructed in accordance with SMC 16.16.230, to avoid, minimize, and

restore all adverse impacts. Applicants must first demonstrate an inability to avoid or reduce impacts, before restoration and compensation of impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas. (Ord. 1380 §2(part), 2004).

**16.16.100 Best available science.**

(A) 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 shall give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

(B) Best available science shall be consistent with the criteria established in WAC 365-195-900 through WAC 365-195-925. Nonscientific information may supplement scientific information as provided in WAC 365-195-905.

(C) Where there is an absence of valid scientific information or incomplete scientific information relating to a critical area leading to uncertainty about the risk to critical area function of permitting an alteration of or impact to the critical area, the Town Administrator shall 1) take a precautionary or a no-risk approach that strictly limits development and land use activities until the uncertainty is sufficiently resolved and 2) require application of an effective adaptive management program. Adaptive management programs shall meet the criteria set out in WAC 365-195-920. (Ord. 1380 §2(part), 2004).

**16.16.110 Applicability.**

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

(B) The Town shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water, or vegetation, or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer, without first ensuring compliance with the requirements of this Chapter, including, but not limited to, the following: building permit; clearing and grading permit; forest practices permit; conditional use permit; shoreline permits, exemptions, or variance; short subdivision; subdivision; planned area development; zoning variance; zoning code amendment and any other adopted permit or required approval not expressly exempted by this Chapter.

(C) Approval of a permit or development proposal pursuant to the provisions of this Chapter does not discharge the obligation of the applicant to comply with the provisions of this Chapter. (Ord. 1380 §2(part), 2004).

**16.16.120 Exemptions.**

(A) **Exemption request.** Any person may submit a written request for exemption to the Town Administrator describing the proposed activity and identifying an exemption listed in this section. The Town Administrator shall review the request and approve or deny the exemption in writing.

(B) **Exempt activities and impacts to critical areas.** All exempted activities shall use reasonable methods to avoid potential impacts to critical areas. To be exempt from this Chapter does not give permission to degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be restored, rehabilitated, or replaced at the responsible party's expense.



(C) **Exempt activities.** The following developments, activities, and associated uses are exempt from the provisions of this Chapter, provided that they are otherwise consistent with the provisions of other local, state, and federal laws and requirements:

(1) **Emergencies.** Those activities necessary to prevent an immediate threat to public health, safety, or welfare, or that pose an immediate risk of damage to private property and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this Chapter.

The person or agency undertaking such action shall notify the Town within one (1) working day following commencement of the emergency activity. Within thirty (30) days, the Town Administrator shall determine if the action taken was reasonable in light of the emergency. Actions taken beyond the scope of an emergency action are subject to SMC16.16.330. After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and/or mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved critical area report and mitigation plan. Restoration and/or mitigation activities must be initiated within one (1) year of the date of the emergency, and completed in a timely manner.

(2) **Operation, maintenance, or repair.** Operation, maintenance, or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees, or drainage systems, that do not require construction permits, if the activity does not further alter or increase the impact to, or encroach further within, the critical area or buffer and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair.

(3) **Passive outdoor activities.** Recreation, education, and scientific research activities that do not degrade the critical area, including fishing, hiking, and bird watching.

(4) **Forest practices.** Forest practices regulated and conducted in accordance with the provisions of Chapter 76.09 RCW and forest practices regulations, Chapter 222 WAC, and those that are exempt from Town's jurisdiction, provided that forest practice conversions are not exempt. (Ord. 1380 §2(part), 2004).

#### **16.16.130 Exception – Public agency and utility.**

(A) If the application of this Chapter would prohibit a development proposal by a public agency or public utility, the agency or utility may apply for an exception pursuant to this Section.

(B) **Exception request and review process.** An application for a public agency or utility exception shall include a critical area report, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW).

(C) **Review and Decision.** The Town Administrator shall review the application and shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all of the public agency and utility exception criteria in Subsection (D) pursuant to SMC 14.20.010.

(D) **Public agency and utility review criteria.** Public agency and utility exceptions shall be granted when all of the following criteria are demonstrated:

(1) There is no other practical alternative to the proposed development with less impact on the critical areas.

(2) The application of this Chapter would unreasonably restrict the ability to provide utility services to the public.

(3) The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site.

(4) The proposal attempts to protect and mitigate impacts to the critical area functions and values consistent with the best available science.

(5) The proposal is consistent with other applicable regulations and standards.

(E) **Burden of proof.** The burden of proof shall be on the applicant to provide evidence in support of the application and to provide information sufficient for any required decision. (Ord. 1380 §2(part), 2004).

**16.16.140 Exception – Reasonable use.**

(A) If the application of this Chapter would deny all reasonable economic use of the subject property, the property owner may apply for an exception pursuant to this Section and SMC 14.08.050.

(B) **Exception request and review process.** An application for a reasonable use exception shall include a critical area report, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW) (SEPA documents). The Town Administrator shall prepare a recommendation to the Hearing Examiner based on review of the submitted information, a site inspection, and the proposal's ability to comply with reasonable use exception criteria in Subsection (D).

(C) **Hearing Examiner review.** The Hearing Examiner shall review the application and conduct a public hearing pursuant to the provisions of SMC 14.08.050. The Hearing Examiner shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all of the reasonable use exception review criteria in Subsection (D).

(D) **Reasonable use review criteria.** A reasonable use exception shall be granted if all of the following criteria are met:

(1) The application of this Chapter would deny all reasonable economic use of the property.

(2) No other reasonable economic use of the property has less impact on the critical area.

(3) The proposed impact to the critical area is the minimum necessary to allow for reasonable economic use of the property.

(4) The inability of the applicant to derive reasonable economic use of the property is not the result of actions by the applicant after the effective date of this Chapter, or its predecessor.

(5) The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site.

(6) The proposal will result in no net loss of critical area functions and values consistent with the best available science.

(7) The proposal is consistent with other applicable regulations and standards.

(E) **Burden of proof.** The burden of proof shall be on the applicant to provide evidence in support of the application and to provide information sufficient for any required decision. (Ord. 1380 §2(part), 2004).

**16.16.150 Allowed activities.**

(A) **Permits.** Allowed activities do not require critical area permits, however, they may require other permits or approvals. The Town Administrator may apply conditions to the other permit or approval to ensure that the allowed activity is consistent with the provisions of this Chapter to protect critical areas.

(B) **Best management practices.** Allowed activities shall use best management practices that result in the least amount of impact to the critical areas. Best management practices shall be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. Best management practices shall ensure that the activity does not result in degradation to the critical area. Any incidental damage to, or alteration of, a critical area shall be restored, rehabilitated, or replaced at the responsible party's expense.

(C) **Allowed activities.** The following activities are allowed:

(1) **Permit requests subsequent to previous critical area review.** Development permits and approvals that involve both discretionary land use approvals (such as subdivisions, rezones, or conditional use permits), and construction approvals (such as building permits) are allowed if all of the following conditions have been met:

(a) The provisions of this Chapter have been previously addressed as part of another approval.

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

(c) There is no new information available that is applicable to any critical area review of the site or particular critical area.

(d) The permit or approval has not expired or, if no expiration date, no more than five years has elapsed since the issuance of that permit or approval.

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

(2) **Modification to existing structures.** Structural modification of, addition to, or replacement of an existing legally constructed structure that does not further alter or increase the impact to the critical area or buffer and does not increase the risk to life or property as a result of the proposed modification or replacement are allowed. Restoration of structures substantially damaged by fire, flood, or act of nature must be initiated within one (1) year of the date of such damage, as evidenced by the issuance of a valid building permit, and diligently pursued to completion.

(3) **Activities within the improved right-of-way.** Replacement, modification, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances, not including substations, when such facilities are located within the improved portion of the public right-of-way or a Town authorized private roadway except those activities that alter a wetland or watercourse, such as culverts or bridges, or result in the transport of sediment or increased stormwater are allowed subject to the following:

(a) Critical area and/or buffer widths shall be increased, where possible, equal to the width of the right-of-way improvement, including disturbed areas.

(b) Retention and replanting of native vegetation shall occur wherever possible along the right-of-way improvement and resulting disturbance.

(4) **Minor utility projects.** Minor utility projects meeting the all the criteria below are allowed.

(a) The activity involves the placement of a utility pole, street signs, anchor, vault or other small component of a utility facility.

(b) The activity involves disturbance of an area less than 75 square feet.

(c) The activity involves minor or short-duration impacts to critical areas.

(d) The activity does not significantly impact the function or values of a critical area(s).

(e) There is no practical alternative to the proposed activity with less impact on critical areas.

(f) The project utilizes best management practices and restoration measures.

(g) The activity will not result in the transport of sediment or increased stormwater.

(5) **Public and private pedestrian trails.** Public and private pedestrian trails, except those in wetlands or fish and wildlife habitat conservation areas, or their buffers, are allowed if the following criteria are met:

(a) The trail surface shall meet all other requirements including water quality standards set forth in SMC 13.50.

(b) Critical area and/or buffer widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas.

(c) Trails proposed to be located in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report.

(6) **Select vegetation removal activities.** The following vegetation removal activities are allowed, provided that no vegetation shall be removed from a critical area or its buffer without approval from the Town Administrator:

(a) The removal of the following vegetation with hand labor and light equipment:

(i) Invasive and noxious weeds listed by the Pierce County Noxious Weed Control Board.

(ii) English Ivy (*Hedera helix*)

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

(iv) Evergreen blackberry (*Rubus laciniatus*);

(b) The removal of trees from critical areas and buffers that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to private property, provided that:

(i) The applicant submits a report from a certified arborist, registered landscape architect, or professional forester that documents the hazard and provides a replanting schedule for the replacement trees.

(ii) Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified by a qualified professional. Where pruning or crown thinning is not sufficient to address the hazard, trees should be removed or converted to wildlife snags.

(iii) The certified arborist shall determine whether vegetation cut (tree stems, branches, etc.) shall be left within the critical area or buffer.

(iv) The landowner shall replace any trees that are removed with new trees at a ratio of two replacement trees for each tree removed (2:1) within one (1) year in accordance with an approved restoration plan. Replacement trees may be planted at a nearby location if it can be determined that planting in the same location would create a new hazard or potentially damage the critical area. Replacement trees shall be species that are native and indigenous to the site and a minimum of one (1) inch in diameter-at-breast height (dbh) for deciduous trees and a minimum of six (6) feet in height for evergreen trees as measured from the top of the root ball;

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

(vi) Hazard trees determined to pose an imminent threat or danger to public health or safety, to public or private property, or of serious environmental degradation may be removed or pruned by the landowner prior to receiving written approval from Town of Steilacoom provided that within fourteen (14) days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this Chapter.

(c) Measures to control a fire or halt the spread of disease or damaging insects consistent with the State Forest Practices Act; Chapter 76.09 RCW, provided that the removed vegetation shall be replaced in-kind or with similar native species within one (1) year in accordance with an approved restoration plan.

(d) Unless otherwise provided, or as a necessary part of an approved alteration, removal of any vegetation or woody debris from a habitat conservation area or wetland shall be prohibited.

(7) **Chemical applications.** Application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, are allowed in accordance with Department of Fish and Wildlife Management Recommendations, the regulations of the Department of Agriculture and the U.S. Environmental Protection Agency.

(8) **Minor site investigative work.** Work necessary for land use submittals, such as surveys, soil logs, percolation tests, and other related activities, where such activities do not

require construction of new roads or significant amounts of excavation are allowed. In every case, impacts to the critical area shall be minimized and disturbed areas shall be immediately restored; and

(9) **Navigational aids and boundary markers.** Construction or modification of navigational aids and boundary markers are allowed.

(10) **Authorized alteration of vegetation under the Urban Forestry Ordinance.** Management and alteration of vegetation on town-owned or leased properties conducted in accordance with the provisions of SMC 16.18.100 through 16.18.150 is allowed. (Ord. 1485 §1, 2012; Ord. 1380 §2(part), 2004).

**16.16.160 Critical area pre-application meeting.** Any person preparing to submit an application for development or use of land that may be regulated by the provisions of this Chapter may request a meeting with Town staff prior to submitting an application for development or other approval. At this meeting the potential applicant and Town staff shall discuss the requirements of this Chapter and attempt to identify potential concerns that might arise during the review process, in addition to discussing other permit procedures and requirements. (Ord. 1380 §2(part), 2004).

**16.16.170 Review.**

(A) The Town Administrator shall review all applications for permits or authorizations subject to this Chapter and shall make an initial determination as to whether critical areas or buffers may be impacted by the proposal. The Town Administrator may conduct a site inspection and may use any available information deemed reliable, including but not limited to, Town critical areas maps; information and scientific opinions from appropriate agencies, including but not limited to the departments of Fish and Wildlife, Natural Resources, and Ecology; documentation from a scientific or other reasonable source; a finding by a qualified professional; or a reasonable belief by the Town Administrator that a critical area may exist on or adjacent to the site of the proposed activity. The applicant may provide a report from qualified professional to assist the Town Administrator.

(B) **Determination**

The Town Administrator shall notify the applicant if critical areas are present and the type and general location of each critical area identified.

(1) **Waiver.** The Town Administrator may waive the requirement for a critical area permit if the best available science shows that the proposed activity is unlikely to degrade the functions or values of critical areas affected by the proposed activity. A waiver may be granted if the Town Administrator finds there is substantial evidence that all of the following requirements will be met:

(a) There will be no alteration of the critical area or buffer.

(b) The development proposal will not impact the critical area in a manner contrary to the purpose, intent, and requirements of this Chapter.

(c) The proposal is consistent with other applicable regulations and standards.

(2) **Effect.** If no critical areas are present or a waiver is issued, the project may proceed to obtain other necessary permits or authorizations. If critical areas may be affected by the proposal, the applicant shall submit a critical area report for each of the critical areas identified.

(C) **Reconsideration.** A determination regarding the apparent absence of one or more critical areas by the Town Administrator is not an expert certification regarding the presence of critical areas and the determination is subject to possible reconsideration and reopening if new information is received. (Ord. 1380 §2(part), 2004).

**16.16.180 Mapping.**

(A) The approximate location and extent of critical areas are shown on the adopted critical area map. This map is a guide for the Town, project applicants, and/or property owners, and may be continuously updated as new critical areas are identified. It is a reference and does not provide a final critical area designation.

(B) The exact location of a critical area's boundary shall be determined through the performance of a field investigation by a qualified professional applying best available science.

(C) The Town, project applicants, and/or property owners and their agents may consult maps produced by federal, state, regional and county agencies to assist in determining the location of critical areas.

**16.16.190 [Reserved]**

**16.16.200 Critical area reports – Requirements.**

(A) **Preparation by qualified professional.** Critical area reports shall be prepared by a qualified professional as defined herein.

(B) **Best available science.** The critical area report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used. The critical area report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this chapter.

(C) **Minimum contents.** At a minimum, the report shall contain the following:

(1) The name and contact information of the applicant, a description of the proposal, and identification of the permit requested.

(2) A copy of the site plan for the development proposal including:

(a) A map to scale depicting critical areas, buffers, the development proposal, and any areas to be cleared.

(b) A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations

(3) The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site.

(4) Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area.

(5) A statement specifying the accuracy of the report, and all assumptions made and relied upon.

(6) An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development.

(7) An analysis of site development alternatives including a no development alternative.

(8) A description of reasonable efforts made to apply mitigation sequencing pursuant to SMC 16.16.230 to avoid, minimize, and mitigate impacts to critical areas.

(9) Plans for adequate mitigation, as needed, to offset any impacts, in accordance with SMC 16.16.240, including, but not limited to:

(a) The impacts of any proposed development within or adjacent to a critical area or buffer on the critical area.

(b) The impacts of any proposed alteration of a critical area or buffer on the development proposal, other properties and the environment.

(10) A discussion of the performance standards applicable to the critical area and proposed activity.

(11) Financial guarantees to ensure compliance.

(12) Any additional information required for the critical area as specified in the corresponding chapter.

(D) Unless otherwise provided, a critical area report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Town Administrator. (Ord. 1380 §2(part), 2004).

**16.16.210 Critical area report – Modifications to requirements.**

(A) **Limitations to study area.** The Town Administrator may limit the required geographic area of the critical area report as appropriate if:

(1) The applicant, with assistance from the Town, cannot obtain permission to access properties adjacent to the project area; or

(2) The proposed activity will affect only a limited part of the subject site.

(B) **Modifications to required contents.** The applicant may consult with the Town Administrator prior to or during preparation of the critical area report to obtain Town approval of modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

(C) **Additional information requirements.** The Town Administrator may require additional information to be included in the critical area report when determined to be necessary to the review of the proposed activity in accordance with this Chapter. Additional information that may be required, includes, but is not limited to:

(1) Historical data, including original and subsequent mapping, aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site.

(2) Grading and drainage plans.

(3) Information specific to the type, location, and nature of the critical area.

(Ord. 1380 §2(part), 2004).

**16.16.220 Mitigation requirements.**

(A) The applicant shall avoid all impacts that degrade the functions and values of a critical area or areas. Unless otherwise provided in this Chapter, if alteration to the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated using the best available science in accordance with an approved critical area report and SEPA documents, so as to result in no net loss of critical area functions and values.

(B) Mitigation shall be in-kind and on-site, when possible, and sufficient to maintain the functions and values of the critical area, and to prevent risk from a hazard posed by a critical area.

(C) Mitigation shall not be implemented until after Town of Steilacoom approval of a critical area report that includes a mitigation plan, and mitigation shall be in accordance with the provisions of the approved critical area report. (Ord. 1380 §2(part), 2004).

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

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

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

(C) Rectifying the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected

environment to the historical conditions or the conditions existing at the time of the initiation of the project.

(D) Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods.

(E) Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action.

(F) Compensating for the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments.

(G) Monitoring the hazard or other required mitigation and taking remedial action when necessary.

(H) Mitigation for individual actions may include a combination of the above measures. (Ord. 1380 §2(part), 2004).

**16.16.240 Mitigation plan requirements.** When mitigation is required, the applicant shall submit a mitigation plan as part of the critical area report. The mitigation plan shall include:

(A) **Environmental goals and objectives.** The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:

(1) A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area.

(2) A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed.

(3) An analysis of the likelihood of success of the compensation project.

(B) **Performance standards.** The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and whether or not the requirements of this Chapter have been met.

(C) **Detailed construction plans.** The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as:

(1) The proposed construction sequence, timing, and duration.

(2) Grading and excavation details.

(3) Erosion and sediment control features.

(4) A planting plan specifying plant species, quantities, locations, size, spacing, and density.

(5) Measures to protect and maintain plants until established.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

(D) **Monitoring program.** The mitigation plan shall include a program for monitoring construction of the compensation project and for assessing a completed project. A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years 1, 3, 5, and 7 after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation 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.

(E) **Contingency plan.** The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.



(F) **Financial guarantees.** The mitigation plan shall include financial guarantees pursuant to SMC 16.16.360 to ensure that the mitigation plan is fully implemented. (Ord. 1380 §2(part), 2004).

**16.16.250 Innovative mitigation.**

(A) The Town may encourage, facilitate, and approve innovative mitigation projects that are based on the best available science. Advance mitigation or mitigation banking are examples of alternative mitigation projects allowed under the provisions of this Section wherein one or more applicants, or an organization with demonstrated capability, may undertake a mitigation project together if it is demonstrated that all of the following circumstances exist:

(1) Creation or enhancement of a larger system of critical areas and open space is preferable to the preservation of many individual habitat areas.

(2) The applicant demonstrates the organizational and fiscal capability to act cooperatively.

(3) The applicant demonstrates that long-term management of the habitat area will be provided.

(4) There is a clear potential for success of the proposed mitigation at the identified mitigation site.

(B) Conducting mitigation as part of a cooperative process does not reduce or eliminate the required replacement ratios. (Ord. 1380 §2(part), 2004).

**16.16.260 Permit.** The Town shall issue a critical areas permit, subject to conditions of approval, if the proposal is consistent with the provisions of this Chapter and SMC 14.20.010. The Town's determination shall be based on the criteria of SMC 16.16.270. (Ord. 1380 §2(part), 2004).

**16.16.270 Review criteria.**

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

(1) The proposal minimizes the impact on critical areas in accordance with SMC 16.16.230;

(2) The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

(3) The proposal is consistent with the general purposes of this chapter and the public interest;

(4) Any alterations permitted to the critical area are mitigated in accordance with SMC 16.16.240;

(5) The proposal protects the critical area functions and values consistent with the best available science and results in no net loss of critical area functions and values; and

(6) The proposal is consistent with other applicable regulations and standards.

(B) The Town Administrator shall condition the proposed activity as necessary to mitigate impacts to critical areas and to conform to the standards required by this Chapter.

(C) Except as provided for by this Chapter, any project that cannot adequately mitigate its impacts to critical areas in the sequencing order of preferences in SMC 16.16.230 shall be denied. (Ord. 1380 §2(part), 2004).

**16.16.280 Consolidation with other permits.** Critical areas permits shall be consolidated with any other necessary decision regarding the applicant's proposal or other activity. If

consolidated, the critical areas permit shall be issued by the highest decision maker under SMC 14.12.010. (Ord. 1380 §2(part), 2004).

**16.16.290 Appeals.** Any decision to approve, condition, or deny an application for a critical areas permit may be appealed as provided in Chapter 14.24 SMC. (Ord. 1380 §2(part), 2004).

**16.16.300 Variances.**

(A) Variances from the standards of this chapter may be authorized by the Town in accordance with the procedures set forth in SMC Chapter 14.08.050. The Hearing Examiner shall review the request and make a written finding that the request meets or fails to meet the variance criteria.

(B) **Variance criteria.** A variance may be granted only if the applicant demonstrates that the requested action conforms to all of the criteria set forth as follows:

(1) Special conditions and circumstances exist that are peculiar to the land, the lot, or something inherent in the land, and that are not applicable to other lands in the same district.

(2) The special conditions and circumstances do not result from the actions of the applicant.

(3) A literal interpretation of the provisions of this Chapter would deprive the applicant of all reasonable economic uses and privileges permitted to other properties in the vicinity and zone of the subject property under the terms of this Chapter, and the variance requested is the minimum necessary to provide the applicant with such rights.

(4) Granting the variance requested will not confer on the applicant any special privilege that is denied by this Chapter to other lands, structures, or buildings under similar circumstances.

(5) The granting of the variance is consistent with the general purpose and intent of this chapter, and will not further degrade the functions or values of the associated critical areas or otherwise be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity of the subject property.

(6) The decision to grant the variance includes the best available science and gives special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish habitat.

(7) The granting of the variance is consistent with the general purpose and intent of the Steilacoom Comprehensive Plan and adopted development regulations.

(C) **Conditions may be required.** In granting any variance, the Hearing Examiner may prescribe such conditions and safeguards as are necessary to secure adequate protection of critical areas from adverse impacts, and to ensure conformity with this chapter.

(D) **Time limit.** The Hearing Examiner shall prescribe a time limit within which the action for which the variance is required shall be begun, completed, or both. Failure to begin or complete such action within the established time limit shall void the variance.

(E) **Burden of proof.** The burden of proof shall be on the applicant to provide evidence in support of the application and to provide information sufficient for any required decision. (Ord. 1380 §2(part), 2004).

**16.16.310 Unauthorized critical area alterations and enforcement.**

(A) When a critical area or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored. The Town shall issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Chapter.

(B) **Requirement for restoration plan.** All development work shall remain stopped until a restoration plan is prepared and approved by the Town Administrator. The plan shall be

prepared by a qualified professional using best available science and shall describe how the actions proposed meet the minimum requirements described in Subsection C. The Town Administrator may seek expert advice in determining the adequacy of the plan, at the violator's expense. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

**(C) Minimum performance standards for restoration.**

(1) For alterations to critical aquifer recharge areas, frequently flooded areas, wetlands, and habitat conservation areas, all of the following minimum performance standards shall be met for the restoration of a critical area. If the violator can demonstrate that greater functional and habitat values can be obtained, the Town Administrator may modify these standards:

(a) The historic structural and functional values shall be restored, including water quality and habitat functions.

(b) The historic soil types and configuration shall be replicated.

(c) The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.

(d) Information demonstrating compliance with the requirements in SMC 16.16.240 shall be submitted to the Town Administrator.

(2) For alterations to flood and geological hazards, all of the following minimum performance standards shall be met for the restoration of a critical area, provided that, if the violator can demonstrate that greater safety can be obtained, these standards may be modified:

(a) The hazard shall be reduced to a level equal to, or less than, the pre-development hazard.

(b) Any risk of personal injury resulting from the alteration shall be eliminated or minimized.

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

**(D) Site investigations.** The Town Administrator is authorized to make site inspections and take such actions as are necessary to enforce this chapter. The Town Administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

**(E) Criminal Penalties.** Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense.

**(F) Civil Penalties.** Enforcement action for civil violations of this Chapter shall be governed by the provisions of Chapter 14.32 SMC. (Ord. 1543 §10, 2016; Ord. 1380 §2(part), 2004).

**16.16.320 Critical area markers and signs.**

(A) The boundary at the outer edge of critical area tracts and easements shall be delineated with permanent survey stakes, using iron or concrete markers as established by state survey standards.

(B) The boundary at the outer edge of the critical area or buffer shall be identified with temporary signs prior to any site alteration. Such temporary signs shall be replaced with permanent signs prior to occupancy or use of the site.

(C) The Town Administrator may modify these provisions as necessary to ensure protection of sensitive features or wildlife needs. (Ord. 1380 §2(part), 2004).

**16.16.330 Recorded Notice.**

(A) In order to inform subsequent purchasers of real property of the existence of critical areas, the owner of any property containing a critical area or buffer on which a development proposal is submitted shall file a notice with the county records and elections division according to the direction of the Town of Steilacoom. The notice shall state the presence of the critical area or buffer on the property, the application of this Chapter to the property, and the fact that limitations on actions in or affecting the critical area or buffer may exist. The notice shall run with the land.

(B) This notice on chapter shall not be required for a development proposal by a public agency or public or private utility:

(1) Within a recorded easement or right-of-way.

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

(3) On the site of a permanent public facility.

(C) The applicant shall submit proof that the notice has been filed for public record before the Town of Steilacoom approves any site development or construction for the property or, in the case of subdivisions, short subdivisions, and planned area developments, at or before recording. (Ord. 1380 §2(part), 2004).

**16.16.340 Native growth protection areas.**

(A) Unless otherwise required in this Chapter, native growth protection areas (NGPA) shall be used in development proposals for subdivisions, short subdivisions, and planned area developments to delineate and protect those contiguous critical areas and buffers listed below:

(1) All landslide hazard areas and buffers.

(2) All wetlands and buffers.

(3) All habitat conservation areas.

(4) All other lands to be protected from alterations as conditioned by project approval.

(B) Native growth protection areas shall be recorded on all documents of record for all affected lots.

(C) Native growth protection areas shall be designated on the face of the plat or recorded drawing in a format approved by the Town Attorney. The designation shall include the following restrictions:

(1) An assurance that native vegetation will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering, and protecting plants, fish, and animal habitat; and

(2) The right of the Town of Steilacoom to enforce the terms of the restriction.

(D) The Town of Steilacoom may require that any NGPA be included in a separate critical area tract. Each owner of a building lot within a development shall own an undivided interest in the tract with the ownership interest passing with the ownership of the lot, unless the Town Administrator approves an alternative ownership arrangement. Alternative arrangements include dedication to the Town, or ownership by an incorporated homeowner's association or other legal entity, such as a land trust, which ensures the ownership, maintenance, and protection of the tract. (Ord. 1380 §2(part), 2004).

**16.16.350 Building setbacks.** All building setback lines shall be in accordance with Chapter 18.16 SMC and shall be measured from the outside edge of established critical area buffers, or from the edges of all critical areas, if no buffers are required. Minor intrusions may

be allowed into the setback if the Town determines that such intrusions will not negatively impact the wetland. The setback shall be identified on all site plans submitted by the applicant for approval. The following may be allowed in the building setback area:

- (A) Landscaping.
- (B) Decks less than 42 inches from finished grade.
- (C) Building overhangs, if such overhangs do not extend more than four feet into the setback area, but no closer than five feet from the property line.
- (D) Impervious ground surfaces, such as driveways and patios, provided that such improvements may be subject to water quality regulations as adopted in Chapter 13.50 SMC. (Ord. 1380 §2(part), 2004).

**16.16.360 Security to ensure mitigation, maintenance, and monitoring.**

(A) When required mitigation measures are not completed prior to final permit approval, such as final plat approval or final building inspection, the applicant shall post a performance bond or other security in a form and amount deemed acceptable by the Town to ensure completion of the mitigation. Applicants shall also post security to ensure maintenance and/or monitoring of required mitigation.

(B) The security shall be in the amount of one hundred and twenty-five percent (125%) of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater.

(C) Securities shall be in the form of a surety bond, performance bond, maintenance bond, assignment of savings account, or an irrevocable letter of credit guaranteed by an acceptable financial institution with terms and conditions acceptable to the Town Attorney.

(D) Securities authorized by this Section shall remain in effect until the Town of Steilacoom determines, in writing, that the standards bonded for have been met. Securities shall be held by the Town of Steilacoom for a minimum of five (5) years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods when necessary.

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

(F) Public development proposals are not required to post securities if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.

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

(H) Any funds recovered pursuant to this Section shall be used to complete the required mitigation.

(Ord. 1380 §2(part), 2004).

**16.16.370 Critical area inspections.** Reasonable access to the site shall be provided to the Town, state, and federal agency review staff for the purpose of inspections during any proposal review, restoration, emergency action, or monitoring period. (Ord. 1380 §2(part), 2004).

**16.16.380 [Reserved]**

**16.16.390 [Reserved]**

**Article II – Wetlands - amended by Ordinances 1541 and 1567**

16.16.400	Designation and rating
16.16.405	<u>Regulated activities</u>
16.16.410	Activities allowed in wetlands
16.16.420	Critical area report – Additional requirements
16.16.430	Performance standards – General requirements
16.16.440	Performance standards – Mitigation
16.16.450	Performance standards – Subdivisions
16.16.460	<del>[Reserved]</del> <u>Stormwater Management Impacts to Wetlands</u>
16.16.470	<del>[Reserved]</del> <u>Removal of Vegetative Invasive Species</u>
16.16.480	[Reserved]
16.16.490	[Reserved]

### 16.16.400 Designation and rating

A. **Designating wetlands.** Wetlands are those areas, designated in accordance with the most current version of the approved federal wetland delineation manual and applicable regional supplements ~~Washington State Wetland Identification and Delineation Manual~~, that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands. All areas within the Town meeting the wetland designation criteria in the Identification and Delineation Manual, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.

B. **Wetland ratings.** Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system found in *Washington State Ratings System for Western Washington – Revised* (Ecology Publication #04-06-014, ~~August 2004~~ #14-06-029, October 2014), or as revised by the Department. Wetland rating categories shall be applied as the wetland exists at the time of the adoption of this Chapter or as it exists at the time of an associated permit application. Wetland ratings shall not change due to illegal modifications.

#### 1. Wetland rating categories

a. **Category I.** Category I wetlands are (1) relatively undisturbed estuarine wetlands larger than 1 acre; (2) wetlands that are identified by scientist of the Washington Natural Heritage Program/DNR as high quality wetlands; (3) bogs larger than ½ acre; (4) mature and old growth forested wetlands larger than 1 acre; (5) wetlands in coastal lagoons; and (6) wetlands that perform many functions well.

These Category I wetlands are those that: ~~(1)~~ represent a unique or rare wetland type; ~~or (2)~~ are more sensitive to disturbance than most wetlands; ~~or (3)~~ are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or ~~(4)~~ provide a very high level of functions.

b. **Category II.** Category II wetlands are: (1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; (2) a wetland identified by the Washington State Department of Natural resources as containing “sensitive” plant species; (3) a bog

between ¼ and ½ acre in size; (4) and interdunal wetland larger than 1 acre; or (5) wetlands with moderately high level of functions.

Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but they still need a relatively high level of protection.

c. **Category III.** Category III wetlands are (1) wetlands with a moderate level of functions (~~scores between 30 and 50 points~~) and (2) interdunal wetlands between 0.1 and 1 acres in size. ~~Wetlands scoring between 30 and 50 points.~~ Generally wetlands in this category have been disturbed in some ways, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

d. **Category IV.** Category IV wetlands have the lowest levels of functions (~~scores less than 30 points~~) and are often heavily disturbed. ~~These are wetlands capable of being replaced, and in some cases be able to improve. Replacement cannot be guaranteed in any specific case.~~ These are wetlands that should be replaceable, and in some cases may be improved. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree.

2. **Date of wetland rating.** Wetland rating categories shall be applied as the wetland exists on the date of adoption of ~~the rating system by the local government, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities this Chapter, or as it exists at the time of an associated permit application.~~ Wetland rating categories shall not change due to illegal modifications.

#### **16.16.405 Regulated Activities**

The following activities are regulated if they occur in a regulated wetland or its buffer, and may require a critical area report pursuant to SMC 16.16.420:

A. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;

B. The dumping of, discharging of, or filling with any material;

C. The draining, flooding, or disturbing of the water level or water table;

D. The driving of pilings;

E. The placing of obstructions;

F. The construction, reconstruction, demolition, or expansion of any structure;

G. The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland, provided that these activities are not part of a forest practice governed under Chapter 76.09 RCW and its rules; or

H. Activities that result in:

1. a significant change of water temperature;

2. a significant change of physical or chemical characteristics of the sources of water to the wetland;

3. a significant change in the quantity, timing or duration of the water entering the wetland, or

4. the introduction of pollutants.

#### **16.16.410 Activities allowed in wetlands**

The activities listed below are allowed in wetlands in addition to those activities listed in SMC 16.16.150 and do not require a permit, except where such activities result in a loss to the functions and values of a wetland or wetland buffer. These activities include:

A. Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife that does not entail changing the structure or functions of the existing wetland.

B. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

C. Drilling for utilities under a wetland provided that the drilling does not interrupt the groundwater connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the groundwater connection to the wetland or percolation of surface water down through the soil column is disturbed.

D. Enhancement of a wetland through the removal of non-native invasive species, ~~Weeding shall be restricted to hand removal and weed material shall be removed from the site. Bare areas that remain after weed removal shall be re-vegetated with native plants at natural densities~~ subject to the requirements of SMC 16.16.470.

#### **16.16.420 Critical area report – Additional requirements**

In addition to the general critical area report requirements of SMC 16.16.200, critical area reports for wetlands must meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

~~A. Preparation by a qualified professional. A critical area report for wetlands shall be prepared by a qualified professional who is a wetland biologist with experience preparing wetland reports.~~

~~B. Area addressed in critical area report. The following areas shall be addressed in a critical area report for wetlands:~~

~~1. The project area of the proposed activity.~~

~~2. All wetlands and recommended buffers within three hundred (300) feet of the project area.~~

~~3. All shoreline areas, water features, floodplains, and other critical areas, and related buffers within three hundred (300) feet of the project area.~~

~~C. Wetland analysis. In addition to the minimum required contents of SMC 16.16.200, a critical area report for wetlands shall contain an analysis of the wetlands including the following site- and proposal-related information at a minimum:~~

~~1. A written assessment and accompanying maps of the wetlands and buffers within three hundred (300) feet of the project area, including the following information at a minimum:~~

~~a. Wetland delineation and required buffers~~

~~b. Existing wetland acreage~~

~~c. Wetland category; vegetative, faunal, and hydrologic characteristics~~

~~d. Soil and substrate conditions~~

~~e. Topographic elevations, at two-foot contours~~



- f. ~~A discussion of the water sources supplying the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, evidence of recharge or discharge, evidence of water depths throughout the year—drift lines, algal layers, moss lines, and sediment deposits).~~
- 2. ~~A discussion of measures, including avoidance, minimization and mitigation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land use activity.~~
- 3. ~~A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and wetland functions.~~
- 4. ~~Functional evaluation for the wetland and adjacent buffer using a local or state agency staff-recognized method and including the reference of the method and all data sheets.~~
- 5. ~~Proposed mitigation, if needed, including a written assessment and accompanying maps of the mitigation area, including the following information at a minimum:~~
  - i. ~~Existing and proposed wetland acreage~~
  - ii. ~~Vegetative and faunal conditions~~
  - iii. ~~Surface and subsurface hydrologic conditions including an analysis of existing and future hydrologic regime and proposed hydrologic regime for enhanced, created, or restored mitigation areas~~
  - iv. ~~Relationship within watershed and to existing water bodies~~
  - v. ~~Soil and substrate conditions, topographic elevations~~
  - vi. ~~Existing and proposed adjacent site conditions~~
  - vii. ~~Required wetland buffers (including any buffer reduction and mitigation proposed to increase the plant densities, remove weedy vegetation, and replant the buffers~~
  - viii. ~~Property ownership~~
  - ix. ~~Associated wetlands and related wetlands that may be greater than 300 feet from the subject project.~~
- 6. ~~A scale map of the development proposal site and adjacent area. A discussion of ongoing management practices that will protect wetlands after the project site has been developed; including proposed monitoring and maintenance programs.~~
- 7. ~~A bond estimate for the installation (including site preparation, plant materials and installation, fertilizers, mulch, stakes) and the proposed monitoring and maintenance work for the required number of years.~~
- D. **Additional Analysis.** ~~When appropriate, the Town Administrator may also require the critical area report to include an evaluation by the Washington Department of Ecology or an independent qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, and to include any recommendations as appropriate.~~
- E. **Affidavit of Applicant.** ~~If the development proposal site contains or is within a wetland area, the applicant shall submit an affidavit, which declares whether the applicant has knowledge of any illegal alteration to any or all wetlands on the proposed site and whether the applicant previously had been found in violation of this ordinance. If the applicant has been found previously in violation, the applicant shall declare whether such violation has been corrected to the satisfaction of the jurisdiction~~

**A. Preparation by a Qualified Professional.** A critical area report for wetlands shall be prepared by a qualified professional who is a certified Professional Wetland Scientist or a non-certified professional wetland scientist with a minimum of five (5) years of experience in the field of wetland science, including experience preparing wetland reports.

**B. Minimum Standards for Wetland Reports.** The written report and the accompanying plan sheets shall contain the following information, at a minimum:

1. The written report shall include at a minimum:

a. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the wetland critical area report; a description of the proposal; identification of all the local, state, and/or federal wetland-related permit(s) required for the project; and a vicinity map for the project;

b. A statement specifying the accuracy of the report and all assumptions made and relied upon;

c. Documentation of any fieldwork performed on the site, including field data sheets for delineations, function assessments, baseline hydrologic data, etc.;

d. A description of the methodologies used to conduct the wetland delineations, function assessments, or impact analyses including references;

e. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off-site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information;

f. For each wetland identified on-site and within 300 feet of the project site provide: the wetland rating per SMC 16.16.400B; required buffers; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site;

g. A description of the proposed actions including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives including a no-development alternative;

h. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development;

i. A description of reasonable efforts made to apply mitigation sequencing pursuant to SMC 16.16.440A to avoid, minimize, and mitigate impacts to critical areas;

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

k. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions, and;

l. Evaluation of functions of the wetland and adjacent buffer using a functions assessment method recognized by local or state agency staff and including the reference for the method used and all data sheets.

2. A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:

a. Maps (to scale) depicting delineated and surveyed wetland and required buffers on-site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; grading and clearing limits; areas of proposed impacts to wetlands and/or buffers (include square footage estimates);

b. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project.

**C. Compensatory Mitigation Reports.** When a project involves wetland and/or buffer impacts, a compensatory mitigation report shall be required, meeting the following minimum standards:

**1. Preparation by a Qualified Professional.** A compensatory mitigation report for wetland or buffer impacts shall be prepared by one or more qualified professional(s) including someone who is a certified Professional Wetland Scientist or a non-certified professional wetland scientist with a minimum of five (5) years experience designing compensatory mitigation projects. The compensatory mitigation projects must have been installed and monitored for a minimum of two (2) years, in order to verify success. In addition, the design team may include civil engineers, landscape architects, or landscape designers depending upon the complexity of the project.

**2. Wetland Critical Area Report.** A critical area report for wetlands must accompany or be included in the compensatory mitigation report and include the minimum parameters described in *Minimum Standards for Wetland Reports* (SMC 16.16.420B) of this Chapter.

**3. Compensatory Mitigation Report.** The report must include a written report and plan sheets that must contain, at a minimum, the following elements. Compensatory mitigation plans shall be consistent with *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans--Version 1*, (Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised), and *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)* (Publication #09-06-32, Olympia, WA, December 2009).

a. The written report must contain, at a minimum:

i. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the Compensatory Mitigation Report; a description of the proposal; a summary of the impacts and proposed compensation concept; identification of all the local, state, and/or federal wetland related permit(s) required for the project; and a vicinity map for the project;

ii. Description of the existing wetland and buffer areas proposed to be impacted including: acreages (or square footage) based on professional surveys of the delineations; Cowardin classifications including dominant vegetation community types (for upland and wetland habitats); hydrogeomorphic classification of wetland(s) on and adjacent to the site; the results of a functional assessment for the entire wetland and the portions proposed to be impacted; wetland rating based on SMC 16.16.400B;

iii. An assessment of the potential changes in wetland hydroperiod from the proposed project and how the design has been modified to avoid, minimize, or reduce adverse impacts to the wetland hydroperiod;

iv. An assessment of existing conditions in the zone of the proposed compensation, including: vegetation community structure and composition, existing hydroperiod, existing soil conditions, existing habitat functions. Estimate future conditions in this location if the compensation actions are NOT undertaken (i.e., how would this site progress through natural succession?);

v. A description of the proposed conceptual actions for compensation of wetland and upland areas affected by the project. Describe future vegetation community types for years 1, 3, 5, 10, and 25 post-installation including the succession of vegetation community types and dominants expected. Describe the successional sequence of expected changes in hydroperiod for the compensation site(s) for the same time periods as vegetation success. Describe the change in habitat characteristics expected over the same 25-year time period;

vi. The field data collected to document existing conditions and on which future condition assumptions are based for hydroperiod (e.g., existing hydroperiod based on piezometer data, staff/crest gage data, hydrologic modeling, visual observations, etc.) and soils (e.g., soil pit data - hand dug or mechanically trenched, and soil boring data. Do not rely upon soil survey data for establishing existing conditions.);

vii. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands);

viii. A bond estimate for the entire compensatory mitigation including the following elements: site preparation, plant materials, construction materials, installation oversight, maintenance twice/year for up to five (5) years, annual monitoring field work and reporting, and contingency actions for a maximum of the total required number of years for monitoring;

ix. Proof of establishment of Notice on Title for the wetlands and buffers on the project site, including the compensatory mitigation areas.

x. A description of how the project design has been modified to avoid, minimize, or reduce adverse impacts to the wetlands.

b. The scaled plan sheets for the compensatory mitigation must contain, at a minimum:

i. Surveyed edges of the existing wetland and buffers, proposed areas of wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions;

ii. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be impacted, and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation;

iii. Surface and subsurface hydrologic conditions including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory

mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions;

iv. Proposed conditions expected from the proposed actions on site including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future hydrologic regimes;

v. Required wetland buffers for existing wetlands and proposed compensation areas. Also, identify any zones where buffers are proposed to be reduced or enlarged outside of the standards identified in this Chapter;

vi. A plant schedule for the compensatory area including all species by proposed community type and hydrologic regime, size and type of plant material to be installed, spacing of plants, "typical" clustering patterns, total number of each species by community type, timing of installation;

vii. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring schedule, and maintenance schedule and actions by each biennium.

**D. Additional Information.** When appropriate, the Town Administrator may also require the wetland report to include an evaluation by the State Department of Ecology or an independent qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs and to include any recommendations as appropriate.

1. If the development proposal site contains or is within a wetland area, the applicant shall submit an affidavit, which declares whether the applicant has knowledge of any illegal alteration to any or all wetlands on the proposed site and whether the applicant previously had been found in violation of this ordinance. If the applicant has been found previously in violation, the applicant shall declare whether such violation has been corrected to the satisfaction of the jurisdiction.

2. The Town Administrator, in accordance with the recommendations of an experienced, qualified professional wetland scientist, shall determine if the mitigation and monitoring plans and bonding measures proposed by the applicant are sufficient to protect the public health, safety, and welfare, consistent with the goals, purposes, objectives, and requirements of this Chapter.

3. The applicant shall be responsible for the costs of an evaluation by the State department of Ecology or an independent qualified expert.

#### **16.16.430 Performance standards – General requirements**

A. Activities may only be permitted in a wetland or wetland buffer if the applicant can show that the proposed activity will not degrade the functions and functional performance of the wetland and other critical areas.

B. Activities and uses shall be prohibited in wetlands and wetland buffers, except as provided for in this Chapter.

C. **Category I wetlands.** Activities and uses are prohibited in Category I wetlands, except as provided for in the public agency and utility exception, reasonable use exception, and variance sections of this Chapter.

D. **Category II and III wetlands.** The following standards shall apply to activities in Category II and III wetlands:

1. ~~Water dependent activities may be allowed where there are no practicable alternatives that would have a less adverse impact on the wetland, its buffers and other critical areas~~

~~2.1. Non water-dependant activities and uses are prohibited, the presumption being that alternative locations are available~~ Where wetland fill is proposed, it is presumed that an alternative development location exists; activities and uses shall be prohibited unless the applicant demonstrates that:

a. The basic project purpose cannot reasonably be accomplished and successfully avoid, or result in less adverse impact on, a wetland on another site or sites in the general region

b. All alternative designs of the project as proposed, that would avoid or result in less of an adverse impact on a wetland or its buffer, such as a reduction in the size, scope, configuration, or density of the project, are not feasible.

Full compensation for the loss of acreage and functions of wetland and buffers shall be provided under the terms established under SMC 16.16.440.

**E. Category IV wetlands.** Activities and uses that result in unavoidable and necessary impacts are permitted in Category IV wetlands and associated buffers in accordance with an approved critical area report and mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the acreage and loss functions will be provided under the terms established under SMC 16.16.440.

**F. Wetland buffers**

1. **Standard buffer widths.** The standard buffer widths set forth in the following tables (Tables 1-4) presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. If the vegetation is inadequate, then the buffer width shall be increased or the buffer planted to maintain the standard width. Required standard wetland buffers, based on wetland category and land use intensity, are as follows:

**Table 1. Width of buffers needed to protect Category IV wetlands**

(Buffers for wetlands scoring less than 16 points for all functions)

<b>Wetland Characteristics</b>	<b>Buffer Widths by Impact of Land Use</b>	<b><u>Other Measures Recommended for Protection</u></b>
Score for <u>all 3 basic functions is less than 30 pts-16 points</u>	Low - 25 ft Moderate – 40 ft High – 50 ft	<u>No recommendations at this time</u>

**Table 2. Width of buffers needed to protect Category III wetlands**

(Buffers for wetlands scoring 16 – 19 points for all functions)

<b>Wetland Characteristics</b>	<b>Buffer Widths by Impact of Land Use</b>	<b><u>Other Measures Recommended for Protection</u></b>
Moderate level of function for habitat (score for habitat <u>20 – 28 pts- 5 - 7 points</u> )	Low - 75 ft Moderate – 110 ft High – 150 ft	<u>No recommendations at this time</u>

<u>If wetland scores 8 - 9 habitat points, use Table 3 for Category II buffers</u>		
<del>Not meeting above criteria</del> <u>Score for habitat 3 - 4 points</u>	Low - 40 ft Moderate – 60 ft High – 80 ft	<u>No recommendations at this time</u>

**Table 3. Width of buffers needed to protect Category II wetlands**  
 (Buffers for wetlands scoring 20-22 points for all functions or having the “Special Characteristics” identified in the rating system.)

<b>Wetland Characteristics</b>	<b>Buffer Widths by Impact of Land Use</b>	<b>Additional <u>Other Measures Recommended for Protection</u></b>
High level of function for habitat (score for habitat <del>29-36 pts.</del> <u>8 - 9 points</u> )	Low - 150 ft Moderate – 225 ft High – 300 ft	<del>Maintain connectivity to other natural areas.</del> <u>Maintain connections to other habitat areas</u>
Moderate level of function for habitat (score for habitat <del>20-28 pts.</del> <u>5 - 7 points</u> )	Low - 75 ft Moderate – 110 ft High – 150 ft	<u>No recommendations at this time</u>
High level of function for water quality improvement and low for habitat (score for water quality <del>24-32 pts.</del> <u>8 - 9 points</u> ; habitat less than <del>20 pts.</del> <u>5 points</u> )	Low - 50 ft Moderate – 75 ft High – 100 ft	No additional discharges of untreated runoff.
Estuarine	Low - 75 ft Moderate – 110 ft High – 150 ft	<u>No recommendations at this time</u>
<u>Interdunal</u>	<u>Low - 75 ft</u> <u>Moderate – 110 ft</u> <u>High – 150 ft</u>	<u>No recommendations at this time</u>
Not meeting above criteria	Low - 50 ft Moderate – 75 ft High – 100 ft	<u>No recommendations at this time</u>



**Table 4. Width of buffers needed to protect Category I wetlands**

(Buffers for wetlands scoring 23 or more points for all functions or having the “Special Characteristics” identified in the rating system.)

Wetland Characteristics	Buffer Widths by Impact of Land Use	Additional <u>Other Measures Recommended for Protection</u>
<u>Natural Heritage Wetlands</u> <u>Wetlands of High Conservation Value</u>	Low - 125 ft Moderate – 190 ft High – 250 ft	<del>No additional discharges of surface water.</del> <u>No additional surface discharges to wetland or its tributaries.</u> No septic systems within 300 ft. Restore degraded parts of buffer.
Bogs	Low - 125 ft Moderate – 190 ft High – 250 ft	<del>No additional discharges of surface water.</del> <u>No additional surface discharges to wetland or its tributaries.</u> Restore degraded parts of buffer. <del>Forested Buffer size to be based on score for habitat functions or water quality functions</del> If forested wetland scores high for habitat, need to maintain connectivity to other natural areas. <del>Restore degraded parts of buffer.</del>
<u>Forested</u>	<u>Buffer width to be based on score for habitat functions or water quality functions</u>	<u>If forested wetland scores high for habitat, need to maintain connectivity to other natural areas.</u> <u>Restore degraded parts of buffer.</u>
Estuarine	Low - 100 ft Moderate – 150 ft High – 200 ft	<u>No recommendations at this time</u>
<u>Wetlands in Coastal Lagoons</u>	<u>Low - 100 ft</u> <u>Moderate – 150 ft</u> <u>High – 200 ft</u>	<u>No recommendations at this time</u>

High level of function for habitat (score for habitat <del>29-36 pts.</del> <u>8 – 9 points</u> )	Low – 150 ft Moderate – 225 ft High – 300 ft	<del>Maintain connectivity to other natural areas.</del> <u>Maintain connections to other habitat areas</u> Restore degraded parts of buffer.
<u>Interdunal wetland with high level of function for habitat (score for habitat 8 – 9 points)</u>	<u>Low – 150 ft</u> <u>Moderate – 225 ft</u> <u>High – 300 ft</u>	<u>Maintain connections to other habitat areas</u> Restore degraded parts of buffer.
Moderate level of function for habitat (score for habitat <del>20–28 pts.</del> <u>5 -7 points.</u> )	Low – 75 ft Moderate – 110 ft High – 150 ft	<u>No recommendations at this time</u>
High level of function for water quality improvement ( <del>24–32 pts.</del> <u>8 - 9 points</u> ) and low for habitat (less than <del>20 pts.</del> <u>5 points.</u> )	Low – 50 ft Moderate – 75 ft High – 100 ft	No additional <u>surface</u> discharges of untreated runoff.
Not meeting any of the above <del>criteria</del> <u>characteristics</u>	Low – 50 ft Moderate – 75 ft High – 100 ft	<u>No recommendations at this time</u>

**Table 5. Types of proposed land use that can result in high, moderate, and low levels of impacts to adjacent wetlands.**

<u>Level of Impact from Proposed Change in Land Use</u>	<u>Types of Land Use</u>
<u>High</u>	<u>Commercial</u> <u>Urban</u> <u>Industrial</u> <u>Institutional</u> <u>Retail sales</u> <u>Residential (more than 1 unit/acre)</u> <u>Conversion to high-intensity agriculture (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling and raising and maintaining animals, etc.)</u> <u>High-intensity recreation (golf courses, ball fields, etc.)</u> <u>Hobby farms</u>
<u>Moderate</u>	<u>Residential (1 unit/acre or less)</u> <u>Moderate-intensity open space (parks with biking, jogging, etc.)</u>

	<u>Conversion to moderate-intensity agriculture (orchards, hay fields, etc.)</u> <u>Paved trails</u> <u>Building of logging roads</u> <u>Utility corridor or right-of-way shared by several utilities and including access/maintenance road</u>
<u>Low</u>	<u>Forestry (cutting of trees only)</u> <u>Low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.)</u> <u>Unpaved trails</u> <u>Utility corridor without a maintenance road and little or no vegetation management.</u>

**2. Measurement of wetland buffers.** All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category and the proposed land use. 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 areas are considered buffers. Lawns, walkways, driveways and other mowed or paved areas are not buffers.

**3. Increased or enhanced wetland buffer widths.** The Town Administrator shall require increased buffer widths and/or enhanced buffers in accordance with the recommendations of an experienced, qualified professional wetland scientist, and the best available science on a case-by-case basis when a larger or enhanced buffer is necessary to protect wetland functions and values based on site-specific characteristics. This determination shall be based on one or more of the following criteria:

- a. A larger buffer is needed to protect other critical areas, including habitat for priority species particularly sensitive to disturbance, such as threatened or endangered species. The buffer should be increased to provide adequate protection for the species based on its particular life-history needs.
- b. If the buffer is based on the score for its ability to improve water quality rather than for habitat or other criteria, then the buffer should be increased by 50% if the slope is greater than 30%.
- c. The buffer area has minimal vegetative cover. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to project the wetland functions and values, implementation of a buffer planting plan may substitute. Where a buffer planting plan is proposed, it shall include densities that are not less than 3 feet on center for shrubs and 8 feet on center for trees and require monitoring and maintenance to ensure success. Existing buffer vegetation is considered "inadequate" and will need to be enhanced through additional native plantings and (if appropriate) removal of non-native plants when: (1) non-native or invasive plant species provide the dominant cover, (2) vegetation is lacking due to disturbance and wetland resources could be adversely affected, or (3) enhancement plantings in the buffer could significantly improve buffer functions.

d. The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts.

**4. Wetland buffer width averaging.** The Town Administrator may allow modification of the standard wetland buffer width in accordance with an approved critical area report and the best available science on a case-by-case basis by averaging buffer widths to either improve wetland protection or allow reasonable use of a parcel. Averaging shall not occur in conjunction with reductions of buffer widths under Subsection 5.

a. Averaging may be permitted to improve wetland protection when all the following conditions are met, as demonstrated by a qualified professional wetland scientist:

1. The wetland has significant differences in characteristics that affect its habitat functions such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower rated area; and
2. The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the wetland, and decreased adjacent to the lower-functioning area of habitat or less sensitive portion of the wetland; and
3. The total area contained in the buffer after averaging is equal to the area required without averaging; and
4. The buffer width at its narrowest point is never less than 75 percent (75%) of the standard required width.

b. Averaging may be permitted to allow reasonable use when all the following conditions are met, as demonstrated by a qualified professional wetland scientist:

1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging; and
2. The averaged buffer will not result in a degradation of the wetland’s functions and values; and
3. The total area contained in the buffer after averaging is equal to the area required without averaging; and
4. The buffer width at its narrowest point is never less than 75 percent (75%) of the standard required width.

**5. Reductions in buffer widths.** ~~The Town Administrator may allow buffer widths for high-intensity land uses to be reduced to those for moderate intensity impacts in accordance with an approved critical area report and the best available science on a case-by-case basis~~ The buffer widths recommended for proposed land uses with high-intensity impacts to wetlands can be reduced to those recommended for moderate-intensity impacts under the following conditions.

a. For wetlands that score moderate or high for habitat (~~20~~ 5 points or more for the habitat functions) the width of a wetland buffer may be reduced if both of the following criteria are met:

1. ~~There is~~ a relatively undisturbed vegetative corridor at least 100 feet wide is protected between the wetland and any other ~~priority habitat~~ Priority Habitats as determined defined by the Washington State Department of Fish and Wildlife. The corridor shall must be protected for the entire distance between the wetland and the

~~priority habitat~~ Priority Habitat by some type of legal protection such as a conservation easement or similar device; and

2. Measures to minimize the impacts of different uses on wetlands, such as the examples summarized as set forth in Table 5.6, below are applied to the proposed use.

b. For wetlands that score ~~low for habitat~~ (less than 20.5 points) for habitat, the width of a wetland buffer ~~width may can~~ be reduced to those required for moderate land-use impacts by applying if measures to minimize the impacts of different uses on wetlands, the proposed land uses, (see examples in as set forth in Table 5.6 below are applied to the ~~proposed use.~~)

**Table 5. Measures for Reduction of Buffer Widths**

Type of Use	Type of Disturbance	Example of Measure to Minimize Disturbance
Residential, commercial, parking lots	Lights	Direct lights away from wetland
Residential, industrial, commercial	Noise	Locate noise-generating activity away from wetland
Residential, industrial, commercial, landscaping, agricultural, parking lots, roads	Toxic runoff (not adequate to protect threatened or endangered species)	Route all new runoff away from wetland Covenants limiting use of pesticides Integrated pest management
Impermeable surfaces, lawns, tilling	Change in water regime	Infiltrate or treat, detain, and disperse new runoff into buffer
Residential	Pets	Plant dense vegetation around buffer, such as rose, hawthorn etc.
Residential	Human disturbance	Plant buffer with impenetrable natural vegetation appropriate for region
Tilling	Dust	Best Management Controls for dust

**Table 6. Examples of measures to minimize impacts to wetlands from proposed change in land use that have high impacts. (This is not a complete list)**

<u>Example of Disturbance</u>	<u>Activities and Uses that Cause Disturbances</u>	<u>Examples of Measures to Minimize Impacts</u>
<u>Lights</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Warehouses</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Direct lights away from wetland</u></li> </ul>

<u>Noise</u>	<ul style="list-style-type: none"> <li>• <u>Manufacturing</u></li> <li>• <u>Residential</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Locate activity that generates noise away from wetland</u></li> </ul>
<u>Toxic runoff*</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Roads</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> <li>• <u>Application of agricultural pesticides</u></li> <li>• <u>Landscaping</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</u></li> <li>• <u>Establish covenants limiting use of pesticides within 150 feet of wetland</u></li> <li>• <u>Apply integrated pest management</u></li> </ul>
<u>Stormwater runoff</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Roads</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> <li>• <u>Commercial</u></li> <li>• <u>Landscaping</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Retrofit stormwater detention and treatment for roads and existing development</u></li> <li>• <u>Prevent channelized flow from lawns that directly enters the buffer</u></li> </ul>
<u>Change in water regime</u>	<ul style="list-style-type: none"> <li>• <u>Impermeable surfaces</u></li> <li>• <u>Lawns</u></li> <li>• <u>Tilling</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Infiltrate or treat, detain and disperse into buffer new runoff from impervious surfaces and new lawns</u></li> </ul>
<u>Pets and human disturbance</u>	<ul style="list-style-type: none"> <li>• <u>Residential areas</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Use privacy fencing, plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; place wetland and buffer in separate tract</u></li> </ul>
<u>Dust</u>	<ul style="list-style-type: none"> <li>• <u>Tilled fields</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Use best management practices to control dust</u></li> </ul>
<p><u>*These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.</u></p>		

6. **Buffers consistency on mitigation sites.** All mitigation sites shall have buffers consistent with the buffer requirements of this Chapter and based upon the expected category of the wetland once the mitigation actions are completed.

7. **Buffer maintenance.** Except as otherwise specified or allowed in accordance with this Chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. Removal of invasive non-native weeds is required for the duration of the mitigation security.

8. **Buffer uses.** The following uses may be permitted within a wetland buffer in accordance with the review procedures of this Chapter; provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

a. **Conservation and restoration activities.** Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.

b. **Passive recreation.** Passive recreation facilities designed and in accordance with an approved critical area report, including:

i. Walkways and trails, provided that those pathways that are generally parallel to the perimeter of the wetland shall be located in the outer twenty-five percent (25%) of the buffer area, and constructed with a surface that does not interfere with the permeability. Raised boardwalks utilizing non-treated pilings area may be acceptable.

ii. Wildlife viewing structures; and

iii. Fishing access areas down to the water's edge that shall be no larger than 6 feet.

c. **Stormwater management facilities.** Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:

i. No other location is feasible.

ii. The location of such facilities will not degrade the functions or values of the wetland.

Stormwater management facilities are not allowed in buffers of Category I or II wetlands. See also SMC 16.16.460.

## G. Signs and fencing of wetlands

1. **Temporary markers.** The outer perimeter of the wetland or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be conspicuously marked in the field. Markings are subject to inspection by the Town Administrator prior to commencement of permitted activities. Temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

2. **Permanent signs.** The Town Administrator may require installation of permanent signs along the boundary of a wetland or buffer as a condition of any permit or authorization pursuant to this Chapter.

a. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post, or another non-treated material of equal durability, and be approximately 12 inches by 18 inches in size. Signs must be posted at an interval of one per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner in perpetuity. The sign shall be worded as follows or with alternative language approved by the Town Administrator:

Protected Wetland Area  
Do Not Disturb  
Contact Town of Steilacoom  
Regarding Uses and Restrictions

b. The provisions of subsection (a) may be modified as necessary to assure protection of sensitive features or wildlife.

### 3. Fencing

a. The Town Administrator may require installation of permanent fencing at the edge of the wetland buffer as a condition of any permit or authorization pursuant to this Chapter when fencing will prevent future impacts to the wetland.

- b. The applicant shall be required to install a permanent fence around the wetland or buffer when domestic grazing animals are present or may be introduced on site.
- c. Fencing installed as part of a proposed activity or as required in this Subsection shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

## **H. Impacts to Buffers**

Requirements for compensation for impacts to buffers are set forth in SMC 16.16.440.

## **I. Overlapping Critical Area Buffers**

If buffers from two contiguous critical areas overlap, such as buffers for a stream and a wetland, the wider buffer applies.

### **16.16.440 Performance standards – Compensatory Mitigation requirements**

Compensatory Mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions. Compensatory Mitigation plans shall be consistent with the most recent edition of the Department of Ecology *Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals*. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans--Version 1*, (Ecology Publication #06-06- 011b, Olympia, WA, March 2006 or as revised), and *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)* (Publication #09-06-32, Olympia, WA, December 2009).

#### **A. Mitigation shall be required in the following Order of Preference:**

1. Mitigation shall be required in the following order of preference:

- 4 a. Avoiding the impact altogether by not taking a certain action or parts of an action;
- 2 b. 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 c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- 4 d. Reducing or eliminating the impact over time by preservation and maintenance operations;
- 5 e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

2. All mitigation must be monitored for effectiveness. The person or entity responsible for the mitigation shall take remedial or corrective measures when necessary to restore effectiveness.

3. Compensatory mitigation shall be allowed in the following preferential sequence:

- a. a mitigation bank approved by the State Department of Ecology within the same watershed as the impacted wetland,
- b. a government-sponsored in-lieu fee program,
- c. a privately funded in-lieu fee program,



- d. permittee-responsible mitigation using a watershed approach,
- e. permittee-responsible mitigation through on-site and in-kind mitigation, or
- f. permittee-responsible mitigation through off-site and/or out-of-kind mitigation.

3. Permittee-responsible mitigation shall meet the same standards as the government-sponsored counterparts.

**B. Mitigation for lost or affected functions.** ~~Compensatory Mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement and shall provide similar wetland functions as those lost, except when:~~

Compensatory mitigation shall address the functions affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions. The goal shall be for the compensatory mitigation to provide similar wetland functions as those lost, except when either:

1. The lost wetland provides minimal functions as determined by a site-specific function assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington State watershed assessment plan or protocol; or
2. Out-of-kind replacement will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.

**C. Preference of mitigation actions.** Mitigation actions that require compensation by replacing, enhancing, or substitution shall occur in the following order of preference:

1. ~~Restoring wetlands on upland sites that were formerly wetlands.~~ Restoration (re-establishment and rehabilitation) of wetlands.
  - a. The goal of re-establishment is returning natural or historic functions to a former wetland. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.
  - b. The goal of rehabilitation is repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.
2. ~~Creating wetlands~~ Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native introduced species. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is being designed.
  - a. If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the approval authority may authorize creation of a wetland and buffer upon demonstration by the applicant's qualified wetland scientist that:
    - i. The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that creation of a wetland at the site will not likely cause hydrologic problems elsewhere;
    - ii. The proposed mitigation site does not contain invasive plants or noxious weeds or that such vegetation will be completely eradicated at the site;

iii. Adjacent land uses and site conditions do not jeopardize the viability of the proposed wetland and buffer (e.g., due to the presence of invasive plants or noxious weeds, stormwater runoff, noise, light, or other impacts); and

iv. The proposed wetland and buffer will eventually be self-sustaining with little or no long-term maintenance.

3. Enhancing significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area meeting appropriate ratio requirements. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Applicants proposing to enhance wetlands or associated buffers shall demonstrate:

a. How the proposed enhancement will increase the wetland's/buffer's functions;

b. How this increase in function will adequately compensate for the impacts; and

c. How all other existing wetland functions at the mitigation site will be protected.

4. Preservation. Impacts to wetlands may be mitigated by preservation of wetland areas when used in combination with other forms of mitigation such as creation, restoration, or enhancement. Preservation may also be used by itself, but more restrictions apply as outlined below.

a. Acceptable Uses of Preservation. The preservation of at-risk, high-quality wetlands and habitat may be considered as part of an acceptable mitigation plan when the following criteria are met:

i. Preservation is used as a form of compensation only after the standard sequencing of mitigation (avoid, minimize, and then compensate). Refer to SMC 16.16.440A;

ii. Restoration (re-establishment and rehabilitation), creation, and enhancement opportunities have also been considered, and preservation is proposed by the applicant and approved by the permitting agencies as the best compensation option;

iii. The preservation site is determined to be under imminent threat; that is, the site has the potential to experience a high rate of undesirable ecological change due to on-site or off-site activities that are not regulated (e.g., logging of forested wetlands). This potential includes permitted, planned, or likely actions;

iv. The area proposed for preservation is of high quality or critical for the health of the watershed or basin due to its location. Some of the following features may be indicative of high- quality sites:

A. Category I or II wetland rating;

B. Rare or irreplaceable wetland type (e.g., bogs, mature forested wetlands, estuaries) or aquatic habitat that is rare or a limited resource in the area;

C. Habitat for threatened or endangered species;

D. Provides biological and/or hydrological connectivity;

E. High regional or watershed importance (e.g., listed as priority site in a watershed or basin plan);

F. Large size with high species diversity (plants and/or animals) and/or high abundance of native species;

G. A site that is continuous with the head of a watershed, or with a lake or pond in an upper watershed that significantly improves outflow hydrology and water quality.

b. Preservation in combination with other forms of compensation. Using preservation as compensation is acceptable when done in combination with restoration, creation, or enhancement, provided that a minimum of 1:1 acreage replacement is provided by re-establishment or creation and the criteria below are met:

i. All criteria listed in SMC 16.16.440 C 4 a are met.

ii. The impact area is small and/or impacts are occurring to a low- functioning system (Category III or IV wetland);

iii. Preservation of a high-quality system occurs in the same watershed or basin as the wetland impact;

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

v. Mitigation ratios for preservation in combination with other forms of mitigation shall range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being impacted and the quality of the wetlands being preserved.

c. Preservation as the sole means of compensation for wetland impacts. Preservation alone shall only be used as compensatory mitigation in exceptional circumstances. Preservation alone shall not apply if impacts are occurring to functions that must be replaced on site, such as flood storage or water quality treatment that need to be replicated by water quality measures implemented within the project limits. Preservation of at-risk, high-quality wetlands and habitat (as defined above) may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

i. All criteria listed in SMC 16.16.440 C 4 a and b are met;

ii. There are no adverse impacts to habitat for fish and species listed as endangered and threatened;

iii. There is no net loss of habitat functions within the watershed or basin;

iv. Higher mitigation ratios are applied. Mitigation ratios for preservation as the sole means of mitigation shall generally start at 20:1. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost.

**D. Type and location of compensatory mitigation.** Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be either in-kind and on-site, or in-kind and within the same stream reach, sub-basin, or drift cell. Mitigation actions shall be conducted within the same sub-drainage basin and on the site as the alteration except when the all of the following apply:

1. There are no reasonable on-site or in-subdrainage basin opportunities or on-site and in-subdrainage basin opportunities do not have a high likelihood of success, ~~after a determination of the natural capacity of the site to mitigate for the impacts~~ based on a

determination of the capacity of the site to compensate for the impacts. Consideration should include: anticipated wetland mitigation replacement ratios, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of on-site wetlands when restored, proposed flood storage capacity, potential to mitigate riparian fish and wildlife impacts (such as connectivity);

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

3. Off-site locations shall be in the same sub-drainage basin unless:

a. Established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions have been established and strongly justify location of mitigation at another site; or

b. Credits from a state certified wetland mitigation bank are used as mitigation and the use of credits is consistent with the terms of the bank's certification, or

c. Fees are paid to an approved in-lieu fee program to compensate for the impacts.

4. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which required the construction of berms to hold the water.

**E. Mitigation timing.** Mitigation projects shall be completed with an approved monitoring plan prior to activities that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

The Town Administrator may authorize a one-time temporary delay, up to one-hundred-twenty (120) days, in completing minor construction and landscaping when environmental conditions could produce a high probability of failure or significant construction difficulties. The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, and general welfare of the public. The request for the temporary delay must include a written justification by an experienced, qualified professional wetland scientist that documents the environmental constraints that preclude implementation of the mitigation plan. The justification must be verified and approved by the Town of Steilacoom and include a financial guarantee.

#### **F. Mitigation ratios**

1. **Acreeage replacement ratios.** ~~The following ratios in Table 7 shall apply to the creation, or restoration or enhancement that is in-kind, is on-site, is the same category, is timed prior to or concurrent with alteration, and has a high probability of success of wetlands for compensatory~~

mitigation. The mitigation ratio is the acreage required for compensatory mitigation divided by the acreage of impact. The ratios are based on the following assumptions.

- a. The ratios are for a compensatory mitigation project that is concurrent with impacts to the wetlands.
- b. If impacts are to be mitigated by using an approved and established mitigation bank, the rules and ratios applicable to the bank should be used.
- c. The ratios assume that the category and hydrogeomorphic (HGM) class or subclass of the wetland proposed for compensation are the same as the category and HGM class or subclass of the affected wetland.
- d. Ratios for projects in which the category and HGM class or subclass of wetlands proposed as compensation is not the same as that of the wetland affected will be determined on a case-by case basis using the recommended ratios as a starting point. The ratios could be higher in such cases.
- e. The ratio for using rehabilitation as compensation is two times that for using re-establishment or creation (R/C). (2 acres of rehabilitation are equivalent to 1 acre of R/C). The ratio for using enhancement as compensation is four times that for using re-establishment or creation (R/C). (4 acres of enhancement are equivalent to 1 acre of R/C).
- f. Re-establishment or creation can be used in combination with rehabilitation or enhancement. For example, 1 acre of impact to a Category II wetland would require 2 acres of R/C. If an applicant provides 1 acre of R/C (i.e. replacing the lost acreage at a 1:1 ratio), the remaining 1 acre of R/C necessary to compensate for the impact could be substituted with 2 acres of rehabilitation or 4 acres of enhancement.
- g. Generally, the use of enhancement alone as compensation is discouraged. Using enhancement in combination with the replacement of wetland area at a minimum of 1:1 through re-establishment or creation is preferred.

These ratios do not apply to remedial actions resulting from unauthorized alterations; greater ratios shall apply in those cases. ~~These ratios do not apply to the use of credits from a state certified wetland mitigation bank. When credits from a certified bank are used, replacement ratios should be consistent with the requirements of the bank's certification. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered.~~

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

**Table 7. Mitigation ratios**

<u>Category and Type of Wetland Impact</u>	<u>Re-establishment or creation</u>	<u>Rehabilitation only</u>	<u>Re-establishment or creation (R/C) and Rehabilitation (RH)</u>	<u>Re-establishment or creation (R/C) and Enhancement (E)</u>	<u>Enhancement only</u>
<u>All Category IV</u>	<u>1.5:1</u>	<u>3:1</u>	<u>1:1 R/C and 1:1 RH</u>	<u>1:1 R/C and 2:1 E</u>	<u>6:1</u>

<u>All Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>1:1 R/C and 2:1 RH</u>	<u>1:1 R/C and 4:1 RH</u>	<u>8:1</u>
<u>Category II Estuarine</u>	<u>Case-by-case</u>	<u>4:1 Rehabilitation of an estuarine wetland</u>	<u>Case-by-case</u>	<u>Case-by-case</u>	<u>Case-by-case</u>
<u>Category II Interdunal</u>	<u>2:1 Compensation has to be interdunal wetland</u>	<u>4:1 Compensation has to be interdunal wetland</u>	<u>1:1 R/C and 2:1 RH Compensation has to be interdunal wetland</u>	<u>Not considered an option</u>	<u>Not considered an option</u>
<u>All other Category II</u>	<u>3:1</u>	<u>6:1</u>	<u>1:1 R/C and 4:1 RH</u>	<u>1:1 R/C and 8:1 E</u>	<u>12:1</u>
<u>Category I Forested</u>	<u>6:1</u>	<u>12:1</u>	<u>1:1 R/C and 10:1 RH</u>	<u>1:1 R/C and 20:1 E</u>	<u>24:1</u>
<u>Category I based on score or functions</u>	<u>4:1</u>	<u>8:1</u>	<u>1:1 R/C and 6:1 RH</u>	<u>1:1 R/C and 12:1 E</u>	<u>16:1</u>
<u>Category I Natural Heritage site</u>	<u>Not considered possible</u>	<u>6:1 Rehabilitation of a Natural Heritage site</u>	<u>R/C Not considered possible</u>	<u>R/C Not considered possible</u>	<u>Case-by-case</u>
<u>Category I Coastal Lagoon</u>	<u>Not considered possible</u>	<u>6:1 Rehabilitation of a coastal lagoon</u>	<u>R/C Not considered possible</u>	<u>R/C Not considered possible</u>	<u>Case-by-case</u>
<u>Category I Bog</u>	<u>Not considered possible</u>	<u>6:1 Rehabilitation of a bog</u>	<u>R/C Not considered possible</u>	<u>R/C Not considered possible</u>	<u>Case-by-case</u>
<u>Category I Estuarine</u>	<u>Case-by-case</u>	<u>6:1 Rehabilitation of an estuarine wetland</u>	<u>Case-by-case</u>	<u>Case-by-case</u>	<u>Case-by-case</u>

**2. Increased Conditions for increasing or reducing replacement ratios.**

a. The Town Administrator may increase the replacement ratios in Table 7 under the following circumstances when documentation by a qualified wetland specialist demonstrates that:

- a. i. uncertainty exists as to the probable success of the proposed restoration or creation;
- b. ii a significant period of time will elapse between impact and replication of wetland functions;

- e. iii. proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or
- d. iv. The impact was an unauthorized impact.

b. The Town Administrator may reduce the replacement ratios in Table 7 under the following circumstances:

- i. Documentation by a qualified wetland specialist demonstrates that the proposed mitigation actions have a very high likelihood of success based on prior experience.
- ii. Documentation by a qualified wetland specialist demonstrates that the proposed actions for compensation will provide functions and values that are significantly greater than the wetland being affected.
- iii. The proposed actions for compensation are conducted in advance of the impact and are shown to be successful.
- iv. In wetlands where several HGM classes are found within one delineated boundary, the areas of the wetlands within HGM class can be scored and rated separately and the ratios adjusted accordingly if all of the following apply:
  - The wetland does not meet any of the criteria for wetlands with “Special Characteristics” as defined in the rating system
  - The ratings and score for the entire wetland is provided along with the scores and ratings of for each area with a different HGM class.
  - Impacts to the wetland are all within an area that has a different HGM class from the one used to establish the initial category.
  - The proponents provide adequate hydrologic and geomorphic data to establish that the boundary between HGM classes lies at least 50 feet outside of the footprint of the impacts.

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

#### **G. Wetlands enhancement as mitigation**

1. Impacts to wetland functions may be mitigated by enhancement of existing significantly degraded wetlands, but must be used in conjunction with restoration and/or creation. Applicants proposing to enhance wetlands must produce a critical area report that identifies how enhancement will increase the functions of the degraded wetland and how this increase will adequately mitigate for the loss of wetland area and function at the impact site. An enhancement proposal must also show whether existing wetland functions will be reduced by the enhancement actions.

2. ~~At a minimum, enhancement acreage shall be double the acreage required for creation or restoration under Subsection F. The ratios shall be greater than double the required acreage where the enhancement proposal would result in minimal gain in the performance of wetland functions and/or result in the reduction of other wetland functions currently being provided in the wetland.~~

- ~~3. Mitigation ratios for enhancement in combination with other forms of mitigation shall range from 6:1 to 3:1 and be limited to Class III and Class IV wetlands.~~

#### H. Wetland mitigation banks

1. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:
  - a. The bank is certified under Chapter 173-700 WAC;
  - b. Documentation by a qualified wetland specialist demonstrates The Town Administrator determines, that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and
  - c. The proposed use of credits is consistent with the terms and conditions of the bank's certification.
2. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.
3. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, bank service areas may include portions of more than one adjacent drainage basin for specific wetland functions.

**I. Buffer Mitigation Ratios.** Impacts to buffers shall be mitigated at a 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.

**J. Protection of the Mitigation Site.** The area where the mitigation occurred and any associated buffer shall be located in a critical area tract or a conservation easement consistent with SMC 16.16.340.

**K. In-Lieu Fee.** To aid in the implementation of off-site mitigation, the Town may develop an in-lieu fee program. This program shall be developed and approved through a public process and be consistent with federal rules, state policy on in-lieu fee mitigation, and state water quality regulations. An approved in-lieu-fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor, a governmental or non-profit natural resource management entity. Credits from an approved in-lieu-fee program may be used when paragraphs 1-6 below apply:

1. The approval authority determines that it would provide environmentally appropriate compensation for the proposed impacts.
2. The mitigation will occur on a site identified using the site selection and prioritization process in the approved in-lieu-fee program instrument.
3. The proposed use of credits is consistent with the terms and conditions of the approved in-lieu-fee program instrument.
4. Land acquisition and initial physical and biological improvements of the mitigation site must be completed within three years of the credit sale.
5. Projects using in-lieu-fee credits shall have debits associated with the proposed impacts calculated by the applicant's qualified wetland scientist using the method consistent with the credit assessment method specified in the approved instrument for the in-lieu-fee program.
6. Credits from an approved in-lieu-fee program may be used to compensate for impacts located within the service area specified in the approved in-lieu-fee instrument.



L. **Advance Mitigation.** Mitigation for projects with pre-identified impacts to wetlands may be constructed in advance of the impacts if the mitigation is implemented according to federal rules, state policy on advance mitigation, and state water quality regulations.

M. **Alternative Mitigation Plans.** The Administrator may approve alternative critical areas mitigation plans that are based on best available science, such as priority restoration plans that achieve restoration goals identified in the Town's Shoreline Master Program. Alternative mitigation proposals must be prepared by qualified professionals and clearly demonstrate that the proposal provides an equivalent or better level of protection of critical area functions and values than would be provided by the strict application of this chapter.

The Administrator shall consider the following criteria for approval of an alternative mitigation proposal:

1. The proposal uses a watershed approach consistent with *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)* (Ecology Publication #09-06-32, Olympia, WA, December 2009).
2. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual habitat areas.
3. Standard mitigation proposals are not feasible due to site constraints such as parcel size, stream type, wetland category, or geologic hazards.
4. There is clear potential for success of the proposed mitigation at the proposed mitigation site.
5. The plan shall contain clear and measurable standards for achieving compliance with the specific provisions of the plan, and shall include a monitoring plan and financing to achieve those objectives.
6. The plan shall be reviewed and approved as part of overall approval of the proposed use.
7. A wetland of a different type is justified based on regional needs or functions and values; the replacement ratios may not be reduced or eliminated unless the reduction results in a preferred environmental alternative.
8. Qualified professionals in each of the critical areas addressed shall prepare the plan.
9. The Town may consult with agencies with expertise and jurisdiction over the resources during the review to assist with analysis and identification of appropriate performance measures that adequately safeguard critical areas.

#### **N. Long Term Maintenance Plan**

To the maximum extent practicable, compensatory mitigation project sites must be planned and designed to be self-sustaining over time, but some active management and maintenance may be required to ensure their long-term viability and sustainability. If active management for a period longer than five years is required by the compensatory mitigation report, a long term maintenance plan shall be prepared by a qualified professional which shall include the following:

1. The legal mechanisms and the party responsible for the long-term management and the protection of the compensatory mitigation project site. The responsible party shall make adequate provisions for the operation, maintenance, and long-term management of the compensatory mitigation project site. The long-term management plan shall include a description of long-term management needs and identify the funding mechanism that will be used to meet those needs.

2. The long-term management plan shall contain provisions for the responsible party to transfer long-term management responsibilities to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager.
3. The long-term management plan must establish the financial arrangements and timing of any necessary transfer of long-term management funds to the steward.
4. Where needed, the acquisition and protection of water rights should be secured and documented in the long-term management plan.

#### **16.16.450 Performance standards – Subdivisions**

The subdivision and short subdivision of land in wetlands and associated buffers is subject to the following:

- A. Land that is located wholly within a wetland or its buffer may not be subdivided.
- B. Land that is located partially within a wetland or its buffer may be subdivided provided that an accessible and contiguous portion of each new lot is:
  1. Located outside of the wetland and its buffer; and
  2. Meets the minimum lot requirements of Titles 17 and 18 SMC.
- C. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only if the Town Administrator determines documentation by a qualified wetland specialist demonstrates that no other feasible alternative exists and when consistent with this Chapter.

#### **16.16.460 ~~[Reserved]~~ Stormwater Management Impacts to Wetlands**

A. **Protection of Wetland Hydrology.** Wetland hydrology shall be protected through the development process. Post-development wetland hydrology shall match pre-development wetland hydrology to the maximum extent feasible.

B. **Construction of New Surface Water Conveyance Systems.** Construction of new surface water conveyance systems in wetland buffers is allowed only if discharging at the wetland edge has less adverse impact upon the wetland or wetland buffer than if the surface water is discharged at the buffer edge and allowed to naturally drain through the buffer.

C. **Stormwater Facilities on Roads Adjacent to Wetlands and their Buffers.** Construction of new surface water flow control or surface water quality treatment facilities are only allowed in wetlands and buffers when such facilities are located in the right-of-way of an existing road and conducted consistent with established guidelines for road maintenance and best management practices. This does NOT include an outlet structure for a detention facility that is designed to impound water in a wetland up-gradient of a road, unless the provisions in Limits on Use of Wetlands for Stormwater Detention in subsection D below are satisfied.

D. **Limits on Use of Wetlands for Stormwater Detention.** Wetlands cannot be used for stormwater detention and treatment unless the project satisfies the guidance and criteria developed by the Puget Sound Wetlands and Stormwater Management Research Program (Azous and Horner, eds, 2001, *Wetlands and Urbanization: Implications for the Future*) and contained in Appendix I-D of the *Stormwater Management Manual for Western Washington*, titled “Wetlands and Stormwater Management Guidelines.” Compensatory mitigation should be provided for unavoidable loss of functions through hydrologic or structural modification of wetlands.

**16.16.470     Removal of Vegetative Invasive Species**

Removal of vegetative invasive species from wetlands and buffers shall be in compliance with approved plans and all of the criteria below.

A. Plant removal shall be performed such that it will not cause significant damage to untargeted vegetation, impair water quality or any wetland or buffer function. Removal of native vegetation within wetlands and buffers is prohibited.

B. Hand tools shall be used for plant removal unless permission to use other methods is sought from the Town Administrator prior to removal. If the scale of the project warrants use of small scale equipment such as light mechanical cultivating equipment or powered saws, the Town Administrator may approve such methods.

C. Use of other methods of removal, including the application of herbicide or larger powered equipment including riding lawn mowers, shall require submission of a plan prepared by an experienced, certified professional wetland scientist for approval by the Town Administrator that demonstrates that the proposed method does not pose a significant risk to untargeted areas, habitat functions, or water quality. Plans involving the use of herbicide shall include documentation of all necessary certification for the correct and legal application of the herbicide, including the name of the person applying the herbicide.

D. Activity that would expose more than one hundred square feet of soil within the wetland or wetland buffer shall require submission of a plan prepared by an experienced, certified professional wetland scientist for approval by the Town Administrator that identifies the proposed plant removal and site restoration consistent with the provisions of this section.

E. Erosion shall be effectively controlled and exposed areas shall be stabilized immediately following plant removal. If the area of exposed soil exceeds one hundred square feet and lies within a wetland or wetland buffer, submission of a re-planting plan prepared by an experienced, certified professional wetland scientist for approval by the Town Administrator is required prior to removal. Wetlands and wetland buffers shall be re-planted with appropriate native plants at a density that will provide complete ground cover at maturity, unless the plan demonstrates that the area will revegetate naturally without jeopardizing water quality or wetland and buffer functions.

**16.16.480     [Reserved]**

**16.16.490     [Reserved]**

**Article III Critical Aquifer Recharge Areas**

**Sections:**

**16.16.500 Critical aquifer recharge areas designation.**

**16.16.510 Critical area report – Additional requirements.**

**16.16.520 Performance standards – Specific uses.**

**16.16.530 Uses prohibited from critical aquifer recharge areas.**

**16.16.540 [Reserved]**

**16.16.550 [Reserved]**

**16.16.560 [Reserved]**

**16.16.570 [Reserved]**

**16.16.580 [Reserved]**

**16.16.590 [Reserved]**

**16.16.500 Designation.** The Town of Steilacoom is wholly located within an aquifer recharge area as defined by Clover/Chambers Creek Aquifer Basin Boundary, and the 10-year wellhead protection areas as identified by the Tacoma-Pierce County Health District. (Ord. 1380 §2(part), 2004).

**16.16.510 Critical area report – Additional requirements.** In addition to the general critical area report requirements of SMC 16.16.200, critical area reports for critical aquifer recharge areas must meet the requirements of the Tacoma-Pierce County Health District for hydrogeologic assessments. An aquifer recharge area critical area report shall be prepared by a qualified professional who is a hydrogeologist, geologist, or engineer, who is licensed in the state of Washington and has experience in preparing hydrogeologic assessments. (Ord. 1380 §2(part), 2004).

**16.16.520 Performance standards – Specific uses.**

(A) **Storage tanks.** All storage tanks proposed to be located in a critical aquifer recharge area must comply with Town building code requirements and must conform to the following requirements:

(1) **Underground tanks.** All new underground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

(a) Prevent releases due to corrosion or structural failure for the operational life of the tank;

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

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

(2) **Aboveground tanks.** All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

(a) Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;

(b) Have a primary containment area enclosing or underlying the tank or part thereof; and

(c) A secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.

(B) **Vehicle repair and servicing.**

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

(2) No dry wells shall be allowed in critical aquifer recharge areas on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility establishment must be

abandoned using techniques approved by the Washington Department of Ecology prior to commencement of the proposed activity.

(C) **Residential use of pesticides and nutrients.** Application of household pesticides, herbicides, and fertilizers shall not exceed times and rates specified on the packaging.

(D) **Use of reclaimed water for surface percolation or direct recharge.** Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the state departments of Ecology and Health.

(1) Use of reclaimed water for surface percolation must meet the ground water recharge criteria given in Chapter 90.46.080(1) and Chapter 90.46.010(10) RCW. The Washington Department of Ecology may establish additional discharge limits in accordance with Chapter 90.46.080(2) RCW.

(2) Direct injection must be in accordance with the standards developed by authority of Chapter 90.46.042 RCW.

(E) **State and federal regulations.** The uses listed below shall be conditioned as necessary to protect critical aquifer recharge areas in accordance with the applicable state and federal regulations.

### **Statutes, Regulations, and Guidance Pertaining to Ground Water Impacting Activities**

<b>Activity</b>	<b>Statute – Regulation – Guidance</b>
Above Ground Storage Tanks	Chapter 173-303-640 WAC
Animal Feedlots	Chapter 173-216 WAC, Chapter 173-220 WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (Washington Department of Ecology WQ-R-95-56)
Below Ground Storage Tanks	Chapter 173-360 WAC
Chemical Treatment Storage and Disposal Facilities	Chapter 173-303-182 WAC
Hazardous Waste Generator <i>(Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)</i>	Chapter 173-303 WAC
Injection Wells	Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (Washington Department of Ecology 94-146)
Oil and Gas Drilling	Chapter 332-12-450 WAC, Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC

Activity	Statute – Regulation – Guidance
On-Site Sewage Systems (< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapter 15.54 RCW, Chapter 17.21 RCW
Sawmills	Chapter 173-303 WAC, Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (Washington Department of Ecology, 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	Chapter 332-18-015 WAC
Waste Water Application to Land Surface	Chapter 173-216 WAC, Chapter 173-200 WAC, Washington Department of Ecology Land Application Guidelines, Best Management Practices for Irrigated Agriculture

(Ord. 1380 §2(part), 2004).

**16.16.530 Uses prohibited from critical aquifer recharge areas.** The following activities and uses are prohibited in critical aquifer recharge areas:

- (A) **Landfills.** Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste landfills;
- (B) **Underground injection wells.** Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;
- (C) **Mining**
  - (1) Metals and hard rock mining.
  - (2) Sand and gravel mining, prohibited from critical aquifer recharge areas determined to be highly susceptible or vulnerable.
- (D) **Wood Treatment Facilities.** Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);
- (E) **Storage, processing, or disposal of radioactive substances.** Facilities that store, process, or dispose of radioactive substances; and
- (F) **Other prohibited uses or activities.**
  - (1) Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source;
  - (2) Activities that would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream; and
  - (3) Activities that are not connected to an available sanitary sewer system, prohibited from critical aquifer recharge areas associated with sole source aquifers. (Ord. 1380 §2(part), 2004).

- 16.16.540 [Reserved]**
- 16.16.550 [Reserved]**
- 16.16.560 [Reserved]**
- 16.16.570 [Reserved]**
- 16.16.580 [Reserved]**
- 16.16.590 [Reserved]**

**Article IV Frequently Flooded Areas – as amended by Ordinance 1562**

**Sections:**

- 16.16.600 Designation of frequently flooded areas.**
- 16.16.610 Critical area reports – Additional requirements.**
- 16.16.620 Warning and disclaimer of liability.**
- 16.16.630 Performance standards – Basic requirements.**
- 16.16.640 Performance standards – Specific uses.**
- 16.16.650 Performance standards – Areas of shallow flooding.**
- 16.16.660 Performance standards – Coast high hazard areas.**
- 16.16.670 Uses prohibited from frequently flooded areas.**
- 16.16.680 Variances – Additional considerations for frequently flooded areas.**
- 16.16.690 [Reserved]**

**16.16.600 Designation of frequently flooded areas.**

(A) **Frequently flooded areas.** Frequently flooded areas include:

(1) **Areas identified on the flood insurance map.** ~~These~~ The areas of special flood hazard identified by the ~~Federal Emergency Management Agency's Flood Insurance Study for Town of Steilacoom, dated January 19, 1982, Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Pierce County and Incorporated Areas" dated March 7, 2017, and any revisions thereto,~~ with an accompanying Flood Insurance Rate Map (FIRM) and any revisions thereto ~~The Flood Insurance Study and FIRM~~ are hereby adopted by reference, and declared part of this Chapter. The Flood Insurance Study and the FIRM are on file at and are available for public review at the Town Public Works Building, 1030 Roe Street, Steilacoom. The best available information for flood hazard areas identification as outlined in subsection C shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under subsection C. The areas identified as special flood hazard on the flood insurance map are also designated on the Town critical areas map.

(2) **Areas identified by the Administrator.** Those areas of special flood hazard identified by the Town Administrator based on review of base flood elevation and floodway data available from federal, state, county, or other valid sources when base flood elevation data has not been provided from the Federal Insurance Administration.

(B) **Use of additional information.** The Town Administrator may use additional flood information that is more restrictive or detailed than that provided in the Flood Insurance Study to designate frequently flooded areas, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show riparian habitat areas, or similar information.

(C) **Flood elevation data.** When base flood elevation data is has ~~not available through the Federal Emergency Management Agency~~ been provided in A or V zones in accordance with Section A(1), the Town Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a reliable Federal, State or other source, in order to administer this Chapter.

(D) **Use of flood insurance map.** The flood insurance map is to be used as the regulatory map for the Town of Steilacoom, project applicants, property owners and the public. The map is a minimum designation of frequently flooded areas. The Town shall utilize the most recent flood insurance map available as the basis for regulation.

(E) **Maintenance of records.** In all designated frequently flooded areas, the Town Administrator shall obtain and record the as-built elevation (in relation to mean sea level) of the

lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. The Town Administrator shall also maintain for public inspection all records of floodplain hazards, certificates of flood proofing, and flood elevation data. (Ord. 1450 §2, 2009; Ord. 1380 §2(part), 2004).

**16.16.610 Critical area report – Additional requirements.** In addition to the general critical area report requirements of SMC 16.16.200, critical area reports for frequently flooded areas must meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

(A) **Preparation by a qualified professional.** A frequently flooded areas report shall be prepared by a qualified professional who is a hydrologist or engineer, licensed in the state of Washington with experience in preparing flood hazard assessments.

(B) **Areas to be addressed.** The following areas shall be addressed in a critical area report for frequently flooded areas:

- (1) The site area of the proposed activity;
- (2) All areas of a special flood hazard area, as indicated on the flood insurance map(s) within two hundred (200) feet of the project area; and
- (3) All other flood areas indicated on the flood insurance map(s) within two hundred (200) feet of the project area.

(C) **Flood hazard assessment.** A critical area report for a proposed activity within a frequently flooded area shall contain a flood hazard assessment including the following site- and proposal-related information at a minimum:

(1) **Site and construction plans.** A copy of the site and construction plans for the development proposal showing:

(a) Floodplain (100-year flood elevation), 10- and 50-year flood elevations, floodway, other critical areas, buffers, and shoreline areas;

(b) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;

(c) Clearing limits; and

(d) Elevation of the lowest floor (including basement) of all structures, and the level to which any non-residential structure has been floodproofed.

(2) **Watercourse alteration.** Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, a critical area report shall include:

(a) **Extent of watercourse alteration.** A description of and plan showing the extent to which a watercourse will be altered or relocated as a result of proposal;

(b) **Maintenance program required for watercourse alterations.** A maintenance program that provides maintenance practices for the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished; and

(c) **Compliance documentation.** Information describing and documenting how the proposed watercourse alteration complies with the requirements of Article VI of this Chapter, the Town Shoreline Management Program, and other applicable state or federal permit requirements.

(D) **Information regarding other critical areas.** Potential impacts to wetlands, fish and wildlife habitat, and other critical areas shall be addressed in accordance with the applicable sections of this Chapter. (Ord. 1380 §2(part), 2004).

**16.16.620 Warning and disclaimer of liability.** The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land



outside frequently flooded areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Town of Steilacoom, any officer or employee thereof, or the Federal Insurance Administration for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder. (Ord. 1380 §2(part), 2004).

**16.16.630 Performance standards – General requirements.** The following standards shall be adhered to in all frequently flooded areas, except as otherwise provide for in this Chapter.

(A) **Development permit.** A development permit shall be obtained before land is altered or a new use is commenced within a frequently flooded area. For application of this Article, development shall include any man-made alteration to land, including but not limited to buildings, structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials within the area of special flood hazard.

(B) **All other necessary permits.** The Town Administrator shall verify that all necessary permits have been obtained from those governmental agencies from which prior approval is required by federal, state, or local law including Section 404 of the Federal Water Pollution Control Act Amendment of 1972 and the Endangered Species Act of 1973.

(C) **Before regulatory floodway.** In areas where the base flood elevation is provided, but where a regulatory floodway has not been designated, new construction, substantial improvements, or other development, including fill, shall not be permitted within zones A1-30 and AE, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

~~(D) **Areas without base flood elevation data.** Where base flood elevation data is not available (A and V zones) and there is insufficient data available from federal, state, or other sources, the Town Administrator shall determine the base flood elevation using approved engineering methods and historical data, such as high water marks, photographs of past flooding, and other available information. If there is insufficient data available for the Town Administrator to make a determination of the base flood elevation and standards requiring a base flood elevation cannot be implemented, the Town Administrator shall require measures that ensure the proposed structures will be reasonably safe from flooding. At a minimum, the base flood elevation should be set at least two (2) feet above the highest adjacent grade to avoid higher flood insurance rates.~~

**Review of building permits.** Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source as provided in SMC 16.16.600 (C), applications for building permits shall be reviewed to assure that proposed construction will be *reasonably safe from flooding*. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

(E) **Construction materials and methods**

(1) **Structures shall be located outside the floodplain.** All structures, utilities, and other improvements shall be located on the buildable portion of the site out of the floodplain unless there is no buildable site area out of the floodplain. For sites with no buildable area out of the floodplain, structures, utilities, and other improvements shall be placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If the Town Administrator detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

(2) **Methods that minimize flood damage.** All new construction and substantial improvements shall be constructed using flood resistant materials using methods and practices that minimize flood damage.

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

(F) **Elevation certificate following construction.** Where the base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in SMC 16.16.600, the applicant shall obtain and record the actual (as-built) elevation (in relation to mean sea level), of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. The elevation certificate shall be completed by a surveyor licensed in the state of Washington and shall be submitted to the Town of Steilacoom for recording.

(G) **Anchoring**

(1) **Anchoring requirement.** All new construction and substantial improvements within the floodplain shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

(2) **Manufactured homes.** All manufactured homes placed within the floodplain must be anchored to prevent flotation, collapse, or lateral movement and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(H) **Fill and grading.** Fill and grading within the floodplain shall only occur upon a determination from a qualified professional that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a channel migration zone, whether or not the Town has delineated such zones as of the time of the application. (Ord. 1450 §3, 2009; Ord. 1380 §2(part), 2004).

**16.16.640 Performance standards – Specific uses.** Specific uses shall adhere to the following relevant standards, in addition to the general standards of SMC 16.16.630. Subsections (A) through (D) apply where base flood elevation data is provided through the Flood Insurance Study or required through SMC 16.16.600; Subsections (E) through (G) apply to all frequently flooded areas.

(A) **Residential construction**

(1) **Must be above base flood elevation.** New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot or more above the base flood elevation.

(2) **Areas below the lowest floor.** Fully enclosed areas below the lowest floor that are subject to flooding shall only be allowed when designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

- (a) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
- (b) The bottom of all openings shall be no higher than one (1) foot above grade; and
- (c) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(B) **Manufactured homes must be elevated.** All manufactured homes to be placed or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one (1) foot or more above the base flood elevation and be

securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(C) **Recreational vehicles.** Recreational vehicles are required to either:

- (1) Be on the site for fewer than one hundred eighty (180) consecutive days; or
- (2) Be fully licensed and ready for highway use on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
- (3) Obtain a development permit and meet the requirements, including elevation and anchoring, for manufactured homes.

(D) **Nonresidential construction**

(1) **Above base flood elevation.** New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot (1) or more above the base flood elevation, or, together with attendant utility and sanitary facilities, shall:

(a) Be floodproofed so that below one (1) foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

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

(c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this Subsection based on their development and/or review of the structural design, specifications, and plans. Such certification shall be provided to the Town Administrator in accordance with SMC 16.16.600(E). Following construction of the structure, certifications shall be submitted to the Town that record the actual (as-built) elevation to which the structure was floodproofed.

(d) Non-residential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in SMC 16.16.640(A)(2).

(e) Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level.

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

(a) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;

(b) The bottom of all openings shall be no higher than one (1) foot above grade; and

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

(E) **Utilities**

(1) **Infiltration of flood waters.** All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

(2) **Sanitary sewage systems.** New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

(3) **On-site waste disposal systems.** On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New on-site sewage disposal systems are prohibited pursuant to SMC 16.16.670 (C).

(F) **Subdivision proposals**

(1) All subdivisions and short subdivisions shall:

(a) **Minimize flood damage.** Subdivisions and short subdivisions shall be designed to minimize or eliminate flood damage and impacts to floodplain functions and values. Public utilities and facilities that are installed as part of such subdivisions, such as sewer, gas, electrical, and water systems, shall be located and constructed to also minimize flood damage and impacts to floodplain functions and values. Subdivisions should be designed using natural features of the landscape and should not incorporate flood protection changes.

(b) **Have adequate drainage.** Subdivisions and short subdivisions shall have adequate natural surface water drainage in accordance with SMC 13.50 to reduce exposure to flood hazards; and

(c) **Show flood areas on plat maps.** Subdivisions and short subdivisions shall show the 100-year floodplain, floodway, and channel migration zone on the preliminary and final plat and short plat maps and designate such areas as “no build,” when applicable.

(d) **Detailed base flood elevation data.** Where detailed base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for all subdivision proposals regardless of size, and other proposed developments which contain at least 50 lots or five (5) acres, whichever is less.

(G) **Alteration of watercourses.** Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:

(1) **Habitat regulations.** Watercourse alterations shall only be allowed in accordance with the provisions of Article VI of this Chapter.

(2) **Blockage.** Watercourse alteration projects shall not result in blockage of side channels.

(3) **Notification.** The Town of Steilacoom shall notify adjacent communities, the state departments of Ecology and Fish and Wildlife, and the Federal Insurance Administration about the proposed watercourse alteration at least thirty (30) days prior to permit issuance, and submit evidence of such notification to the Federal Insurance Administration.

(4) **Maintenance of alterations.** The applicant shall maintain the altered or relocated portion of the watercourse to ensure that the flood carrying capacity is not diminished. Maintenance shall be bonded for a period of five years, and be in accordance with an approved maintenance program. (Ord. 1450 §4, 2009; Ord. 1380 §2(part), 2004).

**16.16.650 Performance standards – Areas of shallow flooding.** Uses in areas of shallow flooding shall adhere to the following standards, in addition to the general standards of SMC 16.16.630 and relevant specific standards of SMC 16.16.640.

(A) **Residential structures.** New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one (1) foot or more above the depth number specified in feet on the flood insurance map or at least two (2) feet if no depth number is specified.

(B) **Nonresidential structures.** New construction and substantial improvements of nonresidential structures within AO zones shall either:

(1) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site one (1) foot or more above the depth number specified on the flood insurance map or at least two (2) feet if no depth number is specified; or

(2) Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially

impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this Subsection based on their development and/or review of the structural design, specifications, and plans. Following construction of the structure, certifications shall be submitted to the Town that record the actual (as-built) elevation to which the structure was floodproofed.

(C) **Drainage paths.** All development shall include adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

(D) **Recreational vehicles.** Recreational vehicles placed on sites within AO Zones on the flood insurance map(s) shall meet the requirements of this Article, as well as all other Town regulations. (Ord. 1380 §2(part), 2004).

**16.16.660 Performance standards – Coastal high hazard areas.** Uses in all coastal high hazard areas, Zones V1-30, V and VE on the Town FIRM map, shall adhere to the following standards, in addition to the general standards of SMC 16.16.630 and relevant specific standards of SMC 16.16.640.

(A) All new construction shall be located landward of the reach of mean high tide.

(B) All new construction and substantial improvements shall be elevated on pilings and columns so that:

(1) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one (1) foot or more above the base flood level; and

(2) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent (1%) chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(C) **Design certification.** The structural design, specifications, and plans for a proposed activity within a coastal high hazard area shall be developed or reviewed, and certified by a registered professional engineer or architect that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the standards of this Section.

(D) **Elevation certification.** The applicant shall provide the Town Administrator with the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30 and VE, and whether or not such structures contain a basement. The Town Administrator shall maintain a record of all such flood elevation information.

(E) **Space below lowest floor and obstruction.** The space below the lowest floor of all new construction and substantial improvements shall be either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this Section, a breakaway wall shall have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of twenty (20) pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(1) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and

(2) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Maximum wind and water loading values to be used in this determination shall each have a one percent (1%) chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(F) **Use of breakaway walls.** If breakaway walls are utilized, such enclosed space shall be used solely for parking of vehicles, building access, or storage, and shall not be used for human habitation.

(G) **Manufactured homes**

(1) All manufactured homes to be placed or substantially improved within Zones V1-30, V or VE on the Town's FIRM map on sites:

- (a) Outside of a manufactured home park or subdivision;
- (b) In a new manufactured home park or subdivision;
- (c) In an expansion to an existing manufactured home park or subdivision; or
- (d) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

shall meet the standards of SMC 16.16.660 A through F and SMC 16.16.670 E.

(2) All manufactured homes to be placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V or VE on the Town's FIRM map shall meet the requirements of SMC 16.16.640.

(H) **Recreational Vehicles.**

All recreational vehicles placed on sites within Zones V1-30, V or VE on the Town's FIRM map must either:

- (1) Be on the site for fewer than one hundred eighty (180) consecutive days; or
- (2) Be fully licensed and ready for highway use on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
- (3) Meet the requirements of SMC 16.16.630 (A) and SMC 16.16.660 A through F and SMC 16.16.670 E. (Ord 1450 §5, 2009: Ord. 1380 §2(part), 2004).

**16.16.670 Uses and activities prohibited from frequently flooded areas**

(A) **Critical facilities.** Critical facilities are prohibited from frequently flooded areas to prevent damage to such facilities, to avoid costs that will be incurred by the public, and to maintain functionality of such facilities during flood events. If such a prohibition is unreasonable, an allowance for critical facilities in frequently flooded areas with the following specific conditions:

- (1) Construction of new critical facilities shall be permissible within frequently flooded areas if no feasible alternative site is available.
- (2) Critical facilities constructed within frequently flooded areas shall have the lowest floor elevated three (3) feet or more above the level of the base flood elevation (100-year flood).
- (3) Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters.
- (4) Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

(B) **Wells used for potable water.** Water wells shall be located on high ground and are prohibited from the floodway.

(C) **On-site sewage disposal systems.** On-site sewage disposal systems are prohibited from the floodway, the channel migration zone, and the ten-year floodplain elevation.

(D) **Construction in floodways**

Located within areas of special flood hazard established in SMC 16.16.600 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provisions apply:

(1) **New construction certification.** Encroachments, including new construction, substantial improvements, fill, and other development are prohibited within designated floodways unless certified by a registered professional engineer. Such certification shall demonstrate through hydrologic and hydraulic analyses, performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge.

Small projects that are solely to protect or create fish habitat and designed by a qualified professional may be allowed without certification, if the Town Administrator determines that the project will not obstruct flood flows. Fish protection projects shall be reviewed on behalf of the Town of Steilacoom by a qualified professional in the field of hydraulics. Fish enhancement projects shall be required to meet the FEMA Policy on Fish Enhancement Structures in the Floodway.

(2) **Residential construction and reconstruction.** Construction and reconstruction of residential structures is prohibited within designated floodways, except for:

(a) Repairs, reconstruction, or improvements to a structure that do not increase the ground floor area; and

(b) Repairs, reconstruction, or improvements to a structure, for which the cost does not exceed fifty percent (50%) of the market value of the structure either:

(i) Before the repair or reconstruction is started, or

(ii) If the structure has been damaged and is being restored, before the damage occurred. Improvement to a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to ensure safe living conditions or to structures identified as historic places may be excluded from the fifty percent (50%).

(3) If Subsections (1) and (2) above are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions.

**(E) Construction in coastal high hazard areas**

(1) Fill for structural support of buildings shall be prohibited in coastal high hazard areas.

(2) Man-made alteration of sand dunes that would result in increasing the potential flood damage shall be prohibited in coastal high hazard areas. (Ord. 1450 §6, 2009; Ord. 1380 §2(part), 2004).

**16.16.680 Variances – Additional considerations for frequently flooded areas.**

(A) **Additional variance considerations.** In review of variance requests for activities within frequently flooded areas, the Hearing Examiner shall consider all technical evaluations, relevant factors, standards specified in this Chapter, and:

(1) The danger to life and property due to flooding, erosion damage, or materials swept onto other lands during flood events;

(2) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the proposed use;

(3) The importance of the services provided by the proposed use to the community;

(4) The necessity to the proposed use of a waterfront location, where applicable, and the availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;

(5) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(6) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

(7) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems and streets and bridges.

(B) Variances shall only be issued upon a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing laws or ordinances. Unavoidable impacts to floodplain functions and values shall be mitigated in accordance with SMC 16.16. 230.

(C) Variances shall not be issued within a designated floodway, if any increase in flood levels during the base flood discharge would result. (Ord. 1380 §2(part), 2004).

#### **16.16.690 [Reserved]**

### **Article V Geologically Hazardous Areas**

#### **Sections:**

**16.16.700 Designation of geologically hazardous areas.**

**16.16.710 Designation of specific hazard areas.**

**16.16.720 Classification of geologically hazardous areas.**

**16.16.730 Activities allowed in geologically hazardous areas.**

**16.16.740 Critical area report – Additional requirements for geologically hazardous Areas.**

**16.16.750 Critical area report – Additional requirements for specific hazards.**

**16.16.760 Performance standards – General requirements.**

**16.16.770 Performance standards – Erosion and Landslide hazards.**

**16.16.780 [Reserved]**

**16.16.790 [Reserved]**

**16.16.700 Designation of geologically hazardous areas.**

Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. The following types of geologically hazardous are:

(A) Erosion hazard

(B) Landslide hazard

(C) Seismic hazard

(D) Other geological hazards, including mines, volcanoes, and tsunamis

(E) Other geological events, including mass wasting, debris flows, rock falls, and differential settlement. (Ord. 1380 §2(part), 2004).

**16.16.710 Designation of specific hazard areas.**

(A) **Erosion hazard areas.** Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard.

(B) **Landslide hazard areas.** Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope



aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to the following:

- (1) Areas of historic failures, such as:
  - (a) Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development;
  - (b) Those areas mapped by the Washington Department of Ecology (*Coastal Zone Atlas*) or the Washington State Department of Natural Resources (slope stability mapping) as unstable (U or class 3), unstable old slides (UOS or class 4), or unstable recent slides (URS or class 5); or
  - (c) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Washington State Department of Natural Resources;
- (2) Areas with all three of the following characteristics:
  - (a) Slopes steeper than fifteen percent (15%);
  - (b) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
  - (c) Springs or ground water seepage.
- (3) Areas that have shown movement during the Holocene epoch (from ten thousand years ago to the present) or that are underlain or covered by mass wastage debris of that epoch;
- (4) Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
- (5) Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;
- (6) Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;
- (7) Areas that show evidence of, or are at risk from snow avalanches;
- (8) Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and
- (9) Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief.

(C) **Seismic hazard areas.** Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by:

- (1) The magnitude of an earthquake;
- (2) The distance from the source of an earthquake;
- (3) The type of thickness of geologic materials at the surface; and
- (4) The type of subsurface geologic structure.

Settlement and soil liquefaction conditions occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with a shallow ground water table.

(D) **Other hazard areas.** Geologically hazardous areas shall also include areas determined by the Town Administrator to be susceptible to other geological hazards, including mines, volcanoes, and tsunamis, or geological events including mass wasting, debris flows, rock falls, and differential settlement. (Ord. 1380 §2(part), 2004).

#### **16.16.720 Classification of geologically hazardous areas**

All geologic hazard areas should be classified according to the following categories for each geologic hazard type.

(A) **Known or Suspected Risk.** Documentation or projection of the hazard by a qualified professional exists.

(B) **Unknown Risk.** Documentation or projection of the lack of hazard by a qualified professional exists, or data are not available to determine the presence or absence of a geologic hazard. (Ord. 1380 §2(part), 2004).

#### **16.16.730 Activities allowed in geologically hazardous areas.**

The following activities are allowed in geologically hazardous areas pursuant to SMC 16.16.150 and do not require submission of a critical area report:

(A) **Erosion and landslide hazard areas.** Except as otherwise provided for in this Article, only those activities approved and permitted consistent with an approved critical area report in accordance with this Chapter shall be allowed in erosion or landslide hazard areas.

(B) **Seismic hazard areas.** The following activities are allowed within seismic hazard areas:

(1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;

(2) Additions to existing single-story residences that are 250 square feet or less; and

(3) Installation of fences.

(C) **Other hazard areas.** The Town Administrator may allow the following activities within other geologically hazardous areas, if the activity will not increase the risk of the hazard:

(1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;

(2) Additions to existing residences that are 250 square feet or less; and

(3) Installation of fences. (Ord. 1380 §2(part), 2004).

#### **16.16.740 Critical area report – Additional requirements for geologically hazardous areas.**

(A) **Preparation by a qualified professional.** A critical areas report for a geologically hazardous area shall be prepared by an engineer or geologist, licensed in the state of Washington, with experience analyzing geologic, hydrologic, and ground water flow systems, and who has experience preparing reports for the relevant type of hazard.

(B) **Area addressed in critical area report.** The following areas shall be addressed in a critical area report for geologically hazardous areas:

(1) The project area of the proposed activity; and

(2) All geologically hazardous areas within two hundred (200) feet of the project area or that have potential to be affected by the proposal.

(C) **Geological hazards assessment.** A critical area report for a geologically hazardous area shall contain an assessment of geological hazards including the following site- and proposal-related information at a minimum:

(1) **Site and construction plans.** The report shall include a copy of the site plans for the proposal showing:

(a) The type and extent of geologic hazard areas, and any other critical areas, and buffers on, adjacent to, within two hundred (200) feet of, or that are likely to impact the proposal;

(b) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain, if available;

(c) The topography, in two-foot contours, of the project area and all hazard areas addressed in the report; and

(d) Clearing limits.

(2) **Assessment of geological characteristics.** The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region. The assessment shall include, but not be limited to:

(a) A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;

(b) A detailed overview of the field investigations, published data and references; data and conclusions from past assessments of the site; and site specific measurements, test, investigations, or studies that support the identification of geologically hazardous areas; and

(c) A description of the vulnerability of the site to seismic and other geologic events.

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

(4) **Minimum buffer and building setback.** The report shall make a recommendation for the minimum no-disturbance buffer and minimum building setback from any geologic hazard based upon the geotechnical analysis.

(D) **Incorporation of previous study.** Where a valid critical areas report has been prepared within the last five (5) years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be incorporated into the required critical area report. The applicant shall submit a hazards assessment detailing any changed environmental conditions associated with the site.

(E) **Mitigation of long-term impacts.** When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity. (Ord. 1380 §2(part), 2004).

**16.16.750 Critical area report – Additional technical information requirements for specific hazard.** In addition to the general critical area report requirements of SMC 16.16.200 and SMC 16.16.740, critical area reports for geologically hazardous areas must meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

(A) **Erosion and landslide hazard areas.** In addition to the basic critical area report requirements, the technical information for an erosion hazard or landslide hazard area shall include the following information at a minimum:

(1) **Site plan.** The critical area report shall include a copy of the site plan for the proposal showing:

(a) The height of slope, slope gradient, and cross-section of the project area;

(b) The location of springs, seeps, or other surface expressions of ground water on or within two hundred (200) feet of the project area or that have potential to be affected by the proposal; and

(c) The location and description of surface water runoff features.

(2) **Hazards analysis.** The hazards analysis component of the critical areas report shall specifically include:

(a) A description of the extent and type of vegetative cover;

- (b) A description of subsurface conditions based on data from site-specific explorations;
- (c) Descriptions of surface and ground water conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements;
- (d) An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;
- (e) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one hundred-year storm event;
- (f) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties.
- (g) A study of slope stability including an analysis of proposed cuts, fills, and other site grading;
- (h) Recommendations for building siting limitations; and
- (i) An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion.

(3) **Geotechnical engineering report.** The technical information for a project within a landslide hazard area shall include a geotechnical engineering report prepared by a licensed engineer that presents engineering recommendations for the following:

- (a) Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations and estimates of settlement performance;
- (b) Recommendations for drainage and subdrainage improvements;
- (c) Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary; and
- (d) Mitigation of adverse site conditions including slope stabilization measures and seismically unstable soils, if appropriate.

(4) **Erosion and sediment control plan.** For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in Chapter 13.50 SMC.

(5) **Drainage plan.** The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with Chapter 13.50 SMC. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area.

(6) **Mitigation plans.** Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability.

(7) **Monitoring surface waters.** If the Town Administrator determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the Town of Steilacoom.

(B) **Seismic hazard areas.** In addition to the basic report requirements, a critical area report for a seismic hazard area shall also meet the following requirements:

- (1) The site map shall show all known and mapped faults within two hundred (200) feet of the project area or that have potential to be affected by the proposal.
- (2) The hazards analysis shall include a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement).

(3) A geotechnical engineering report shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented.

(C) **Other geologically hazardous areas.** In addition to the basic requirements, the Town Administrator may require additional technical information to be submitted when determined to be necessary to review the proposed activity and the subject hazard. Additional technical information that may be required, includes, but is not limited to:

(1) **Site plan.** The site plan shall show all hazard areas located within two hundred (200) feet of the project area or that have potential to be affected by the proposal; and

(2) **Hazards analysis.** The hazards analysis shall include a complete discussion of the potential impacts of the hazard on the project area and of the proposal on the hazard. (Ord. 1380 §2(part), 2004).

#### **16.16.760 Performance standards – General requirements.**

(A) Alterations of geologically hazardous areas or associated buffers may only occur for activities that:

(1) Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;

(2) Will not adversely impact other critical areas;

(3) Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and

(4) Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.

(B) **Critical facilities prohibited.** Critical facilities shall not be sited within geologically hazardous areas unless there is no other practical alternative. (Ord. 1380 §2(part), 2004).

#### **16.16.770 Performance standards – Erosion and Landslide hazard areas.**

Activities on sites containing erosion or landslide hazards shall meet the standards of SMC 16.16.760 and the specific following requirements:

(A) **Buffer requirement.** A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the Town Administrator to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.

(1) **Minimum buffer.** The minimum buffer shall be equal to the height of the slope or fifty (50) feet, whichever is greater.

(2) **Buffer reduction.** The buffer may be reduced to a minimum of ten (10) feet when a qualified professional demonstrates to the Town Administrator's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area.

(3) **Increased buffer.** The buffer may be increased where the Town Administrator determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.

(B) **Alterations.** Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:

(1) The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;

(2) The development will not decrease slope stability on adjacent properties; and

(3) Such alterations will not adversely impact other critical areas.

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

(1) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the Town Building Code.

(2) Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

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

(4) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

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

(6) The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and

(7) Development shall be designed to minimize impervious lot coverage.

(D) **Vegetation retention.** Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited.

(E) **Seasonal restriction.** Clearing shall be allowed only from May 1 to October 1 of each year. The Town may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions. Timber harvest, not including brush clearing or stump removal, shall be allowed pursuant to an approved forest practice permit issued by the Washington State Department of Natural Resources.

(F) **Utility lines and pipes.** Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.

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

(1) Conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge;

(2) Discharged at flow durations matching predeveloped conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the predeveloped state; or

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

(H) **Subdivisions.** The division of land in landslide hazard areas and associated buffers is subject to the following:

(1) Lots may be created that are designed so that future development of the lot will not impact the active landslide hazard area or its associated buffer. Each created lot shall contain a

sufficient buildable area after all setbacks, buffers, other critical area restrictions, and other Town regulations are applied.

(2) Access roads and utilities may be permitted within the landslide hazard area and associated buffers only if the Town determines that no other feasible alternative exists.

(l) **Prohibited development.** On-site sewage disposal systems, including drain fields, are prohibited within erosion and landslide hazard areas and related buffers. (Ord. 1380 §2(part), 2004).

**16.16.780 [Reserved]**

**16.16.790 [Reserved]**

## **Article VI Fish and Wildlife Habitat Conservation Areas – as amended by Ordinance 1541**

### **Sections:**

**16.16.800 Designation of fish and wildlife habitat conservation areas.**

**16.16.810 Local designation process.**

**16.16.820 Critical area report – Additional requirements for habitat conservation Areas.**

**16.16.830 Performance standards – General requirements.**

**16.16.840 Performance standards – Specific habitats.**

**16.16.850 [Reserved]**

**16.16.860 [Reserved]**

**16.16.870 [Reserved]**

**16.16.880 [Reserved]**

**16.16.890 [Reserved]**

### **16.16.800 Designation of fish and wildlife habitat conservation areas**

A. Fish and wildlife habitat conservation areas include:

- 1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association.**
- 2. State priority habitats and areas associated with state priority species.**
- 3. Habitats and species of local importance.**
- 4. Commercial and recreational shellfish areas.** These areas include all public and private tidelands or bedlands suitable for shellfish harvest, including shellfish protection districts established pursuant to Chapter 90.72 RCW.
- 5. Kelp and eelgrass beds and herring and smelt spawning areas.**
- 6. Naturally occurring ponds under twenty acres.** Naturally occurring ponds are those ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.
- 7. Waters of the state.** Waters of the state include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses

within the jurisdiction of the state of Washington, as classified in WAC 222-16-031 or WAC 222-16-030.

**8. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity.**

**9. State natural area preserves and natural resource conservation areas.** Natural area preserves and natural resource conservation areas are defined, established, and managed by the Washington State Department of Natural Resources.

**10. Areas of rare plant species and high quality ecosystems.** Areas of rare plant species and high quality ecosystems are identified by the Washington State Department of Natural Resources through the Natural Heritage Program.

**11. Land useful or essential for preserving connections between habitat blocks and open spaces.**

B. "Fish and wildlife habitat conservation areas" does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company.

B-C. All areas within the Town of Steilacoom meeting one or more of the criteria in subsection A, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter and shall be managed consistent with the best available science, such as the Washington Department of Fish and Wildlife's Management Recommendations for Priority Habitat and Species.

**16.16.810 Local designation process.** Habitats and species may be nominated for local designation by any person. The nominator shall provide the Town Administrator with a complete application consisting of the following:

(A) A report prepared by a qualified professional (biologist, botanist, or similar professions) with demonstrated expertise concerning the nominated species or habitat detailing all the following:

(1) The danger of extirpation of the local population of the nominated species based on existing trends.

(2) The recreation, commercial, game, tribal, or other special value of the nominated species or habitat.

(3) Evidence that the long-term persistence of the species is dependent on the protection, maintenance, and/or restoration of the nominated habitat.

(4) Evidence that protection by other county, state, or federal policies, laws, regulations, or non-regulatory tools is not adequate to prevent degradation of the species or habitat within the Town.

(5) Evidence that, without protection, the species or habitat will likely be diminished over the long term.

(6) Evidence that the area nominated to protect a particular habitat or species represents either high-quality native habitat or habitat that has a high potential to recover to a suitable condition and which is of limited availability, highly vulnerable to alteration, or provides landscape connectivity which contributes to the integrity of the surrounding landscape.

(7) Specific habitat features sought to be protected (for example, nest sites, breeding areas, and nurseries), or whether the habitat or ecosystem is being nominated in its entirety.

(8) Management strategies for the nominated species or habitats supported by the best available science, and where restoration of habitat is proposed, a specific plan for restoration.



(B) The Town Administrator shall evaluate all complete applications for nomination according to the characteristics enumerated in subsection A and shall issue a staff report and recommendation to the Town Council based that evaluation. The Town Administrator may request independent review of the nomination from qualified professionals, including, but not limited to, the Washington State Departments of Ecology, Natural Resources and Fish and Wildlife during the evaluation.

(C) Upon receipt of a staff report from the Town Administrator, the Town Council shall hold a public hearing and determine whether or not to designate a Habitat or Species of Local Importance. Notice for such hearing shall be as required by SMC 14.16.030.

(D) Approved nominations will be subject to the provisions of this Chapter. (Ord. 1380 §2(part), 2004).

**16.16.820 Critical area report – Additional requirements for habitat conservation areas.** In addition to the general critical area report requirements of SMC 16.16.200, critical area reports for habitat conservation areas must meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

(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 with experience preparing reports for the relevant type of habitat.

(B) **Areas addressed in critical area report.** The following areas shall be addressed in a critical area report for habitat conservation areas:

- (1) The project area of the proposed activity;
- (2) All habitat conservation areas and recommended buffers within three hundred (300) feet of the project area; and
- (3) All shoreline areas, floodplains, other critical areas, and related buffers within three hundred (300) feet of the project area.

(C) **Habitat assessment.** A habitat assessment is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical area report for a habitat conservation area shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:

- (1) Detailed description of vegetation on and adjacent to the project area and its associated buffer;
- (2) Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
- (3) A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
- (4) A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;
- (5) A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with SMC 16.16.230; and
- (6) A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.

(D) **Additional information may be required.** When appropriate due to the type of habitat or species present or the project area conditions, the Town Administrator may also require the habitat management plan to include:

(1) An evaluation by an independent qualified professional regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate;

(2) A request for consultation with the Washington Department of Fish and Wildlife or the local Native American Indian Tribe or other appropriate agency; and

(3) Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 1380 §2(part), 2004).

**16.16.830 Performance standards – General requirements.**

(A) **Alterations.** A habitat conservation area may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat. All new structures and land alterations shall be prohibited from habitat conservation areas, except in accordance with this Chapter.

(B) **Non-indigenous species.** No plant, wildlife, or fish species not indigenous to the region shall be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.

(C) **Mitigation and contiguous corridors.** Mitigation sites shall be located to preserve or achieve contiguous wildlife habitat corridors in accordance with a mitigation plan that is part of an approved critical area report to minimize the isolating effects of development on habitat areas, so long as mitigation of aquatic habitat is located within the same aquatic ecosystem as the area disturbed.

(D) **Approvals of activities.** The Town Administrator 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:

(1) Establishment of buffer zones;

(2) Preservation of critically important vegetation and/or habitat features such as snags and downed wood;

(3) Limitation of access to the habitat area, including fencing to deter unauthorized access;

(4) Seasonal restriction of construction activities;

(5) Establishment of a duration and timetable for periodic review of mitigation activities;

and

(6) Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

(E) **Mitigation and equivalent or greater biological functions.** Mitigation of alterations to habitat conservation areas shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse impacts upstream or downstream of the development proposal site. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.

(F) **Approvals and the best available science.** Any approval of alterations or impacts to a habitat conservation area shall be supported by the best available science.

**(G) Buffers**

(1) **Establishment of buffers.** The Town Administrator shall require the establishment of buffer areas for activities adjacent to habitat conservation areas when needed to protect habitat conservation areas. Buffers shall consist of an undisturbed area of native vegetation or areas identified for restoration established to protect the integrity, functions, and values of the affected habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby and shall be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife.

Habitat conservation areas and their buffers shall be preserved in perpetuity through the use of native growth protection areas and critical area tracts in accordance with SMC 16.16.340.

(2) **Seasonal restrictions.** When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers may be required and activities may be further restricted during the specified season.

(3) **Habitat buffer averaging.** The Town Administrator may allow the recommended habitat area buffer width to be reduced in accordance with a critical area report, the best available science, and the management recommendations issued by the Washington Department of Fish and Wildlife, only if:

- (a) It will not reduce stream or habitat functions;
- (b) It will not adversely affect salmonid habitat;
- (c) It will provide additional natural resource protection, such as buffer enhancement;
- (d) The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer; and
- (e) The buffer area width is not reduced by more than twenty-five percent (25%) in any location.

(H) **Signs and fencing of habitat conservation areas.**

(1) **Temporary markers.** The outer perimeter of the habitat conservation area or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in such a way as to ensure that no unauthorized intrusion will occur and verified by the Town Administrator prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

(2) **Permanent signs.** As a condition of any permit or authorization issued pursuant to this Chapter, the Town Administrator may require that applicant to install permanent signs along the boundary of a habitat conservation area or buffer.

(a) Permanent signs shall be made of a metal face and attached to a metal post or another material of equal durability. Signs must be posted at an interval of one per lot or every fifty (50) feet, whichever is less and must be maintained by the property owner in perpetuity. The sign shall be worded as follows or with alternative language approved by the Town Administrator:

Habitat Conservation Area  
Do Not Disturb  
Contact Town of Steilacoom  
Regarding Uses and Restriction

(b) The provisions of subsection (a) may be modified by the Town Administrator as necessary to assure protection of sensitive features or wildlife.

(3) **Fencing**

(a) The Town Administrator shall determine if fencing is necessary to protect the functions and values of the critical area. If found to be necessary, the Town Administrator shall condition any permit or authorization issued pursuant to this Chapter to require the applicant to install a permanent fence at the edge of the habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area.

(b) The applicant shall be required to install a permanent fence around the habitat conservation area or buffer when domestic grazing animals are present or may be introduced on site.

(c) Fencing installed as part of a proposed activity or as required in this Subsection shall be design so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts.

(l) **Subdivisions.** The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:

(1) Land that is located wholly within a habitat conservation area or its buffer may not be subdivided.

(2) Land that is located partially within a habitat conservation area or its buffer may be divided provided that the developable portion of each new lot and its access is located outside of the habitat conservation area or its buffer and meets the minimum lot size requirements of Title 18 SMC.

(3) Access roads and utilities serving the proposed may be permitted within the habitat conservation area and associated buffers only if the Town of Steilacoom determines that no other feasible alternative exists and when consistent with this Chapter. (Ord. 1380 §2(part), 2004).

#### **16.16.840 Performance standards – Specific habitats.**

##### **(A) Endangered, threatened, and sensitive species**

(1) No development shall be allowed within a habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.

(2) Whenever activities are proposed adjacent to a habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the Town. Approval for alteration of land adjacent to the habitat conservation area or its buffer shall not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

(3) Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). Whenever activities are proposed adjacent to a verified nest territory or communal roost, a habitat management plan shall be developed by a qualified professional. Activities are adjacent to bald eagle sites when they are within eight hundred (800) feet or within one half mile (2,640 feet) and in a shoreline foraging area. The Town shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the Washington Department of Fish and Wildlife.

##### **(B) Anadromous fish**

(1) All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

(a) Activities shall be timed to occur only during the allowable work window as designated by the Washington State Department of Fish and Wildlife for the applicable species;

(b) An alternative alignment or location for the activity is not feasible;

(c) The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;

(d) Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques, according to an approved critical area report, and

(e) Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved critical area report.

(2) Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be

provided that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

(3) Fills, when authorized by the Town Shoreline Master Program, shall not adversely impact anadromous fish or their habitat or shall mitigate any unavoidable impacts and shall only be allowed for a water-dependent use.

(C) **Wetland habitats.** All proposed activities within or adjacent to habitat conservation areas containing wetlands shall conform to the wetland development performance standards set forth in Article II. If non-wetlands habitat and wetlands are present at the same location, the provisions of this Article or Article II, whichever provides greater protection to the habitat, apply.

(D) **Riparian habitat areas.** Unless otherwise allowed in this Chapter, all structures and activities shall be located outside of the riparian habitat area.

(1) **Establishment of riparian habitat areas.** Riparian habitat areas shall be established for habitats that include aquatic and terrestrial ecosystems that mutually benefit each other and that are located adjacent to rivers, perennial or intermittent streams, seeps, and springs.

(2) **Riparian habitat area widths.** Recommended riparian habitat area widths are detailed in Subsection 7. A riparian habitat area shall have the width recommended, unless a greater width is required pursuant to Subsection 3, or a lesser width is allowed pursuant to Subsection 4. Widths shall be measured outward in each direction, on the horizontal plane, from the ordinary high water mark or from the top of bank, if the ordinary high water mark cannot be identified. Riparian areas should be sufficiently wide to achieve the full range of riparian and aquatic ecosystem functions, which include but are not limited to protection of instream fish habitat through control of temperature and sedimentation in streams; preservation of fish and wildlife habitat; and connection of riparian wildlife habitat to other habitats.

(3) **Increased riparian habitat area widths.** The recommended riparian habitat area widths shall be increased, as follows:

(a) When the Town Administrator determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;

(b) When the frequently flooded area exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the frequently flooded area;

(c) When a channel migration zone is present, the riparian habitat area width shall be measured from the outer edge of the channel migration zone;

(d) When the habitat area is in an area of high blowdown potential, the riparian habitat area width shall be expanded an additional fifty (50) feet on the windward side; or

(e) When the habitat area is within an erosion or landslide hazard area, or buffer, the riparian habitat area width shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

(4) **Riparian habitat area width averaging.** The Town Administrator may allow the recommended riparian habitat area width to be reduced in accordance with a critical area report only if:

(a) The width reduction will not reduce stream or habitat functions, including those of nonfish habitat;

(b) The width reduction will not degrade the habitat, including habitat for anadromous fish;

(c) The proposal will provide additional habitat protection;

(d) The total area contained in the riparian habitat area of each stream on the development proposal site is not decreased;

(e) The recommended riparian habitat area width is not reduced by more than twenty-five percent (25%) in any one location;

(f) The width reduction will not be located within another critical area or associated buffer; and

(g) The reduced riparian habitat area width is supported by the best available science.

(5) **Riparian habitat mitigation.** Mitigation of adverse impacts to riparian habitat areas shall result in equivalent functions and values on a per function basis, be located as near the alteration as feasible, and be located in the same sub-drainage basin as the habitat impacted.

(6) **Alternative mitigation for riparian habitat areas.** The performance standards set forth in this Subsection may be modified at the Town of Steilacoom's discretion if the applicant demonstrates that greater habitat functions, on a per function basis, can be obtained in the affected sub-drainage basin as a result of alternative mitigation measures.

(7) **Description of Riparian Areas and Recommended Habitat Area Widths**

(a) **Puget Sound:** Puget Sound is a Type 1 fish-bearing water, and an important habitat for both fish and wildlife. The Washington State Department of Fish and Wildlife identifies the area as important for waterfowl and shorebirds, as well as Chinook, coho, chum, pink, and sockeye salmon, and steelhead trout. Puget Sound is also regulated under the Shoreline Management Act.

The riparian habitat has been compromised by the railroad tracks that parallel the shoreline. Except for Sunnyside Beach Park, the Town's approximately 3 miles of Puget Sound shoreline are taken up with the Burlington Northern Santa Fe mainline. Areas along the mainline are generally defined by narrow, steep, sand and gravelly beaches located at the base of the rip-rap armored railroad bed. The construction and armoring of the railroad has reduced the connectivity of near shore habitats with the upland, and has likely led to limitations on the near shore environment related to fish and wildlife habitat potential.

Along Sunnyside Beach Park, the railroad was built inland for approximately .25 miles. The beach at the park has also been armored, but has a gently sloping beach and appears to support a wider range of near shore habitat.

The riparian habitat area for Puget Sound is established from Mean Higher High Water to the edge of the railroad right of way.

(b) **Chambers Creek and Chambers Bay:** Chambers Creek is a Type 1 fish-bearing water. It enters Puget Sound through Chambers Bay, at the extreme northern boundary of the Town. The bay is entirely influenced by tides. A fish trap/diversion dam just north of the Town limits serves as the boundary between freshwater and estuarine habitats.

Chambers Bay is an important habitat for both fish and wildlife. The Washington State Department of Fish and Wildlife identifies the area as important for waterfowl and shorebirds, as well as Chinook, coho, chum, pink, and sockeye salmon, and steelhead trout. Chambers Bay is also regulated under the Shoreline Management Act.

The riparian habitat has been compromised by the railroad bridge at the mouth of the bay, commercialization of the shoreline, and the upstream fish trap/diversion dam.

The south shore of Chambers Bay is zoned for commercial and industrial use. A private marina, a marine dry storage and the railroad bridge tender's office occupy the land at the western end of the bay. The eastern end is the Town's industrial area, site of a now closed paper mill. Chambers Creek Road skirts the bay, with a narrow strip of land between the road and the bay. A paved walking path is located across the road from the industrial area, between the road and the bay.

The riparian habitat area for Chambers Bay is established from Mean Higher High Water to the edge of the Chambers Creek Road right-of-way.

(c) **Fifth Street Waterway:** The Fifth Street Waterway is the main drainage course for most of the western side of Steilacoom. The waterway provides an outlet for Farrell's Marsh, and runs in a ditch along Union Avenue, within the Jackson, Fourth and Fifth Street rights-of-way. The waterway is carried in pipes under Union Avenue, under Fifth Street at Jackson

Street, and under Gove Street at Fourth Street. The waterway traverses northeasterly through private property and a steep ravine to Martin Street, where it passes under the street in a culvert and then empties into a small bay and Puget Sound within the Fifth Street right-of-way. The Fifth Street Waterway is has not been typed by the Department of Natural Resources. Fish habitat is available in the bay, but the Martin Street culvert blocks upstream migration. The waterway provides fresh water to Puget Sound, and serves as a wildlife corridor for small animals. A buffer area surrounding the waterway is necessary to provide shade to cool the water for downstream fish, and provide cover and forage area for animals.

The riparian habitat area width for the Fifth Street waterway is:

- Between Martin Street and Gove Street, ten (10) feet;
- Between Gove Street and Jackson Street, the width of the Fourth Street right-of-way;
- Between Fourth Street and Union Avenue, the width of the Jackson Street right-of-way;
- and
- Between Jackson Street and Farrell's Marsh, ten (10) feet.

(d) **Chambers Street Waterway:** The Chambers Street Waterway is a small drainage course through the center of Balch's Part of Steilacoom. The waterway provides an outlet for upland wetlands, and runs in a ditch from Nisqually Street to Lafayette Street. The waterway is carried in pipes under Starling and Rainier Streets, roughly following the now vacated Chambers Street right-of-way through private yards. The waterway is piped from Lafayette Street to Puget Sound.

The Chambers Street Waterway is has not been typed by the Department of Natural Resources. No fish habitat is available within the waterway. The waterway provides fresh water to Puget Sound, and may serve as a wildlife corridor for small animals. The portions of the waterway that are not piped have been landscaped by the adjoining landowners. A buffer area surrounding the waterway is necessary to provide shade to cool the water for downstream fish, and provide cover and forage area for animals.

The riparian habitat area for the Chambers Street waterway is ten (10) feet for those areas not currently piped.

(e) **Cedar Street Waterway:** The Cedar Street Waterway is a small drainage course along the northern edge of Balch's Part of Steilacoom. The waterway provides an outlet for upland wetlands, and runs in a ditch from Sequash Street to Cedar Street. The waterway is carried in pipes under Sequash Street, Balch Street, and Steilacoom Boulevard. The waterway runs through a deep ravine between Steilacoom Boulevard and Cedar Street. The waterway is piped from Cedar Street to Puget Sound.

The Cedar Street Waterway is has not been typed by the Department of Natural Resources. No fish habitat is available within the waterway. The waterway provides fresh water to Puget Sound, and may serve as a wildlife corridor for small animals. The portions of the waterway that are not piped are largely vacant parcels. A buffer area surrounding the waterway is necessary to provide shade to cool the water for downstream fish, and provide cover and forage area for animals.

The riparian habitat area width for the Cedar Street Waterway is ten (10) feet for those areas not currently piped.

(f) **Shannon Street:** The Shannon Street Waterway is a small drainage course in Bill's Addition to Steilacoom. The waterway provides an outlet for upland stormwater, and runs in a ditch in the Shannon Street right-of-way north from Lexington Street about 100 feet. The waterway is carried west in a stormwater structure across private property approximately 50 feet, where it is released and again flows north across private property. The waterway dissipates in sandy soil approximately 100 feet north of the Cincinnati Street right-of-way. The Shannon Street Waterway has not been typed by the Department of Natural Resources. No fish habitat is available within the waterway. The waterway may serve as a wildlife corridor for deer

and small animals. A buffer area surrounding the waterway is necessary to provide cover and forage area for animals.

The riparian habitat area width for the Shannon Street Waterway is the Shannon Street right-of-way between Lexington Street and the stormwater structure; and ten (10) feet for the remainder of the waterway not currently piped.

(g) **Cliff Avenue Waterway:** The Cliff Avenue Waterway is a small drainage course north of the Cormorant Passage development. The waterway provides an outlet for upland stormwater, and runs in a ravine within or near the vacated Cliff Avenue right-of-way. The waterway empties into Puget Sound directly.

The Cliff Avenue Waterway has not been typed by the Department of Natural Resources. No fish habitat is available within the waterway. The waterway may serve as a wildlife corridor for deer and small animals. A buffer area surrounding the waterway is necessary to provide shade to cool the water for downstream fish, and to provide cover and forage area for animals. The riparian habitat area width for the Cliff Avenue Waterway is twenty-five (25) feet.

(h) **Garrison Springs Waterway:** The Garrison Springs Waterway is a small waterway running across the industrial area on the north edge of Town. The waterway provides an outlet for upland spring and stormwater. The waterway is piped under the paper mill and into Chambers Bay.

The Garrison Springs Waterway has not been typed by the Department of Natural Resources. Fish habitat is available within the waterway, and it may serve as a wildlife corridor for deer and small animals upstream from the mill site. A buffer area surrounding the waterway is necessary to provide shade to cool the water for fish, and to provide cover and forage area for animals.

The riparian habitat area width for the Garrison Springs Waterway is twenty-five (25) feet for those portions not currently piped.

(E) **Aquatic habitat.** The following specific activities may be permitted within a riparian habitat area, pond, lake, water of the state, and marine habitat or associated buffer when the activity complies with the provisions set forth in the Town Shoreline Management Program and subject to the standards of this Subsection. The standards that provide the most protection to protected habitat and species shall apply.

(1) **Clearing and Grading.** When clearing and grading is permitted as part of an authorized activity or as otherwise allowed in these standards, the following shall apply:

(a) Grading is allowed only between May 1 and October 1 of each year. The Town Administrator may extend or shorten the grading period on a case-by-case basis, determined on actual weather and soil conditions.

(b) Filling or modification of a wetland or wetland buffer is permitted only if it is conducted as part of an approved wetland alteration.

(c) The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, any soil disturbed shall be redistributed to other areas of the project area.

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

(e) Erosion and sediment control that meets or exceeds the standards set forth in SMC 13.50 shall be provided.

(2) **Shoreline erosion control measures.** New, replacement, or substantially improved shoreline erosion control measures may be permitted in accordance with an approved critical area report that demonstrates the following:

(a) Natural shoreline processes will be maintained. The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate within one-quarter (1/4) mile of the project area.



(b) The shoreline erosion control measures will not degrade fish or wildlife habitat conservation areas or associated wetlands.

(c) Adequate mitigation measures ensure that there is no net loss of the functions or values of intertidal habitat or riparian habitat as a result of the proposed shoreline erosion control measures.

(d) The proposed shoreline erosion control measures do not result in alteration of intertidal migration corridors.

(3) **Streambank stabilization.** Streambank stabilization to protect new structures from future channel migration is not permitted except when such stabilization is achieved through bioengineering or soft armoring techniques in accordance with an approved critical area report.

(4) **Launching ramps – Public or private.** Launching ramps may be permitted in accordance with an approved critical area report that has demonstrated the following:

(a) The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate within one-quarter (1/4) mile of the site;

(b) The ramp will not adversely impact critical fish or wildlife habitat areas or associated wetlands;

(c) Adequate mitigation measures ensure that there is no net loss of the functions or values of intertidal habitat or riparian habitat as a result of the ramp; and

(d) No alteration of intertidal migration corridors will occur as a result of the ramp.

(5) **Docks.** Repair and maintenance of an existing dock or pier may be permitted in accordance with an approved critical area report subject to the following:

(a) There is no increase in the use of materials creating shade for predator species or eelgrass;

(b) There is no expansion in overwater coverage;

(c) There is no new spanning of waters between three (3) and thirteen (13) feet deep;

(d) There is no increase in the size and number of pilings; and

(e) There is no use of toxic materials (such as creosote) that come in contact with the water.

(6) **Roads, trails, bridges, and rights-of-way.** Construction of trails, roadways, and minor road bridging, less than or equal to thirty (30) feet wide, may be permitted in accordance with an approved critical area report subject to the following standards:

(a) There is no other feasible alternative route with less impact on the environment;

(b) The crossing minimizes interruption of downstream movement of wood and gravel;

(c) Roads in riparian habitat areas or their buffers shall not run parallel to the water body;

(d) Trails shall be located on the outer edge of the riparian area or buffer, except for limited viewing platforms and crossings;

(e) Crossings, where necessary, shall only occur as near to perpendicular with the water body as possible;

(f) Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area report;

(g) Road bridges are designed according to the Washington Department of Fish and Wildlife *Fish Passage Design at Road Culverts*, 1999, and the National Marine Fisheries Service *Guidelines for Salmonid Passage at Stream Crossings*, 2000; and

(h) Trails and associated viewing platforms shall not be made of continuous impervious materials.

(7) **Utility Facilities.** New utility lines and facilities may be permitted to cross watercourses in accordance with an approved critical area report, if they comply with the following standards:

- (a) Fish and wildlife habitat areas shall be avoided to the maximum extent possible;
- (b) Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone, where feasible;
- (c) The utilities shall cross at an angle greater than sixty (60) degrees to the centerline of the channel in streams or perpendicular to the channel centerline whenever boring under the channel is not feasible;
- (d) Crossings shall be contained within the footprint of an existing road or utility crossing where possible;
- (e) The utility route shall avoid paralleling the stream or following a down-valley course near the channel; and
- (f) The utility installation shall not increase or decrease the natural rate of shore migration or channel migration.

(8) **Public flood protection measures.** New public flood protection measures and expansion of existing ones may be permitted, subject to the Town Administrator's review and approval of a critical area report and the approval of a Federal Biological Assessment by the federal agency responsible for reviewing actions related to a federally listed species.

(9) **Instream structures.** Instream structures, such as, but not limited to, high flow bypasses, sediment ponds, instream ponds, retention and detention facilities, tide gates, dams, and weirs, shall be allowed only as part of an approved watershed basin restoration project approved by the Town Administrator and upon acquisition of any required state or federal permits. The structure shall be designed to avoid modifying flows and water quality in ways that may adversely affect habitat conservation areas.

(10) **Stormwater conveyance facilities.** Conveyance structures may be permitted in accordance with an approved critical area report subject to the following standards:

- (a) No other feasible alternatives with less impact exist;
- (b) Mitigation for impacts is provided;
- (c) Stormwater conveyance facilities shall incorporate fish habitat features; and
- (d) Vegetation shall be maintained and, if necessary, added adjacent to all open channels and ponds in order to retard erosion, filter out sediments, and shade the water.

(11) **On-site sewage systems and wells**

(a) New on-site sewage systems and individual wells may be permitted in accordance with an approved critical area report only if accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system.

(b) Repairs to failing on-site sewage systems associated with an existing structure shall be accomplished by utilizing one of the following methods that result in the least impact:

- (i) Connection to an available public sanitary sewer system;
- (ii) Replacement with a new on-site sewage system located in a portion of the site that has already been disturbed by development and is located landward as far as possible, provided the proposed sewage system is in compliance with the Tacoma-Pierce County Health District; or
- (iii) Repair to the existing on-site septic system.

(Ord. 1380 §2(part), 2004).

**Article VII – Definitions - as amended by Ordinances 1541 and 1562**

**16.16.900 Definitions.** Words not defined in this Chapter shall be as defined in the Steilacoom Municipal Code, the Washington Administrative Code, or the Revised Code of Washington. Words not found in either code shall be as defined in the Webster's Third New International Dictionary, latest edition.

**A**

**Active fault** – A fault that is considered likely to undergo renewed movement within a period of concern to humans. Faults are commonly considered to be active if the fault has moved one or more times in the last 10,000 years, but faults may also be considered active in some cases if movement has occurred in the last 500,000 years.

**Adaptive management** – Adaptive management relies on scientific methods to evaluate how well regulatory and non-regulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.

**Adjacent** – Immediately adjoining (in contact with the boundary of the influence area) or within a distance that is less than that needed to separate activities from critical areas to ensure protection of the functions and values of the critical areas. Adjacent shall mean any activity or development located:

- (A) On a site immediately adjoining a critical area;
- (B) A distance equal to or less than the required critical area buffer width and building setback;
- (C) A distance equal to or less than one-half mile (2,640 feet) from a bald eagle nest;<sup>1</sup>
- (D) A distance equal to or less than three hundred (300) feet upland from a stream, wetland, or water body;<sup>2</sup>
- (E) Bordering or within the floodway, floodplain or channel migration zone; or
- (F) A distance equal to or less than two hundred (200) feet from a critical aquifer recharge area.<sup>3</sup>

**Advance mitigation** – Mitigation of an anticipated critical area impact or hazard completed according to an approved critical area report and prior to site development.

**Agricultural land** – Land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock, and or that has been designated as long-term commercial significance for agricultural production.

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<sup>1</sup> Distance of 2,640 feet is based on the Washington Department of Fish and Wildlife's *Management Recommendations for Washington's Priority Species, Volume IV: Birds*, June 2000.

<sup>2</sup> Distance of 300 feet is based on maximum recommended riparian habitat area width from the Washington Department of Fish and Wildlife's *Management Recommendations for Washington's Priority Habitats: Riparian*, December 1997.

<sup>3</sup> Distance of 200 feet is a suggested distance to ensure that activities within the critical aquifer recharge area are included under this Chapter, even when the exact boundaries of the critical aquifer recharge area are not known at the time of application.

**Alluvial fan flooding** – Flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport and deposition, and unpredictable flow paths.

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

**Anadromous fish** – Fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following stages: upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

**Appeal** - A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

**Applicant** – A person who files an application for permit under this Chapter and who is either the owner of the land on which that proposed activity would be located, a contract purchaser, or the authorized agent of such a person.

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

**Aquifer, confined** – An aquifer bounded above and below by beds of distinctly lower permeability than that of the aquifer itself and that contains ground water under sufficient pressure for the water to rise above the top of the aquifer.

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

**Aquifer, sole source** – An area designated by the U.S. Environmental Protection Agency under the Safe Drinking Water Act of 1974, Section 1424(e). The aquifer(s) must supply fifty percent (50%) or more of the drinking water for an area without a sufficient replacement available.

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

**Aquifer, unconfined** – An aquifer not bounded above by a bed of distinctly lower permeability than that of the aquifer itself and containing ground water under pressure approximately equal to that of the atmosphere. This term is synonymous with the term "water table aquifer."

**Area of shallow flooding** – An area designated AO or AH Zone on the flood insurance map(s). The base flood depths range from one to three feet; a clearly defined channel does not exist;

the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

**Area of Special Flood Hazard** - The land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

**Avalanche hazard** – An area susceptible to a large mass of snow or ice, sometimes accompanied by other material, moving rapidly down a mountain slope.

## **B**

**Base flood** – A flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

**Basement** – Any area of the building having its floor sub-grade (below ground level) on all sides.

**Best available science** – Current scientific information used in the process to designate, protect, or restore critical areas, which is derived from a valid scientific process as defined by WAC 365-195-900 through 925. Sources of best available science are included in *Citations of Recommended Sources of the Best Available Science for Designating and Protecting Critical Areas* published by the Washington State Department of Community, Trade and Economic Development.

**Best management practices (BMPs)** – Conservation practices or systems of practices and management measures that:

(A) Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;

(B) Minimize adverse impacts to surface water and ground water flow and circulation patterns and to the chemical, physical, and biological characteristics of wetlands;

(C) Protect trees and vegetation designated to be retained during and following site construction and use native plant species appropriate to the site for re-vegetation of disturbed areas; and

(D) Provide standards for proper use of chemical herbicides within critical areas.

The Town of Steilacoom shall monitor the application of best management practices to ensure that the standards and policies of this Chapter are adhered to.

**Biodiversity** – The variety of animal and plant life and its ecological processes and interconnections – represented by the richness of ecological systems and the life that depends on them, including human life and economies.

**Breakaway wall** – A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

**Buffer or buffer zone** – An area that is contiguous to and protects a critical area which is required for the continued maintenance, functioning, and/or structural stability of a critical area.

## C

**Channel migration zone (CMZ)** – The lateral extent of likely movement along a stream or river during the next one-hundred (100) years as determined by evidence of active stream channel movement over the past one-hundred (100) years. Evidence of active movement over the one-hundred (100) year time frame can be inferred from aerial photos or from specific channel and valley bottom characteristics. The time span typically represents the time it takes to grow mature trees that can provide functional large woody debris to streams. A CMZ is not typically present if the valley width is generally less than two (2) bankfull widths, if the stream or river is confined by terraces, no current or historical aerial photographic evidence exists of significant channel movement, and there is no field evidence of secondary channels with recent scour from stream flow or progressive bank erosion at meander bends. Areas separated from the active channel by legally existing artificial channel constraints that limit bank erosion and channel avulsion without hydraulic connections shall not be considered within the CMZ.

**Coastal high hazard area** – An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the flood insurance map(s) as Zone V1-30, VE, or V.

**Compensation project** – Actions necessary to replace project-induced critical area and buffer losses, including land acquisition, planning, construction plans, monitoring, and contingency actions.

**Compensatory mitigation** – Replacing project-induced losses or impacts to a critical area, and includes, but is not limited to, the following:

**Restoration** – Actions performed to reestablish wetland functional characteristics and processes that have been lost by alterations, activities, or catastrophic events within an area that no longer meets the definition of a wetland.

**Creation** – Actions performed to intentionally establish a wetland at a site where it did not formerly exist.

**Enhancement** – Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

**Preservation** – Actions taken to ensure the permanent protection of existing, high-quality wetlands.

**Conservation easement** – A legal agreement that the property owner enters into to restrict uses of the land. Such restrictions can include, but are not limited to, passive recreation uses such as trails or scientific uses and fences or other barriers to protect habitat. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property, therefore, providing permanent or long-term protection.

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

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

**Critical area tract** – Land held in private ownership and retained in an open condition in perpetuity for the protection of critical areas. Lands within this type of dedication may include

but are not limited to, portions and combinations of forest habitats, grasslands, shrub steppe, on-site watersheds, 100-year floodplains, shorelines or shorelines of statewide significance, riparian areas, and wetlands.

**Critical facility** – A facility for which even a slight chance of flooding, inundation, or impact from a hazard event might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations that produce, use, or store hazardous materials or hazardous waste.

**Critical species** – All animal and plant species listed by the state or federal government as threatened or endangered.

**Cumulative impacts or effects** – The combined, incremental effects of human activity on ecological or critical areas functions and values. Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis and changes to policies and permitting decisions.

## D

**Developable area** – A site or portion of a site that may be utilized as the location of development, in accordance with the rules of this Chapter.

**Development** – Any activity upon the land consisting of construction or alteration of structures, earth movement, excavation, dredging, dumping, grading, filling, mining, paving, removal of any sand, gravel, or minerals, driving of piles, drilling operations, bulkheading, clearing of vegetation, or other land disturbance. Development includes the storage or use of equipment or materials inconsistent with the existing use, and storage of equipment or materials within the area of special flood hazard. Development also includes approvals issued by the Town of Steilacoom that binds land to specific patterns of use, including but not limited to, subdivisions, short subdivisions, zone changes, conditional use permits, and binding site plans. Development activity does not include the following activities:

- (A) Interior building improvements.
- (B) Exterior structure maintenance activities, including painting and roofing.
- (C) Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning, and weeding.
- (D) Maintenance of the following *existing* facilities that does not expand the affected area: septic tanks (routine cleaning); wells; individual utility service connections; and individual cemetery plots in established and approved cemeteries.

**Development permit** – Any permit issued by the Town of Steilacoom, or other authorized agency, for construction, land use, or the alteration of land.

## E

**Elevated building** – A building that has no basement and its lowest elevated floor is raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

**Elevation Certificate** - The official form (FEMA Form 81-31) used to track development, provide elevation information necessary to ensure compliance with community floodplain

management ordinances, and determine the proper insurance premium rate with Section B completed by Community Officials.

***Emergent wetland*** – A wetland with at least thirty percent (30%) of the surface area covered by erect, rooted, herbaceous vegetation extending above the water surface as the uppermost vegetative strata.

***Enhancement*** – The manipulation of the physical, chemical, or biological characteristics of a wetland to heighten, intensify or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat improvement. Enhancement results in a change in wetland function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. [Examples are planting vegetation, controlling non-native or invasive species, and modifying site elevations to alter hydroperiods.]

***Erosion*** – The process whereby wind, rain, water, and other natural agents mobilize and transport particles.

***Erosion hazard areas*** – At least those areas identified by the U.S. Department of Agriculture National Resources Conservation Service as having a “severe” rill and inter-rill erosion hazard.

***Existing Manufactured Home Park or Subdivision*** - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

***Expansion to an Existing Manufactured Home Park or Subdivision*** - The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

***Exotic*** – Any species of plants or animals, which are foreign to the planning area.

## **F**

***Fish and wildlife habitat conservation areas*** – Areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by WAC 365-190-080(5). These areas include:

(A) Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;

(B) Habitats of local importance, including but not limited to areas designated as priority habitat by the Washington Department of Fish and Wildlife;

(C) Commercial and recreational shellfish areas;

(D) Kelp and eelgrass beds; herring and smelt spawning areas;

(E) Naturally occurring ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;



(F) Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington;

(G) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

(H) State natural area preserves and natural resource conservation areas; and

(I) Land essential for preserving connections between habitat blocks and open spaces.

**Fish habitat** – Habitat that is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish that could be recovered by restoration or management and includes off-channel habitat.<sup>4</sup>

**Flood or flooding** – A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

**Flood insurance map** – The official map on which the Federal Insurance Administration has delineated the areas of special flood hazards and include the risk premium zones applicable to the community. Also known as “flood insurance rate map” or “FIRM.”

**Flood insurance study** – The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Insurance Rate Maps Flood Boundary Floodway Map, and the water surface elevation of the base flood.

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

**Flood protection elevation** – The elevation that is one (1) foot above the base flood elevation.

**Flood resistant material** – Materials designed to be resistant to the impacts associated with flooding and defined and described in detail in the Federal Emergency Management Agency's Technical Bulletin #2-93, dated April 1993 and FEMA publication FEMA-348, *Protecting Building Utilities from Flood Damage*.

**Floodway** – The channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the surface water elevation more than one (1) foot. Also known as the "zero rise floodway."

**Forested wetland** – A wetland with at least thirty percent (30%) of the surface area covered by woody vegetation greater than twenty (20) feet in height that is at least partially rooted within the wetland.

**Formation** – An assemblage of earth materials grouped together into a unit that is convenient for description or mapping.

**Formation, confining** – The relatively impermeable formation immediately overlying a confined aquifer.

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<sup>4</sup> See WAC 222-16-030(5)(h).

**Frequently flooded areas** – Lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance and attenuation functions, as determined by the Town Administrator in accordance with WAC 365-190-080(3). Frequently flooded areas perform important hydrologic functions and may present a risk to persons and property. Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

**Functions and values** – The beneficial roles served by critical areas including, but are not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical, archaeological, and aesthetic value protection, educational opportunities, and recreation. These beneficial roles are not listed in order of priority. Critical area functions can be used to help set targets (species composition, structure, etc.) for managed areas, including mitigation sites.

## **G**

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

**Ground water** – Water in a saturated zone or stratum beneath the surface of land or a surface water body.

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

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

**Ground water, perched** – Ground water in a saturated zone is separated from the underlying main body of ground water by an unsaturated rock zone.

**Growth Management Act** – RCW 36.70A and 36.70B, as amended.

## **H**

**Habitat conservation areas** – Areas designated as fish and wildlife habitat conservation areas.

**Habitats of local importance** – These areas include a seasonal range or habitat element with which a given species has a primary association, and which, if altered may reduce the likelihood that the species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alterations such as cliffs, talus, and wetlands. WAC 365-190-030

**Hazard areas** – Areas designated as frequently flooded areas or geologically hazardous areas due to potential for erosion, landslide, seismic activity, mine collapse, or other geological condition.

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

**High intensity land use** – Land uses which are associated with high levels of human disturbance or substantial habitat impacts including, but not limited to, medium- and high-density residential (more than one home per five acres), multifamily residential, some agricultural practices, and commercial and industrial land uses.

**High quality wetlands** – Those wetlands that meet the following criteria:

- (A) No, or isolated, human alteration of the wetland topography;
- (B) No human-caused alteration of the hydrology or the wetland appears to have recovered from the alteration;
- (C) Low cover and frequency of exotic plant species;
- (D) Relatively little human-related disturbance of the native vegetation, or recovery from past disturbance;
- (E) If the wetland system is degraded, it still contains a viable and high quality example of a native wetland community; and
- (F) No known major water quality problems.

**Historic condition** – Condition of the land, including flora, fauna, soil, topography, and hydrology that existed before the area and vicinity were developed or altered by human activity.

**Hydraulic project approval (HPA)** – A permit issued by the Washington Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 75.20 RCW.

**Hydric soil** – A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the *Washington State Wetland Identification and Delineation Manual*.

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

**Low runoff** potential and a high rate of infiltration potential;

**Moderate infiltration** potential and a moderate rate of runoff potential;

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

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

**Hydrophytic vegetation** – Macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the *Washington State Wetland Identification and Delineation Manual*.

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

I

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

**Increased Cost of Compliance** - A flood insurance claim payment up to \$30,000 directly to a property owner for the cost to comply with floodplain management regulations after a direct physical loss caused by a flood. Eligibility for an ICC claim can be through a single instance of “substantial damage” or as a result of a “cumulative substantial damage” (more information can be found in FEMA ICC Manual 301)

**In-kind compensation** – To replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity. It does not mean replacement "in-category."

**Isolated wetlands** – Those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

**Infiltration** – The downward entry of water into the immediate surface of soil.

### **Injection well(s)**

(A) **Class I** – A well used to inject industrial, commercial, or municipal waste fluids beneath the lowermost formation containing, within one quarter (1/4) mile of the well bore, an underground source of drinking water.

(B) **Class II** – A well used to inject fluids:

(1) Brought to the surface in connection with conventional oil or natural gas exploration or production and may be commingled with wastewaters from gas plants that are an integral part of production operations, unless those waters are classified as dangerous wastes at the time of injection;

(2) For enhanced recovery of oil or natural gas; or

(3) For storage of hydrocarbons that are liquid at standard temperature and pressure.

(C) **Class III** – A well used for extraction of minerals, including but not limited to the injection of fluids for:

(1) In-situ production of uranium or other metals that have not been conventionally mined;

(2) Mining of sulfur by Frasch process; or

(3) Solution mining of salts or potash.

(D) **Class IV** – A well used to inject dangerous or radioactive waste fluids.

(E) **Class V** – All injection wells not included in Classes I, II, III, or IV.

**Inter-rill** – Areas subject to sheet wash.

**Invasive species** - Nonnative organisms that cause economic or environmental harm and are capable of spreading to new areas of the state. "Invasive species" does not include domestic livestock, intentionally planted agronomic crops, or non-harmful exotic organisms. Invasive species includes, but is not limited to, species on the following lists, as may be amended from time to time:

1. The list of priority invasive species maintained by the Washington Invasive Species Council;
2. The lists of noxious weeds maintained by the Washington State Noxious Weed Control Board;
3. The lists of noxious weeds maintained by the Pierce County Noxious Weed Control Board;
4. The list of Prohibited Sales of Plants and Seeds in Washington State (also known as the quarantine list) maintained by the Washington State Department of Agriculture; and
5. The Prohibited Species List and Regulated Species List maintained by the Washington State Department of Fish and Wildlife.

## **J**

***Joint Aquatic Resource Permits Application (JARPA)*** – A single application form that may be used to apply for hydraulic project approvals, shoreline management permits, approvals of exceedance of water quality standards, water quality certifications, coast guard bridge permits, Washington Department of Natural Resources use authorization, and U.S. Army Corps of Engineers permits.

## **L**

***Lahars*** – Mudflows and debris flows originating from the slopes of a volcano.

***Land use, high intensity*** – See “High intensity land use.”

***Land use, low intensity*** – See “Low intensity land use.”

***Land use, moderate intensity*** – See “Moderate intensity land use.”

***Landslide hazard areas*** – Areas that are potentially subject to risk of mass movement due to a combination of geologic landslide resulting from a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, ground water, or other factors.

***Low intensity land use*** – Land uses which are associated with low levels of human disturbance or low habitat impacts, including, but not limited to, passive recreation, open space, or forest management land uses.

***Lowest floor*** – The lowest floor of the lowest enclosed area, including the basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, which is not considered a building’s lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Chapter, i.e. provided there are adequate flood ventilation openings.

## **M**

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

**Manufactured home park or subdivision** – A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

**Mine hazard areas** – Areas that are underlain by, adjacent to, or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of probable sink holes, gas releases, or subsidence due to mine workings. Factors that should be considered include: Proximity to development, depth from ground surface to the mine working, and geologic material.

**Mitigation** – Avoiding, minimizing, or compensating for adverse critical areas impacts. Mitigation, in the following sequential order of preference, is:

- (A) Avoiding the impact altogether by not taking a certain action or parts of an action;
- (B) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- (C) Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;
- (D) Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;
- (E) Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
- (F) Compensating for the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and
- (G) Monitoring the hazard or other required mitigation and taking remedial action when necessary.

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

**Moderate intensity land use** – Land uses which are associated with moderate levels of human disturbance or substantial habitat impacts including, but not limited to, low-density residential (no more than one home per five acres), active recreation, and moderate agricultural land uses.

**Monitoring** – Evaluating the impacts of development proposals on the biological, hydrological, and geological elements of such systems, and assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and documenting changes in natural ecosystems and features, including gathering baseline data.

## **N**

**Native vegetation** – Plant species that are indigenous to the area in question, occur naturally within the Town of Steilacoom or the Puget Sound coastal region of Pierce County.

**Native growth protection area (NGPA)** – An area where native vegetation is preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering, and protecting plants and animal habitat;

**Natural waters** – Waters, excluding water conveyance systems that are artificially constructed and actively maintained for irrigation.<sup>5</sup>

**New Construction** - Structures for which the “start of construction” commenced on or after the effective date of this ordinance.

**New Manufactured Home Park or Subdivision** - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

**Non-conformity** – A legally established existing use or legally constructed structure that is not in compliance with current regulations.

**Non-indigenous** – See “Exotic.”

**Noxious weed**- A plant that when established is highly destructive, competitive, or difficult to control by cultural or chemical practices. The Pierce County Noxious Weed Control Board is authorized to carry out noxious weed control under Chapter 17.10 RCW, Noxious Weed Control Board Act, and adopts rules and regulations regarding the listing and control of noxious weeds consistent with Chapter 16-750 WAC and Chapter 17.10 RCW.

## O

**Off-site compensation** – To replace critical areas away from the site on which a critical area has been impacted.

**On-site compensation** – To replace critical areas at or adjacent to the site on which a critical areas has been impacted.

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

**Out-of-kind compensation** – To replace critical areas with substitute critical areas whose characteristics do not closely approximate those destroyed or degraded. It does not refer to replacement "out-of-category."

## P

**Perched ground water** – See “Ground water, perched.”

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<sup>5</sup> See WAC 222-16-030(5)(d) and WAC 222-16-031(6)(d)

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

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

**Potable water** – Water that is safe and palatable for human use.

**Practical alternative** – An alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes, and has less impacts to critical areas.

**Primary association area** – The area used on a regular basis by, is in close association with, or is necessary for the proper functioning of the habitat of a critical species. Regular basis means that the habitat area is normally, or usually known to contain a critical species, or based on known habitat requirements of the species, the area is likely to contain the critical species. Regular basis is species and population dependent. Species that exist in low numbers may be present infrequently yet rely on certain habitat types.

**Priority habitat** – Habitat type or elements with unique or significant value to one or more species as classified by the Department of Fish and Wildlife. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element.<sup>6</sup>

**Project area** – All areas within fifty (50) feet of the area proposed to be disturbed, altered, or used by the proposed activity or the construction of any proposed structures. When the action binds the land, such as a subdivision, short subdivision, binding site plan, planned unit development, or rezone, the project area shall include the entire parcel, at a minimum.

## Q

**Certified professional** – A person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A certified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and two years of related work experience.

(A) A certified professional for habitats or wetlands must have a degree in biology and professional experience related to the subject species.

(B) A certified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.

(C) A certified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

## R

**Recharge** – The process involved in the absorption and addition of water to ground water.

**Reclaimed water** – Municipal wastewater effluent that has been adequately and reliability treated so that it is suitable for beneficial use. Following treatment it is no longer considered

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<sup>6</sup> See WAC 173-26-020(34).



wastewater (treatment levels and water quality requirements are given in the water reclamation and reuse standards adopted by the state departments of Ecology and Health).

**Recreation vehicle** – A vehicle that is:

- (A) Built on a single chassis;
- (B) 400 square feet or less when measured at the largest horizontal projection;
- (C) Designed to be self-propelled or permanently towable by a light duty truck; and
- (D) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

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

**Restoration** – Measures taken to restore an altered or damaged natural feature including:

- (A) Active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and
- (B) Actions performed to reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

**Rills** – Steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.

**Riparian habitat** – Areas adjacent to aquatic systems with flowing water that contain elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Widths shall be measured from the ordinary high water mark or from the top of bank if the ordinary high water mark cannot be identified. It includes the entire extent of the floodplain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence the stream system. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities.<sup>7</sup>

**River** – See “Watercourse.”

## S

**Scientific process** – A valid scientific process is one that produces reliable information useful in understanding the consequences of a decision. The characteristics of a valid scientific process are as follows:

- (A) **Peer review.** The information has been critically reviewed by other qualified scientific experts in that scientific discipline.
- (B) **Methods.** The methods that were used are standardized in the pertinent scientific discipline or the methods have been appropriately peer-reviewed to ensure their reliability and validity.

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<sup>7</sup> See Washington Department of Fish and Wildlife’s *Management Recommendations for Washington’s Priority Habitats – Riparian*, page 4, 1997.

(C) **Logical conclusions and reasonable inferences.** The conclusions presented are based on reasonable assumptions supported by other studies and are logically and reasonably derived from the assumptions and supported by the data presented.

(D) **Quantitative analysis.** The data have been analyzed using appropriate statistical or quantitative methods.

(E) **Context.** The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.

(F) **References.** The assumptions, techniques, and conclusions are well referenced with citations to pertinent existing information.

**Scrub–shrub wetland** – A wetland with at least thirty percent (30%) of its surface area covered by woody vegetation less than twenty (20) feet in height as the uppermost strata.

**Section 404 Permit** – A permit issued by the U.S. Corps of Engineers for the placement of dredge or fill material or clearing in waters of the United States, including wetlands, in accordance with 33 USC § 1344. Section 404 permits may also require a consultation under the Federal Endangered Species Act.

**Seeps** – A spot where water oozes from the earth, often forming the source of a small stream.

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

**Serviceable** – Presently usable.

**SEPA** – Washington State Environmental Policy Act, Chapter 43.21C RCW.

**Shorelines** – All of the water areas of the state as defined in RCW 90.58.030, including reservoirs and their associated shorelands, together with the lands underlying them except:

(A) Shorelines of statewide significance;

(B) Shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second (20 cfs) or less and the wetlands associated with such upstream segments; and

(C) Shorelines on lakes less than twenty (20) acres in size and wetlands associated with such small lakes.

**Shorelines of the state** – The total of all “shorelines,” as defined in RCW 90.58.030(2)(d), and “shorelines of statewide significance” within the state, as defined in RCW 90.58.030(2)(c).

**Shorelines of statewide significance** – Those areas defined in RCW 90.58.030(2)(e).

**Shorelands or shoreland areas** – Those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of Chapter 90.58 RCW.

**Significant portion of its range** – That portion of a species range likely to be essential to the long-term survival of the population in Washington.

**Soil survey** – The most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.

**Special flood hazard areas** – The land in the floodplain within an area subject to a one percent (1%) or greater chance of flooding in any given year. Designations of special flood hazard areas on flood insurance map(s) always include the letters A or V.

**Special protection areas** – Aquifer recharge areas defined by WAC 173-200-090 that require special consideration or increased protection because of unique characteristics, including, but not limited to:

(A) Ground waters that support an ecological system requiring more stringent criteria than drinking water standards;

(B) Ground water recharge areas and wellhead protection areas that are vulnerable to pollution because of hydrogeologic characteristics; and

(C) Sole source aquifer status.

**Sole source aquifer** – See “aquifer, sole source.”

**Species** – Any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

**Species, endangered** – Any fish or wildlife species that is threatened with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.

**Species of local importance** – Those species of local concern due to their population status or their sensitivity to habitat manipulation, or that are game species.

**Species, priority** – Any fish or wildlife species requiring protective measures and/or management guidelines to ensure their persistence as genetically viable population levels as classified by the Washington Department of Fish and Wildlife, including endangered, threatened, sensitive, candidate and monitor species, and those of recreational, commercial, or tribal importance.

**Species, threatened** – Any fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

**Start of Construction** - includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction

means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**Stream** – See “Watercourse.”

**Structure** - A walled and roofed building, including a gas or liquid storage tank that is principally above ground.

**Sub-drainage basin or subbasin** – The drainage area of the highest order stream containing the subject property impact area. Stream order is the term used to define the position of a stream in the hierarchy of tributaries in the watershed. The smallest streams are the highest order (first order) tributaries. These are the upper watershed streams and have no tributaries of their own. When two first order streams meet, they form a second order stream, and when two second order streams meet they become a third order stream, and so on.

**Substantial damage** – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

**Substantial improvement** – Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: before the improvement or repair is started; or if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term can exclude:

(1) Any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or

(2) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic places.

## U

**Unavoidable** – Adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.<sup>8</sup>

## V

**Variance** - A grant of relief from the requirements of this ordinance that permits construction in a manner that would otherwise be prohibited by this ordinance.

**Volcanic hazard areas** – Areas that are subject to pyroclastic flows, lava flows, debris avalanche, or inundation by debris flows, mudflows, or related flooding resulting from volcanic activity.

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<sup>8</sup> See RCW 90.84.010(9).

**Vulnerability** – The combined effect of susceptibility to contamination and the presence of potential contaminants.

## **W**

**Water dependent** – A use or portion of a use that cannot exist in a location that is not adjacent to the water, but is dependent water by reason of the intrinsic nature of its operations. A use that can be carried out only on, in, or adjacent to water. Examples of water dependent uses include: ship cargo terminal loading areas; fishing; on the ferry and passenger terminals; barge loading, ship building, and dry docking facilities; marinas, moorage, and boat launching facilities; aquaculture; float plane operations; surface water intake; and sanitary sewer and storm drain outfalls.

**Water resource inventory area (WRIA)** – One of sixty-two (62) watersheds in the state of Washington, each composed of the drainage areas of a stream or streams, as established in Chapter 173-500 WAC as it existed on January 1, 1997.

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

**Water table aquifer** – See “Aquifer, unconfined.”

**Water Typing System** – Waters classified according to WAC 222-16-031 as follows:

(A) **Type 1 Water** – All waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, but not including those waters' associated wetlands as defined in Chapter 90.58 RCW.

(B) **Type 2 Water** – Segments of natural waters that are not classified as Type 1 Water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:

(1) Are diverted for domestic use by more than one hundred (100) residential or camping units or by a public accommodation facility licensed to serve more than ten (10) persons, where such diversion is determined by the Washington State Department of Natural Resources to be a valid appropriation of water and only considered Type 2 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by fifty percent (50%), or whichever is less;

(2) Are diverted for use by federal, state, tribal, or private fish hatcheries. Such waters shall be considered Type 2 Water upstream from the point of diversion for 1,500 feet, including tributaries if highly significant for protection of downstream water quality;

(3) Are within a federal, state, local, or private campground having more than thirty (30) camping units: Provided, that the water shall not be considered to enter a campground until it reaches the boundary of the park lands available for public use and comes within one hundred (100) feet of a camping unit;

(4) Are used by fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish populations:

(a) Stream segments having a defined channel twenty (20) feet or greater within the bankfull width and having a gradient of less than four percent (4%).

(b) Lakes, ponds, or impoundments having a surface area of one (1) acre or greater at seasonal low water; or

(5) 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:

(a) The site must be connected to a fish bearing stream and be accessible during some period of the year; and

(b) The off-channel water must be accessible to fish through a drainage with less than a five percent (5%) gradient.

(C) **Type 3 Water** – Segments of natural waters that are not classified as Type 1 or 2 Waters and have a moderate to slight fish, wildlife, and human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:

(1) Are diverted for domestic use by more than ten (10) residential or camping units or by a public accommodation facility licensed to serve more than ten (10) persons, where such diversion is determined by the Washington State Department of Natural Resources to be a valid appropriation of water and the only practical water source for such users. Such waters shall be considered to be Type 3 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by fifty percent (50%), whichever is less;

(2) Are used by fish for spawning, rearing, or migration. The requirements for determining fish use are described in the State Forest Practices Board Manual, Section 13. If fish use has not been determined:

(a) Waters having the following characteristics are presumed to have fish use:

(i) Stream segments having a defined channel of two (2) feet or greater within the bankfull width in Western Washington; or three (3) feet or greater in width in Eastern Washington; and having a gradient of sixteen percent (16%) or less;

(ii) Stream segments having a defined channel or two (2) feet or greater within the bankfull width in Western Washington; or three (3) feet or greater within the bankfull width in Eastern Washington; and having a gradient greater than sixteen percent (16%) and less than or equal to twenty percent (20%), and having greater than fifty (50) acres in contributing basin size in Western Washington or greater than 175 acres contributing basin size in Eastern Washington, based on hydrographic boundaries;

(iii) Ponds or impoundments having a surface area of less than one (1) acre at seasonal low water and having an outlet to a fish stream;

(iv) Ponds or impoundments having a surface area greater than one half (0.5) acre at seasonal low water.

(b) The Washington Department of Natural Resources shall waive or modify the characteristics in (a) of this Subsection where:

(i) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish;

(ii) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(iii) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (a) of this Subsection, as determined in consultation with the Washington Department of Fish and Wildlife, Washington Department of Ecology, affected tribes, and interested parties.

(D) **Type 4 Water** – All segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type 4 Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see *State Forest Practices Board Manual*, Section 23), then Type 4 Waters begin at a point along the channel where the contributing basin area is:

(1) At least thirteen (13) acres in the Western Washington coastal zone (which corresponds to the Sitka spruce zone defined in Franklin and Dyrness, 1973);

(2) At least fifty two (52) acres in other locations in Western Washington;

(3) At least three hundred (300) acres in Eastern Washington.

(E) **Type 5 Waters** – All segments of natural waters within the bankfull width of the defined channels that are not Type 1, 2, 3, or 4 Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 Water. Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters.

**Watercourse** – Any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state including areas in which fish may spawn, reside, or through which they may pass, and tributary waters with defined beds or banks, which influence the quality of fish habitat downstream. This definition includes watercourses that flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, stormwater run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans.

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

**Wellhead protection area (WHPA)** – The portion of a zone of contribution for a well, wellfield, or spring, as defined using criteria established by the Washington Department of Ecology.

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

**Wetland classes, classes of wetlands, or wetland types** – The descriptive classes of the wetlands taxonomic classification system of the U.S. Fish and Wildlife Service (Cowardin, et al. 1979).

**Wetland edge** – The boundary of a wetland as delineated based on the definitions contained in this Chapter.

**Wetlands mitigation bank** – A site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.<sup>9</sup>

## Z

**Zone of contribution** – The area surrounding a well or spring that encompasses all areas or features that supply ground water recharge to the well or spring.

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<sup>9</sup> See RCW 90.84.010(5).