APPENDIX B:
SHORELINE CRITICAL AREAS REGULATIONS

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1 GENERAL PROVISIONS

A. Purpose

1. The purpose of this appendix 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.
2. The City finds that the beneficial functions, structure, and values of critical areas should be protected as identified in this appendix, and further that potential dangers or public costs associated with inappropriate use of such areas should be minimized by reasonable regulation of uses within, adjacent to, or directly affecting such areas. Reasonable regulation shall be achieved by the balancing of individual and collective interests. The most current, accurate, and complete scientific or technical information available shall be used in the administration of this appendix.

B. General critical areas review procedures

Following is a general description of the general procedures for critical areas review under the City's Shoreline Master Program.

1. The Shoreline Administrator first must determine whether the proposed activity fits within any of the exemptions identified in regulation 8.4(2) of the main body of the City's Shoreline Master Program or the partial exemptions identified in this appendix. If the proposed activity meets any of the exemptions or partial exemptions, no critical area checklist or critical area report is required.
2. If the proposed activity does not fit within any of the exemptions identified in regulation 8.4(2) of the main body of the City's Shoreline Master Program or the partial exemptions identified in this appendix, then the applicant shall submit a complete critical area checklist on a form provided by the City.
3. After receipt of a project application and a complete critical area checklist, the Shoreline Administrator shall conduct a site inspection to review critical area conditions on site.
4. Based on the critical areas checklist, site inspection, and other information available pertaining to the site and proposal, the Shoreline Administrator shall make a determination as to whether any critical areas may be affected by the proposal.
5. If the Shoreline Administrator's analysis indicates that the project area is not within or adjacent to a critical area or buffer and that the proposed activity is unlikely to

degrade the functions or values of a critical area or buffer, then the Shoreline Administrator shall conclude critical area review pursuant to this appendix and document the reasons that no further review is required in any staff report or decision on the shoreline permit.

6. If the Shoreline Administrator determines that there are critical areas or buffers within or adjacent to the project area, but that the proposed activity is unlikely to degrade the functions or values of the critical area or buffer, the Shoreline Administrator may waive the requirement for a critical area report. A critical area report is not required for proposed activities when the only critical area concerned is a Type 1 (S) water unless otherwise specified. For other types of critical areas, a waiver may be granted if there is substantial evidence that all of the following requirements will be met. A summary of this analysis and the findings shall be included in any staff report or decision on the shoreline permit.
   a. There will be no alteration of the critical area or buffer.
   b. The development proposal will not impact the critical area or buffer in a manner contrary to the purposes, intent, and requirements of the City's Shoreline Master Program.
7. If the Shoreline Administrator determines that a critical area or buffer may be affected by the proposal, then the Shoreline Administrator shall notify the applicant that a critical area report must be submitted prior to further review of the project, and indicate each of the critical area types that should be addressed in the report.
8. The City's determination regarding critical areas pursuant to this appendix shall be final concurrent with the final decision to approve, condition, or deny the development proposal or other activity involved.

C. Partial exemptions

1. Activities allowed under this subsection are subject to review and approval by the City, but do not require submittal of a critical area checklist or critical area report. The Shoreline Administrator may apply conditions to the shoreline permit or authorization to ensure consistency with the provisions of this appendix.
2. Activities allowed under this subsection must be conducted using the best management practices that result in the least amount of impact to the critical area or buffer. Any incidental damage to, or alteration of, a critical area or buffer shall be restored, rehabilitated, or replaced at the responsible party's expense.
3. The following developments, activities, and associated uses shall be partially exempt from the provisions of this appendix, provided they are otherwise

consistent with the applicable provisions of the City's Shoreline Master Program and other local, state, and federal requirements:

a. 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 there is no increased risk to life or property as a result of the proposed modification or replacement.

b. 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 City-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.

c. Minor Utility Projects. Utility projects which have minor or short-duration impacts to critical areas, as determined by the Shoreline Administrator in accordance with the criteria below, and which do not significantly impact the function or values of a critical area(s), provided that such projects are constructed using best management practices and additional restoration measures are provided. Minor activities must not result in the transport of sediment or increased stormwater. Such allowed minor utility projects must meet the following criteria:

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

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

d. Public and Private Pedestrian Trails. Public and private pedestrian trails, except in wetlands, fish and wildlife habitat conservation areas, or their buffers, subject to the following:

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

    ii. 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.

e. Select Vegetation Removal Activities. The following vegetation removal activities, provided that no vegetation shall be removed from a critical area or its buffer without approval from the Shoreline Administrator:

i. The removal of invasive and noxious weeds designated in Chapter 17.10 RCW with hand labor and light equipment.

ii. The enhancement of a buffer by planting indigenous vegetation.

iii. The removal of trees or portions 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:

(a) It is demonstrated to the satisfaction of the Shoreline Administrator or his or her designee(s) that an imminent threat exists to public safety, or an imminent risk of damage to private or public property. Landowner shall provide to the Shoreline Administrator with a written statement describing the tree location, danger it poses, and proposed mitigation.

(b) Should the imminent threat or risk not be apparent to the Shoreline Administrator (as danger trees are defined in Chapter 2 of the main body of the City's Shoreline Master Program, Definitions), the Shoreline Administrator may require the landowner to submit a report from a professional forester, certified arborist, or registered landscape architect that documents the hazard and provides a replanting schedule, if tree removal is proposed.

(c) Before a danger tree may be felled or removed, with the exception of an emergency pursuant to WAC 173-27-040(2)(d), the landowner shall obtain written approval from the Shoreline Administrator. This approval shall be processed promptly and may not be unreasonably withheld.

(d) Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified.

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

(f) Trees felled as danger trees shall be counted towards any allowed vegetation clearing amounts.

(g) Mitigation measures are approved by the Shoreline Administrator, and may include, but not be limited to the following:

(i) Any trees that are removed must be replaced within one year

with new trees at a ratio of six replacement native trees for each tree removed. Should a report be submitted under regulation 1.C.3.e.iii.(b) of this appendix, it shall contain recommendations for suitable replacement trees;

(ii) Felled trees shall be left within the critical area or buffer unless a submitted report warrants its removal to avoid spreading of disease or pests;

(iii) The trunk of the cut tree may be segmented, but should be left in as large of segments as possible to provide habitat;

(iv) The branches from the cut tree may be removed to control fire hazard; and

(v) Additional mitigation may be required if three or more trees are to be felled on one property with a 10-year period.

iv. Harvesting of wild crops which do not significantly affect the viability of the wild crop, the function of the critical area or its regulated buffer (does not include tilling of soil or alteration of the critical area or its regulated buffer area).

v. 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 year in accordance with an approved restoration plan.

D. General critical area protective measures

1. Building Setbacks. Unless otherwise provided, buildings and other structures shall be set back a distance of 15 feet from the edges of all critical area buffers or from the edges of all critical areas if no buffers are required. The following may be allowed in the building setback area: landscaping; uncovered decks; building overhangs, if such overhangs do not extend more than 18 inches into the setback area; and impervious ground surfaces, such as driveways and patios.

2. Critical Area Signs. 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. These sign provisions may be modified or waived by the Shoreline Administrator based on critical area type and/or site conditions.

3. Notice on Title.

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 Recording Department according to the direction of the City. The notice shall state the presence of the critical area or buffer on 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 title shall not be required for a development proposal by a public agency or public or private utility:

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

   ii. Where the agency or utility has the right to an easement or right-of-way; or

   iii. 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 City approves any site development or construction for the property or, in the case of subdivisions, short subdivisions, planned unit developments, and binding site plans, at or before recording.

4. Native Growth Protection Areas.

a. Native growth protection areas shall be used in development proposals for subdivisions, short subdivisions, planned unit developments, and binding site plans to delineate and protect those contiguous critical areas and buffers listed below:

   i. All landslide hazard areas and buffers;

   ii. All wetlands and buffers;

   iii. All habitat conservation areas; and

   iv. 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 title 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 City Attorney. The designation shall include the following restrictions:

   i. 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

ii. The right of the City to enforce the terms of the restriction.

5. Critical Area Inspections. Reasonable access to the site shall be provided to the City, state, and federal agency review staff for the purpose of inspections during any proposal review, restoration, emergency action, or monitoring period.

E. Critical area report

1. Minimum Report Contents. At a minimum, the report shall contain the following, as applicable:

   a. The name and contact information of the applicant, a description of the proposal, and identification of any permits known to be required;

   b. A site plan for the development proposal including a map to scale depicting critical areas, buffers, and the development proposal, including any areas to be cleared;

   c. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;

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

   e. Identification and characterization of all critical areas, wetlands, waterbodies, and buffers adjacent to the proposed project area;

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

   g. An assessment of the probable cumulative impacts to critical areas resulting from the proposed development;

   h. A description of reasonable efforts made to apply mitigation sequencing pursuant to regulation 1.F.2 of this appendix;

   i. Plans for adequate mitigation, as needed, to offset any impacts, in accordance with regulation 1.F.3 of this appendix;

   j. A discussion of the performance standards applicable to the critical area and proposed activities;

   k. Financial guarantees to ensure compliance; and

l. Any additional information required for a specific type of critical area as indicated by this appendix.

F. Mitigation

1. General Requirements.

   a. The applicant shall avoid all impacts that degrade the functions and values of critical areas. Unless otherwise provided in this appendix, if alteration to a 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 most current, accurate, and complete scientific or technical information available in accordance with an approved critical area report, 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 or unless mitigation at a regional or watershed-based location provides greater environmental benefit, 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 City 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.

2. 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 below sequential order of preference. Mitigation for individual actions may include a combination of the below measures.

   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, 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, frequently flooded 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.

3. Mitigation Plan Requirements. When mitigation is required, the applicant shall submit for approval a mitigation plan as part of the critical area report. The mitigation plan shall include:

a. A description of the anticipated impacts to critical areas and the mitigating actions proposed, including compensation goals and objectives, mitigation site selection, 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.

b. The mitigation plan shall include performance standards 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 appendix have been met.

c. Detailed construction plans.

d. 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 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 years.

e. The mitigation plan shall include a contingency plan, identifying potential courses of action and corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.

f. The mitigation plan shall include financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with IMC 15.02.030,

Applicability. In the event that a permit applicant does not provide adequate security for the mitigation required as a condition of its approval, then the Shoreline Administrator shall have the discretion of requiring that the mitigation be completed prior to the issuance of the final approval.

4. Innovative Mitigation. The City may encourage, facilitate, and approve innovative mitigation projects that are based on the most current, accurate, and complete scientific or technical information available.

G. Nonconforming uses & structures

1. Nonconforming uses and structures shall be subject to Section 8.3 of the main body of the City's Shoreline Master Program, Nonconforming uses, structures, and lots, and the following provision. In the event of any conflict, the following provision shall apply.

2. Expansion of an existing non-conforming use or structure into the buffer and associated building setback of a fish and wildlife habitat conservation area or wetland may be allowed, where expansion outside of the buffer and associated building setback is not feasible and where the purpose of the expansion is to serve a function that is an essential component of the use or structure. Expansion into an actual critical area is prohibited. Decreasing the distance between the critical area and the existing use or structure requires a shoreline variance as prescribed in the main body of the City's Shoreline Master Program. Any expansion must comply with all other applicable requirements of the City code.

   a. For purposes of this provision, expansion outside of the buffer and associated building setback shall be considered not feasible only when, considering the function to be served by the expansion and the existing structure or use's layout and infrastructure (e.g. plumbing, drainage and electrical systems):

      i. Expansion away from the buffer and associated building setback within the buildable area of the site will not realize the intended functions of the expansion; and

      ii. Expansion away from the buffer and associated building setback, including into non-critical area setbacks, will not realize the intended functions of the expansion; and

      iii. Expansion upwards to the maximum building height of the underlying land use district, within the existing footprint, or together with expansions permitted under regulations 1.G.2.a and 1.G.2.b of this appendix, will not realize the intended functions of the expansion.

b. Where allowed, expansions into the buffer and associated building setback shall be limited as follows:

   i. The expansion shall be along or behind the existing building line parallel to the edge of the critical area, unless such expansion is not feasible. When such expansion is not feasible expansion may only encroach further into the buffer or associated building setback subject to a shoreline variance.

   ii. Expansions shall be the minimum necessary to achieve the intended functions of the expansion, but in no event may the footprint expansion within the buffer and associated building setback exceed 1,000 square feet over the life of the structure.

   iii. Areas of new permanent disturbance and all areas of temporary disturbance within the buffer shall be mitigated and/or restored pursuant to a mitigation plan.

2 WETLANDS

A. Purpose

1. The purpose of this section is to recognize and protect the beneficial functions performed by wetlands.
2. This section regulates land use to avoid adverse effects on wetlands and maintain the functions and values of wetlands throughout the City.
3. This section establishes review procedures for development proposals in and adjacent to wetlands.

B. Identification & rating

1. Identification of wetlands and delineation of their boundaries pursuant to this section shall be done by a qualified professional in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within the City meeting the wetland designation criteria in that procedure are designated critical areas and are subject to this appendix.
2. If the City has reason to believe that a wetland may exist within 315 feet of a proposed development activity, a written determination by a qualified professional, in accordance with the methods in regulation 2.B.1 of this appendix, regarding the existence or nonexistence of wetlands within 315 feet of the proposed development activity must be submitted.

3. If it is determined under regulation 2.B.2 of this appendix that wetlands exist, a wetland delineation must be obtained when an activity regulated under the City's Shoreline Master Program is proposed within 315 feet of the wetland boundary. A written wetland report shall be prepared by a qualified professional pursuant to subsection 2.H of this appendix, Critical area report for wetlands. Wetland delineations are valid for five years; after such date, the City shall determine whether a revision or additional assessment is necessary.

4. Rating. Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Western Washington (Ecology Publication #04-06-029, or as revised and approved by Ecology).

5. Illegal modifications. Wetland rating categories shall not change due to illegal modifications made by the applicant or with the applicant's knowledge.

C. Regulated activities

1. The following activities are regulated if they occur in a regulated wetland or its buffer:

    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. Pile driving.

    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.

    h. "Class IV - General Forest Practices" under the authority of the "1992 Washington State Forest Practices Act Rules and Regulations," WAC 222-12-030, or as thereafter amended.

    i. Activities that result in:

        i. A significant change of water temperature.

        ii. A significant change of physical or chemical characteristics of the sources of water to the wetland.

iii. A significant change in the quantity, timing, or duration of the water entering the wetland.

iv. The introduction of pollutants.

2. Subdivisions. The subdivision and/or short subdivision of land in wetlands and associated buffers are 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:

i. Located outside of the wetland and its buffer; and

ii. Meets the minimum lot size requirements of IMC Title 15, Part 3, Zoning.

D. Exempt wetlands

1. The following wetlands are exempt from the buffer provisions contained in this appendix and the normal mitigation sequencing process in regulation 1.F.2 of this appendix. They may be filled if impacts are fully mitigated based on provisions in subsection 2.I of this appendix, Compensatory mitigation. If available, impacts should be mitigated through the purchase of credits from an in-lieu fee program or mitigation bank, consistent with the terms and conditions of the program or bank. In order to verify the following conditions, a critical area report for wetlands meeting the requirements in subsection 2.H of this appendix, Critical area report for wetlands, must be submitted.

a. All isolated Category III and IV wetlands less than 1,000 square feet that:

i. Are not associated with riparian areas or buffers.

ii. Are not part of a wetland mosaic.

iii. Do not contain habitat identified as essential for local populations of priority species identified by the Washington State Department of Fish and Wildlife or species of local importance.

E. Partial exemptions for wetlands & wetland buffers

In addition to the partial exemptions identified in subsection 1.C of this appendix, Partial exemptions, the activities listed below are allowed in wetlands and wetland buffers and do not require submission of a critical area report, except where such activities would result in a loss of the functions and values of a wetland or wetland buffer.

1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.
2. 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.
3. Drilling for utilities/utility corridors under a wetland or buffer, with entrance/exit portals located completely outside of the wetland buffer, 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 will be disturbed.
4. Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

F. Additional partial exemptions for wetland buffers

In addition to the activities identified in subsection 2.E of this appendix, Partial exemptions for wetlands and wetland buffers, the following uses may be allowed within a wetland buffer, but not within a wetland, in accordance with the review procedures of this appendix, provided they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

1. Passive recreation facilities designed and in accordance with an approved critical area report, including:
    a. Walkways and trails, provided that pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer 25 percent of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five feet in width for

pedestrian use only. Raised boardwalks with non-treated pilings may be acceptable.

b. Wildlife-viewing structures.

2. Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer 25 percent of the buffer of Category III or IV wetlands only, provided that:

a. No other location is feasible; and

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

G. Wetland buffers

1. Buffer Requirements. Wetland buffer zones shall be required for all regulated activities adjacent to regulated wetlands.

2. Standard Buffer Widths. The standard buffer widths in the table below have been established in accordance with the most current, accurate, and complete scientific or technical information available. They are based on the category of wetland, the intensity of the adjacent land use, and the habitat score as determined by a qualified wetland professional using the Washington State Wetland Rating System for Western Washington.

a. In determining wetland buffer widths, land use intensity shall be defined are as follows:

i. High-intensity land uses include commercial, institutional, dense residential (>1 unit/acre), and high-intensity recreation, such as ball fields.

ii. Moderate-intensity land uses include residential (≤1 unit/acre), moderate-intensity open space, paved trails, and maintained utility corridors.

iii. Low-intensity uses include forestry, open space, unpaved trails, and low-maintenance utility corridors.

b. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

Table B2-1. Standard wetland buffer widths

Wetland Category	Habitat Score (2014 Rating System)	Land Use Impact		
		Low	Moderate	High
Category I: Bogs	NA	125 ft	190 ft	250 ft
Category I: Wetlands with a High Conservation Value	NA	125 ft	190 ft	250 ft
Category I: Estuarine	NA	100 ft	150 ft	200 ft
Category I: Coastal Lagoons	NA	100 ft	150 ft	200 ft
Category I: Forested	Base buffer width on habitat function			
Category I (other than above)	8-9	150 ft	225 ft	300 ft
	5-7	75 ft	110 ft	150 ft
	< 5	50 ft	75 ft	100 ft
Category II: Interdunal	NA	75 ft	110 ft	150 ft
Category II: Estuarine	NA	75 ft	110 ft	150 ft
Category II (other than above)	8-9	150 ft	225 ft	300 ft
	5-7	75 ft	110 ft	150 ft
	< 5	50 ft	75 ft	100 ft
Category III	5-7	75 ft	110 ft	150 ft
	< 5	40 ft	60 ft	80 ft
Category IV	N/A	25 ft	40 ft	50 ft

3. Increased Wetland Buffer Widths. Buffer widths shall be increased on a case-by-case basis as determined by the City when a larger buffer is necessary to protect wetland functions and values. This determination shall be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the wetland. The documentation must include, but not be limited to, the following criteria:

    a. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored or documented priority species or habitats, or essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees;

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

    c. The adjacent land has minimal vegetative cover or slopes greater than 30 percent.

4. Buffer Averaging. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

   a. The wetland has significant differences in characteristics that affect its habitat functions.

   b. 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 or less-sensitive portion as demonstrated by a critical area report from a qualified wetland professional.

   c. The total area of the buffer after averaging is equal to the area required without averaging.

   d. The buffer at its narrowest point is never less than either 75 percent of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

5. Measurement of Wetland Buffers. All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.

6. Buffers on Mitigation Sites. All mitigation sites shall have buffers consistent with the buffer requirements of this section. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.

7. Signs and Fencing of Wetlands and Buffers:

   a. Permanent Signs. As a condition of any permit or authorization issued pursuant to this section, the City may require the applicant to install permanent signs along the boundary of a wetland or buffer.

      i. 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. Signs must be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity. The signs shall be worded as follows or with alternative language approved by the City:

Do Not Disturb
Protected Wetland Area
Contact City of Ilwaco
Regarding Uses, Restrictions, and Opportunities for Stewardship

b. Fencing.

i. 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.

ii. Fencing installed as part of a proposed activity or as required in this subsection shall be designed 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.

8. Buffer Maintenance. Except as otherwise specified or allowed in accordance with the City's Shoreline Master Program, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive non-native weeds is required for the duration of the mitigation bond.

H. Critical area report for wetlands

1. When Required. If the City determines that a wetland exists within 315 feet of the site of a proposed development activity, a wetland report prepared by a qualified professional shall be required. The expense of preparing the wetland report shall be borne by the applicant.

2. Minimum Standards for Wetland Reports. In addition to the general critical area report requirements of subsection 1.E of this appendix, Critical area report, critical area reports for wetlands must meet the following requirements.

a. The written report shall include at a minimum:

i. A description of the methodologies used to conduct the wetland delineations, rating system forms, or impact analyses, including references.

ii. 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 315 feet of the project boundaries using the best available information.

iii. For each wetland identified on site and within 315 feet of the project site provide: the wetland rating, including a description of and score for each function; 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.

iv. 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.

v. 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.

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

vii. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.

b. A copy of the site plan for the project must be included with the written report and must include, at a minimum:

i. 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).

ii. 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.

I. Compensatory mitigation

1. Mitigation Sequencing. Before impacting any wetland or its buffer, an applicant shall demonstrate compliance with regulation 1.F.2 of this appendix.

2. Requirements for Compensatory Mitigation:

    a. 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).

    b. Mitigation ratios shall be consistent with this section.

    c. Mitigation requirements may also be determined using the credit/debit tool described 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) consistent with IMC 15.18.030.I.8, Credit/Debit Method.

3. Compensating for Lost or Affected Functions. 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:

    a. The lost wetland provides minimal functions, 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

    b. Out-of-kind replacement of wetland type or functions will best meet watershed goals formally identified by the City, such as replacement of historically diminished wetland types.

4. Preference of Mitigation Actions. Mitigation for lost or diminished wetland and buffer functions shall rely on the types below in the following order of preference:

    a. Restoration (re-establishment and rehabilitation) of wetlands:

        i. 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.

ii. 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.

b. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. Establishment results in a gain in wetland acres. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.

i. 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:

(a) 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;

(b) The proposed mitigation site does not contain invasive plants or noxious weeds or that such vegetation will be completely eradicated at the site;

(c) 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

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

c. Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement should be part of a mitigation package that includes replacing the altered area and 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:

i. How the proposed enhancement will increase wetland and/or buffer functions;

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

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

d. Preservation of high-quality, at-risk wetlands as compensation is generally 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. Ratios for preservation in combination with other forms of mitigation generally range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being altered and the quality of the wetlands being preserved. Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

i. The area proposed for preservation is of high quality. The following features may be indicative of high-quality sites:

(a) Category I or II wetland rating (using the wetland rating system for western Washington).

(b) Rare wetland type (for example, bogs, mature forested wetlands, estuarine wetlands).

(c) The presence of habitat for priority or locally important wildlife species.

(d) Priority sites in an adopted watershed plan.

ii. Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other listed species.

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

iv. 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.

v. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by a land trust.

vi. The impact area is small (generally <½ acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland).

vii. The preservation site includes buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

5. Location of Compensatory Mitigation. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of paragraphs below apply. In that case, mitigation may be allowed off-site within the subwatershed of the impact site. When considering off-site mitigation, preference should be given to alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advanced mitigation.

a. There are no reasonable opportunities on site or within the sub-drainage basin (e.g. on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity).

b. On-site mitigation would require elimination of high-quality upland habitat.

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

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

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

ii. Credits from a state-certified wetland mitigation bank are used as compensation, and the use of credits is consistent with the terms of the certified bank instrument; or

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

e. 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 would require the construction of berms to hold the water.

6. Timing of Compensatory Mitigation. It is preferred that compensatory mitigation projects be completed prior to activities that will disturb wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

   a. The City may authorize a one-time temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified wetland professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g. project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). 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, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan.

7. Wetland Mitigation Ratios.[1]

Table B2-2. Wetland mitigation ratios

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement
Category I: Bog, Natural Heritage site	Not considered possible	Case by case	Case by case

Category I: Estuarine	Case by case	6:1 rehabilitation of an estuarine wetland	Case by case
Category I: Mature Forested	6:1	12:1	24:1
Category I: Based on functions	4:1	8:1	16:1
Category II: Estuarine	Case by case	4:1 rehabilitation of an estuarine wetland	Case by case
Category II	3:1	6:1	12:1
Category III	2:1	4:1	8:1
Category IV	1.5:1	3:1	6:1
Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1a, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance--Version 1, (Ecology Publication #06-06-011a, Olympia, WA, March 2006 or as revised). See also IMC 15.18.030.I.4.d for more information on using preservation as compensation.			

8. 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 Shoreline Administrator 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).

9. Compensatory Mitigation Plan. When a project involves wetland and/or buffer impacts, a compensatory mitigation plan prepared by a qualified professional shall be required, meeting the following minimum standards:

   a. Wetland Critical Area Report. A critical area report for wetlands must accompany or be included in the compensatory mitigation plan.

   b. Compensatory Mitigation Report. The report must include a written report and plan sheets that must contain, at a minimum, the following elements. Full guidance can be found in Wetland Mitigation in Washington State– Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication #06- 06-011b, Olympia, WA, March 2006 or as revised).

      i. The written report must contain, 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 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.

(b) Description of how the project design has been modified to avoid, minimize, or reduce adverse impacts to wetlands.

(c) Description of the existing wetland and buffer areas proposed to be altered. Include acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding lands uses, and functions. Also describe impacts in terms of acreage by Cowardin classification, hydrogeomorphic classification, and wetland rating.

(d) Description of the compensatory mitigation site, including location and rationale for selection. Include an assessment of existing conditions: acreage (or square footage) of wetlands and uplands, water regime, sources of water, vegetation, soils, landscape position, surrounding land uses, and functions. Estimate future conditions in this location if the compensation actions are not undertaken (i.e., how would this site progress through natural succession?).

(e) A description of the proposed actions for compensation of wetland and upland areas affected by the project. Include overall goals of the proposed mitigation, including a description of the targeted functions, hydrogeomorphic classification, and categories of wetlands.

(f) A description of the proposed mitigation construction activities and timing of activities.

(g) 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).

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

(i) Proof of establishment of notice on title for the wetlands and buffers on the project site, including the compensatory mitigation areas.

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

(a) 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.

(b) 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 altered, and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation.

(c) 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.

(d) Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes.

(e) 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 section.

(f) A plant schedule for the compensation area, including all species by proposed community type and water 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.

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

10. 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.

11. Protection of the Mitigation Site. The area where the mitigation occurred and any associated buffer shall be included in a notice on title consistent with regulation 1.D.3 of this appendix.

12. Monitoring. Mitigation monitoring shall be required for a period necessary to establish that performance standards have been met, but not for a period less than

five years. The project mitigation plan shall include monitoring elements that ensure certainty of success for the project's natural resource values and functions. If the mitigation goals are not obtained within the initial five-year period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals agreed to in the mitigation plan are achieved.

13. Wetland Mitigation Banks.

    a. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

        i. The bank is certified under state rules;

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

        iii. The proposed use of credits is consistent with the terms and conditions of the certified bank instrument.

    b. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the certified bank instrument.

    c. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the certified bank instrument.

14. In-Lieu Fee. To aid in the implementation of off-site mitigation, the City may develop an in-lieu fee program. Credits from an approved in-lieu-fee program may be used when the following apply:

    a. The approval authority determines that it would provide environmentally appropriate compensation for the proposed impacts.

    b. The mitigation will occur on a site identified using the site selection and prioritization process in the approved in-lieu-fee program instrument.

    c. The proposed use of credits is consistent with the terms and conditions of the approved in-lieu-fee program instrument.

    d. Land acquisition and initial physical and biological improvements of the mitigation site must be completed within three years of the credit sale.

    e. 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.

f. 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.

15. 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.

16. Alternative Mitigation Plans. The City may approve alternative critical areas mitigation plans that are based on the most current, accurate, and complete scientific or technical information available. Alternative mitigation proposals must provide 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 for approval of an alternative mitigation proposal:

    a. 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).

    b. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual habitat areas.

    c. Mitigation according to subsection of this section is not feasible due to site constraints such as parcel size, stream type, wetland category, or geologic hazards.

    d. There is clear potential for success of the proposed mitigation at the proposed mitigation site.

    e. The plan shall contain clear and measurable standards for achieving compliance with the specific provisions of the plan. A monitoring plan shall, at a minimum, meet the provisions in regulation 2.I.12 of this appendix.

    f. The plan shall be reviewed and approved as part of overall approval of the proposed use.

    g. 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.

    h. Mitigation guarantees shall meet the minimum requirements as outlined in regulation 2.I.9.b.i(h) of this appendix.

i. Qualified professionals in each of the critical areas addressed shall prepare the plan.

j. The City 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.

J. Unauthorized alterations & enforcement

1. Minimum Performance Standards for Restoration. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can demonstrate that greater functions and habitat values can be obtained, these standards may be modified:

   a. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.

   b. The historic soil types and configuration shall be restored to the extent practicable.

   c. The wetland 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. Compliance with other applicable provisions of this chapter shall be demonstrated.

3 FISH & WILDLIFE HABITAT CONSERVATION AREAS

A. Purpose

1. The purpose of this section is to protect fish and wildlife habitats in the City by regulating land use to avoid adverse effects on, and maintain the functions and values of, such habitats.

B. Designation

1. All areas within the City meeting one or more of the following criteria are designated as fish and wildlife habitat conservation areas and are subject to the provisions of this appendix.

   a. Areas with which State or Federally Designated Endangered, Threatened, and Sensitive Species have a Primary Association.

i. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered.

ii. State designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington identified by the Washington State Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats.

b. State Priority Habitats and Areas Associated with State Priority Species. Priority habitats and species are identified by the Washington State Department of Fish and Wildlife.

c. Habitats and Species of Local Importance. Habitats and species of local importance are those identified by the City, including but not limited to those habitats and species that, due to their population status or sensitivity to habitat manipulation, warrant protection. Habitats may include a seasonal range or habitat element with which a species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.

d. 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.

e. Kelp and Eelgrass Beds and Herring and Smelt Spawning Areas.

f. Naturally Occurring Ponds under 20 Acres. Naturally occurring ponds are those ponds under 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, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.

g. 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.

h. Lakes, Ponds, Streams, and Rivers Planted with Game Fish by a Governmental or Tribal Entity.

i. 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.

j. 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.

k. Land Useful or Essential for Preserving Connections Between Habitat Blocks and Open Spaces.

2. The approximate locations and extents of habitat conservation areas may be shown on, but shall not be limited to, the following list of maps. The maps are for reference only and do not provide a final critical area designation.

a. Washington State Department of Fish and Wildlife Priority Habitat and Species maps.

b. Washington State Department of Natural Resources water type maps.

c. Washington State Department of Natural Resources ShoreZone Inventory.

d. Washington State Department of Health shellfish maps.

e. Washington State Department of Natural Resources Natural Heritage Program maps.

f. Anadromous and resident salmonid distribution maps contained in the Habitat Limiting Factors reports published by the Washington Conservation Commission.

g. Washington State Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps.

3. Designation of Habitats and Species of Local Importance. The City shall accept and consider nominations for habitat areas and species to be designated as locally important.

a. Process.

i. Habitats and species may be nominated by any person.

(a) The nomination should indicate whether specific habitat features are to be protected (for example, nest sites, breeding areas, and nurseries) or whether the habitat or ecosystem is being nominated

in its entirety.

(b) The nomination may include management strategies for the species or habitats. Management strategies must be supported by the most current, accurate, and complete scientific or technical information available, and where restoration of habitat is proposed, a specific plan for restoration must be provided prior to nomination.

ii. The Shoreline Administrator shall determine whether the nomination proposal is complete, and if complete, shall evaluate it according to the characteristics enumerated in regulation 3.B.3.b of this appendix and make a recommendation to the Planning Commission.

iii. The Planning Commission shall hold a public hearing on the proposal and make a recommendation to the City Council based on the characteristics enumerated in regulation 3.B.3.b of this appendix.

iv. After receiving the recommendation of the Planning Commission, the City Council shall vote on the nomination.

b. Characteristics. Habitats and species to be designated must exhibit the following characteristics:

i. Local populations of native species in danger of extirpation based on existing trends, including:

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

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

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

iii. Long-term persistence of a species is dependent on the protection, maintenance, and/or restoration of the nominated habitat;

iv. Areas nominated to protect a particular habitat or species represent 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;

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

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

C. Critical area report

1. When Required. A critical area report for fish and wildlife habitat conservation areas shall be required when:

   a. A project area is located within 150 feet of the ordinary high water mark of a waterbody subject to this chapter, except that a critical area report is not required for proposed activities when the only critical area concerned is a Type 1 (S) water unless otherwise specified; or

   b. A project area is located a distance equal to or less than the potential critical area buffer width and building setback of other fish and wildlife habitat conservation areas meeting the criteria of regulation 3.B.1 of this appendix that are not located waterward of the ordinary high water mark of a waterbody subject to this section.

2. Additional Requirements. In addition to the general critical area report requirements of subsection 1.E of this appendix, Critical area report, critical area reports for fish and wildlife conservation areas must meet the requirements of this subsection.

   a. Preparation by a Qualified Professional. A critical area 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. The following areas shall be addressed in a critical area report for fish and wildlife habitat conservation areas:

      i. The project area of the proposed activity;

      ii. All habitat conservation areas and buffers within 150 feet of the project area; and

      iii. All shoreline areas, floodplains, other critical areas, and related buffers within 150 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 a habitat assessment including, at a minimum, the following information:

i. A detailed description of vegetation on and adjacent to the project area and its associated buffer;

ii. 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;

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

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

v. 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 mitigation sequencing pursuant to regulation 1.F.2 of this appendix; and

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

3. Additional Information May Be Required. When appropriate due to the type of habitat or species present or the project area conditions, the Shoreline Administrator may also require the habitat assessment to include:

a. 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; or

b. A request for consultation with the Washington State Department of Fish and Wildlife or other appropriate agency or tribe.

D. Performance standards

1. General Standards.

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.

b. Approvals of Activities. The City may 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 must be based on the most current, accurate, and complete scientific or technical information available and may include, but are not limited to, the following:

i. Establishment of buffer zones;

ii. Preservation of critically important vegetation and/or habitat features such as snags;

iii. Limitations on access to the habitat area; or

iv. Seasonal restriction of construction activities.

c. Buffers.

i. Establishment of Buffers. The City 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 State Department of Fish and Wildlife. Habitat conservation areas and their buffers shall be preserved in perpetuity through the use of notices on title and native growth protection areas in accordance with subsection 1.D of this appendix, General critical area protective measures.

ii. Habitat Buffer Averaging. The City may allow habitat area buffer widths to be reduced in accordance with a critical area report, the most current, accurate, and complete scientific or technical information available, and the management recommendations issued by the Washington State Department of Fish and Wildlife, 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 25 percent in any location.

d. Signs and Fencing.

i. Temporary Markers. The outer perimeter of the habitat conservation area or buffer and the limits of areas authorized to be disturbed shall be marked in the field to ensure that no unauthorized intrusion will occur and shall be verified by the Shoreline Administrator prior to the commencement of authorized activities. Temporary markers shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

ii. Permanent Signs. As a condition of any permit or authorization issued pursuant to this section, the City may require the 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 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 City:

Habitat Conservation Area
Do Not Disturb
Contact City of Ilwaco Regarding Restrictions

iii. Fencing.

(a) The City shall determine if fencing is necessary to protect the function and values of the critical area. If found to be necessary, the City shall condition any permit or authorization issued pursuant to this section to require the applicant to install a permanent fence at the edge of the habitat conservation area or buffer.

(b) Fencing installed as part of a proposed activity or as required by this subsection shall be designed to not interfere with species migration and shall be constructed in a manner that minimizes habitat impacts.

e. Subdivisions. The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:

i. Land that is located wholly within a habitat conservation area or its buffer may not be subdivided.

ii. Land that is located partially within a habitat conservation area or its buffer may be subdivided 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 IMC Title 15, Part 3, Zoning.

iii. Access roads and utilities serving the proposed may be permitted within the habitat conservation area and associated buffers only if the City determines that no other feasible alternative exists and when consistent with the City's Shoreline Master Program.

f. 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.

g. 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.

h. 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.

2. Specific Standards.

a. Riparian Habitat Areas.

i. Unless otherwise allowed by the City's Shoreline Master Program, all structures and activities must be located outside of a riparian habitat area.

ii. Standard riparian habitat area widths are shown in the table below and are based on the Washington State Department of Natural Resource Stream Typing System described in WAC 222-16-031 as now or hereafter amended.

Table B3-1. Shoreline riparian habitat area widths

Water Type	Shoreline Environment Designation	Buffer[1]	Structure Setback[1,2]
Type 1 (S)	High-Intensity A	NA	50 feet or the waterward line of impervious surface parallel to the shoreline
	High-Intensity B	75 feet	15 feet
	Shoreline Residential A	100 feet	15 feet
	Shoreline Residential B	75 feet	15 feet
	Shoreline Residential C	50 feet	15 feet
	Urban Conservancy	200 feet	15 feet
	Natural	200 feet	15 feet

[1] Buffer and setback do not apply to water-dependent uses.
[2] Structure setback measured from edge of buffer or from the ordinary high water mark if no buffer is required.

Table B3-2. Other riparian habitat area widths

Water Type	Buffer	Structure Setback[1]
2,3 (F)	100 feet	15 feet
4 (Np)	50 feet	15 feet
5 (Ns)	50 feet	15 feet

[1] Structure setback measured from edge of buffer.

iii. 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.

iv. Standard riparian habitat area widths may be increased if the standard width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area.

v. 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.

vi. The performance standards set forth in this subsection may be modified at the City'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.

vii. When clearing and grading in buffers is permitted as part of an authorized activity or as otherwise allowed in these standards, the following shall apply:

(a) Grading is allowed only during the dry season, which is typically regarded as beginning on May 1 and ending on October 1, provided that the City may extend or shorten the dry season on a case-by-case basis, determined on actual weather conditions.

(b) 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.

(c) 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.

(d) Erosion and sediment control that meets or exceeds City standards must be provided.

viii. For Type S shorelines only, limited removal of existing trees or vegetation located on the same property as a single-family residence may be allowed for maintenance of a pre-existing view from the primary structure, or to establish a view for a new primary structure provided that:

(a) The applicant submits a critical area report, including a mitigation plan;

(b) The applicant demonstrates to the satisfaction of the Shoreline Administrator that the vegetation removal is the minimum necessary to re-establish or establish a view of the water similar to that enjoyed by other residences in the area and that pruning methods are not sufficient to provide an adequate view of the water similar to that enjoyed by other residences in the area;

(c) Existing significant native trees are not removed from the buffer;

(d) In no instance, including accounting for other approved alterations, shall vegetation removal exceed 20 percent of the required shoreline buffer area or reduce the vegetation canopy coverage to less than 65 percent in the shoreline buffer;

(e) Vegetation removal occurring adjacent to the shoreline shall also be limited to 15 linear feet of the water frontage;

(f) The applicant shall address any potential impacts to geologically hazardous areas the critical area report;

(g) The Shoreline Administrator may deny a request or condition the approval if it is determined that the action will result in an adverse effect to any of the following:

(i) Slope stability;

(ii) Habitat value;

(iii) Health of surrounding vegetation;

(iv) Risk of wind damage to surrounding vegetation;

(v) Nearby surface or groundwater; or

(vi) Water quality of a nearby water body.

ix. A private access pathway constructed of pervious materials may be installed for shoreline residential access, a maximum of four feet wide, through the shoreline management buffer to the ordinary high water mark. Impervious materials may be used as needed to construct a safe, tiered pathway down a slope. Raised boardwalks may also be constructed through wetland areas to reach the shoreline waterbody consistent with regulations in this article. A railing may be installed on one edge of the pathway, a maximum of 36 inches tall and of open construction. Pathways to the shoreline should take the most direct route feasible consistent with appropriate safety standards.

b. Aquatic Habitat. The following activities may be permitted within a riparian habitat area, pond, lake, water of the state, or associated buffer.

i. Roads, Trails, Bridges, and Rights-of-Way. Construction of trails, roadways, and minor road bridging, less than or equal to 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) Trails and associated viewing platforms shall not be made of continuous impervious materials.

ii. 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 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.

iii. 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.

c. Critical Saltwater Habitats.

i. Docks, piers, bulkheads, bridges, fill, floats, jetties, utility crossings, and other human-made structures shall not intrude into or over critical saltwater habitats except when all of the conditions below are met:

(a) The public's need for such an action or structure is clearly

demonstrated and the proposal is consistent with protection of the public trust, as embodied in RCW 90.58.020;

(b) Avoidance of impacts to critical saltwater habitats by an alternative alignment or location is not feasible or would result in unreasonable and disproportionate cost to accomplish the same general purpose;

(c) The project including any required mitigation, will result in no net loss of ecological functions associated with critical saltwater habitat;

(d) The project is consistent with the state's interest in resource protection and species recovery;

ii. Over-water and near-shore developments in marine and estuarine waters must inventory the site and adjacent beach sections to assess the presence of critical saltwater habitats and functions. The inventory shall be consistent with accepted research methodology. Inventories prepared for other agencies with jurisdiction may be submitted to satisfy this requirement.

4 GEOLOGICALLY HAZARDOUS AREAS

A. Purpose

The purpose of this section is to minimize hazards to the public from development activities on or adjacent to areas of geological hazard. Geologically hazardous areas include the following: erosion hazard areas, landslide hazard areas, seismic hazard areas, and tsunami hazard areas.

B. Designation

1. 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 "severe," or "very severe" rill and inter-rill erosion hazard. Erosion hazard areas are also those areas impacted by shoreline and/or stream bank erosion, coastal wave erosion zones, and those areas within a river's channel migration zone.

2. Landslide Hazard Areas. Landslide hazard areas are those areas meeting any of the following criteria:

   a. Areas of historic failure, such as:

i. Those areas mapped by the Washington State 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

ii. Areas designated as quaternary slumps, earthflows, mudflows, or landslides on maps published as the U.S. Geological Survey or the Washington State Department of Natural Resources.

b. Areas with all of the following characteristics:

i. A slope steeper than 15 percent;

ii. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

iii. Springs or groundwater seepage.

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

d. Slopes having gradients greater than 80 percent subject to rock fall during seismic shaking.

e. Areas potentially unstable because of rapid stream incision and stream bank erosion; and undercutting by wave action.

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

g. Any area with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of solid rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 20 feet of vertical relief.

3. Seismic Hazard Areas. The entire City constitutes a seismic hazard area.

4. Tsunami Hazard Areas. Tsunami hazard areas are shoreline or coastal areas susceptible to flooding and inundation as the result of excessive wave runup action derived from seismic or other geologic events.

C. Partial exemptions

The following activities are allowed in geologically hazardous areas, provided they are allowed pursuant to City's Shoreline Master Program, and do not require submission of a critical area report:

1. Erosion and Landslide Hazard Areas. Except as otherwise provided for in this appendix, only those activities approved and permitted consistent with an approved critical area report may be allowed.
2. Seismic and Tsunami Hazard Areas. All activities consistent with this appendix and other City regulations may be allowed.

D. Critical area report

1. When Required. A critical area report for geologically hazardous areas shall be required when an erosion or landslide hazard area is located within 200 feet of a project area, or if an erosion or landslide hazard area located farther than 200 feet from a project area may impact the proposal.
2. Additional Requirements. In addition to the general critical area report requirements of subsection 1.E of this appendix, Critical area report, critical area reports for geologically hazardous areas must meet the following requirements:
    a. Preparation by a Qualified Professional. A critical area 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 groundwater flow systems, and who has experience preparing reports for the relevant type of hazard.
    b. Areas Addressed. The following areas shall be addressed in a critical area report for geologically hazardous areas:
        i. The project area of the proposed activity; and
        ii. All geologically hazardous areas within 200 feet of the project area, or farther than 200 feet from the project area if such areas might impact the proposal.
    c. Geological Hazards Assessment. A critical area report for a geologically hazardous area shall contain a geological hazards assessment, including, at a minimum, the following site- and proposal-related information:
        i. Plans for the proposal showing, as applicable:
            (a) The type and extent of geologic hazard areas and other critical areas, including their buffers, within 200 feet of the project area, or farther than 200 feet from the project area if such areas might 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.

(d) Clearing limits.

ii. 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. 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 field investigations; published data, and references; data and conclusions from past assessments of the site; and site-specific measurements, tests, investigations, or studies that support the identification of geologically hazardous areas.

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

iii. 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.

iv. A recommendation for the minimum no-disturbance buffer and minimum building setback from any geologic hazard.

d. Incorporation of Previous Study. Where a valid critical area report has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be incorporated into the required critical area report. The applicant shall submit a geological hazards assessment addendum detailing any changed environmental conditions associated with the site.

e. Mitigation of Long-Term Impacts. When hazard mitigation is required, a 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.

E. Performance standards

1. General Standards.
   a. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:
      i. Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;
      ii. Will not adversely impact other critical areas;
      iii. 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
      iv. 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 shall not be sited within or below geologically hazardous areas unless there is no other practical alternative.
2. Erosion and Landslide Hazard Area Standards. Activities on sites containing erosion or landslide hazards shall meet the general standards in subsection 4.E.1 of this appendix and the following requirements.
   a. Erosion Hazard Area Buffers. No new structures shall be located on a permanent foundation within a shoreline and/or stream bank erosion hazard area unless the foundation is located at a distance landward of the ordinary high water mark that accommodates potential future erosion.
   b. Landslide Hazard Area Buffers. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon a critical area report.
      i. The minimum buffer shall be equal to the height of the slope or 50 feet, whichever is greater.
      ii. The buffer may be reduced to a minimum of 10 feet when a qualified professional demonstrates that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area.

iii. The buffer may be increased where a larger buffer is necessary to prevent risk of damage to proposed and existing development.

c. Alterations. Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a geologic hazard assessment is submitted and certifies that:

i. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;

ii. The development will not decrease slope stability on adjacent properties; and

iii. Such alterations will not adversely impact other critical areas.

d. 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 the City's Shoreline Master Program. 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:

i. Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas.

ii. 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.

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

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

v. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes.

vi. Development shall be designed to minimize impervious lot coverage.

e. 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.

f. Seasonal Restriction. Clearing shall be allowed only from May 1 to October 1 of each year provided that the City may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practice permit issued by the City or the Washington State Department of Natural Resources.

g. 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.

h. Point Discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area are prohibited, except if:

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

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

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

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

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

ii. Access roads and utilities may be permitted within the landslide hazard area and associated buffers if the City determines that no other feasible alternative exists.

3. Seismic and Tsunami Hazard Area Standards.

a. All development within areas that meet the classification criteria for seismic or tsunami hazard areas shall comply with the model codes as approved and adopted by the State Building Code Council, together with any amendments or additions.

5 FREQUENTLY FLOODED AREAS

A. Purpose

The purpose of the frequently flooded areas section is to minimize public and private losses due to flood conditions in specific areas.

B. Designation

For the purpose of this section, frequently flooded areas within the City shall be classified using the following criteria:

1. Those areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the City of Ilwaco" dated August 1978, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM) dated February 1, 1979, and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The FIRM is on file at Ilwaco City Hall, 120 First Ave. N., Ilwaco, WA. The best available information for flood hazard area identification as outlined in IMC 15.16.060.B.2 shall be the basis for regulation until a new FIRM is issued that incorporates the data utilized under IMC 15.16.060.B.2.
2. When base flood elevation data have not been provided (A and V zones) the local administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source.

C. Development standards

All development within frequently flooded areas shall comply with IMC 15.16, Development in flood areas, as amended, and all other applicable regulations.