CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION CHELAN COUNTY

Chapters:

Chapter 1
FISH AND WILDLIFE HABITAT CONSERVATION AREAS OVERLAY DISTRICT (FWOD)

Sections:

1.010 Purpose.

It is the purpose of this chapter to satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221, to designate and classify fish and wildlife conservation areas and to protect, restore where practical, and enhance fish and wildlife populations and their associated habitats.

1.020 Applicability.

(1) When a chapter reference is used, it shall be inclusive of all of Appendix B.

The provisions of this chapter shall apply to development within the shoreline jurisdiction of the County that is proposed to be located within fish and wildlife habitat conservation areas by definition or within a review area of one thousand feet from a mapped point location (den or nest site) of a priority species.

Fish and wildlife protection is not intended to preclude reasonable use of property, nor is it intended to authorize public use of private property or prevent trespassing laws from being enforced.

This chapter does not require any permit in addition to those otherwise required by county ordinances. This chapter does not exempt uses and activities from any state or federal permits that may be required. Uses and activities in fish and wildlife habitat conservation areas for which no permit or approval is required by any other county ordinance remain subject to the standards and requirements of this chapter.

1.030 Mitigation sequencing.

Development proposals affecting fish and wildlife habitat conservation areas shall demonstrate that reasonable efforts have been examined with the intent to avoid and minimize impacts to the functions and values of the critical area. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized or compensated for in the following order of preference:

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

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

(3) Rectifying the impact to fish and wildlife conservation areas by repairing, rehabilitating, or restoring the affected environment to the historic conditions or the conditions at the time of the initiation of the project;

(4) Minimizing the impact by restoring or stabilizing the area through engineered or other methods;

(5) Reducing the impact over time by preservation and maintenance operation during the life of the action;

(6) Compensating for the impact by replacing, enhancing or providing substitute resources or environments; and

(7) Monitoring the required mitigation and taking remedial action when necessary.

1.040 Protection for fish and wildlife habitat conservation areas.

(1) Wetland Habitat Areas. All fish and wildlife habitat located within wetlands or wetland buffers is protected pursuant to Chapter 2 (Wetland Areas Overlay District (WOD)). Additional protection measures are provided for the following:

(A) Mapped point locations (den or nest sites) or polygons of nongame priority species within wetlands or wetland buffers are also protected through the application of Section 1.090 of this chapter.

(B) Wetlands or wetland buffers which contain Class I wildlife habitat conservation areas shall also be protected pursuant to Section 1.080 of this chapter.

(2) Riparian and Instream Habitat Areas. All fish and wildlife habitat within riparian and instream habitats is protected pursuant to Section 1.100. Additional protection measures are provided for the following:

(A) Mapped point locations (den or nest sites) or polygons of nongame priority species within riparian habitat areas are also protected through the application of Section 1.090.

(B) When riparian habitat areas contain Class I wildlife habitat conservation areas, they shall also be protected pursuant to Section 1.080.

(3) Other Wildlife Habitat. All Class I and II wildlife habitat conservation areas not otherwise protected pursuant to the requirements of subsections (1) and (2) of this section shall be protected pursuant to the requirements of Sections 1.080 and 1.090.

1.050 Relationship to shoreline master program and other critical area regulations.

In the event of any conflict between this chapter and regulations contained in the Chelan County shoreline master program, as amended, or any other critical area regulations, those regulations which provide greater protection of shoreline resources shall prevail, when consistent with SMA policy.

1.060 Retention of county authority.

The county shall retain authority over administrative actions and development permits issued by the county.

1.070 Fish and wildlife habitat conservation areas classification and designation.

(1) Classification. The following classifications shall be used in designating fish and wildlife conservation areas:

(A) Class I Fish and Wildlife Habitat Conservation Areas.

(i) State natural area preserves and natural resource conservation areas; and

(ii) Habitat which have a primary association with species listed by federal agencies as endangered or threatened under the Federal Register for the Endangered Species Act of 1973, or species listed by state agencies as endangered (WAC 232-12-014), threatened (WAC 232-12-011) or sensitive (WAC 232-12-011).

(2) Class II Fish and Wildlife Habitat Conservation Areas.

(A) Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;

(B) Waters of the state;

(C) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

(D) Priority habitats and species as identified by the Washington State Department of Fish and Wildlife Priority Habitats and Species Program;

(E) Mule deer and/or elk winter range and migration corridors.

(3) Designation. All lands and shorelands classified as fish and wildlife habitat conservation areas are designated as fish and wildlife habitat conservation areas. The Chelan County department of building, fire safety and planning will maintain maps to provide information to the public and aid in the administration of this section. Sites that include fish and wildlife habitat conservation areas not mapped shall be subject to the provisions of this section. In the event of a conflict between the information shown on the maps and information shown as a result of field investigations, the latter shall prevail. Maps utilized by Chelan County to identify fish and wildlife habitat conservation areas include the following maps and map databases:

(A) The Washington State Department of Fish and Wildlife Priority Habitats and Species and Wildlife Heritage Maps and Database, as amended;

(B) Washington Rivers Information System Maps and Database, as amended;

(C) National Wetlands Inventory Maps and Database, as amended;

(D) Chelan County shoreline master program, as amended;

(E) DNR Stream Type Maps for Type S, F, Np, and Ns waters per criteria as set forth in WAC 222-16-031, Interim water typing system, as amended;

(F) Mule deer and/or elk winter range and migration corridors in Chelan County identified on the Chelan County mule deer and elk winter range maps in the community development department.

1.080 Class I wildlife habitat conservation area standards.

(1) Major Development Within Class I Wildlife Habitat Conservation Areas. A review area of one thousand feet of a mapped point location of a den or nest site or a polygon of a species listed as endangered, threatened, or sensitive by the state of Washington, or registered as endangered or threatened by the federal government, shall be subject to the following standards:

(A) Pertinent agencies including but not limited to the Washington State Department of Fish and Wildlife shall be given written notice of the development proposal. In order for agency comments to be considered, the agencies shall have thirty days from the date of mailing of the notice to submit written comments to the county. The referral is necessary to determine the accuracy of mapping, presence of habitat, and potential impacts of the development.

(B) If the site does contain wildlife habitat regulated by this chapter, the applicant must meet the requirements outlined in this section. A habitat management and mitigation plan, pursuant to Section 1.110, shall be required for major developments in Class I wildlife habitat conservation areas. In the case of bald eagles, an approved bald

eagle management plan by the Washington State Department of Fish and Wildlife meeting the requirement and guidelines of the bald eagle protection rules (WAC 232-12-292, as amended) will satisfy the requirements for a habitat management and mitigation plan.

(2) Minor Development Within Class I Wildlife Conservation Areas. A review area of one thousand feet of a mapped point location of a den or nest site, or a polygon of a species listed as endangered, threatened, or sensitive by the state of Washington, or registered as endangered or threatened by the federal government, shall be subject to the following standards:

(A) Pertinent agencies, including but not limited to the Washington State Department of Fish and Wildlife, shall be given written notice of the development proposal. In order for agency comments to be considered, the agencies shall have thirty days from the date of mailing of the notice to submit written comments to the county. The referral is necessary to determine the accuracy of mapping, presence of habitat, and potential impacts of the development.

(B) If the site does contain wildlife habitat regulated by this section, the applicant shall meet the requirements outlined in subsections (2)(C) and (D) of this section.

(C) The administrator shall review comments from pertinent agencies and the following criteria to determine if the standards outlined in subsection (2)(D) of this section are adequate to protect wildlife habitat:

(i) Published guidelines regarding the protection and management of the affected species, including but not necessarily limited to those published by the Washington State Department of Fish and Wildlife;

(ii) Physical characteristics of the subject parcel and vicinity, including topography and vegetation;

(iii) Historic, current and proposed uses, proposed density of the development site, and development characteristics in the vicinity of the site;

(iv) Is the site within an urban growth area, rural area or resource land?

(v) What are the potential land uses for the site as identified by the comprehensive plan and zoning code?

(vi) Is the site's habitat fragmented or is it connected to significant habitat blocks or open spaces?

(vii) Consider the habitat located on the site and in the surrounding area. Would impacts of the development be site-specific or have the potential to be cumulative with existing and potential future developments in the area?

If it is determined by the administrator that the standards outlined in subsection (2)(D) of this section are not adequate to protect the wildlife habitat, a habitat management and mitigation plan, pursuant to Section 1.110, shall be required. In the case of bald eagles, an approved bald eagle management plan by the Washington State Department of Fish and Wildlife meeting the requirements and guidelines of the bald eagle protection rules (WAC 232-12-292, as amended) will satisfy the requirements for a habitat management and mitigation plan, pursuant to Section 1.110. The administrator shall base his or her decision on written findings of fact and conclusions.

(D) Minor development within Class I wildlife habitat conservation areas shall be subject to the following standards:

(i) Disturbed areas shall be revegetated with native vegetation within one growing season of project completion in accordance with an approved revegetation plan, where appropriate.

(ii) Site planning shall minimize disruption of existing topography and vegetation, and shall incorporate opportunities for phased clearing.

(iii) Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval shall be marked in the field and approved by the county prior to undertaking the project.

(iv) Fencing requirements as outlined in Section 1.190.

(v) An erosion and drainage control plan will be required for any clearing, grading and/or excavation of one acre or greater in area.

(vi) Building sites are encouraged to be located away from critical wildlife habitat corridors as feasibly as possible.

(3) Any person aggrieved by the administrator's decision can file an appeal of the decision in conformance with Section 7.13, Appeals of this SMP.

1.090 Class II wildlife habitat conservation area standards.

(1) Major development within Class II wildlife habitat conservation areas within a review area of one thousand feet from a mapped point location of a nest or den site or polygon of a priority species shall be subject to the following standards:

(A) Pertinent agencies, including but not limited to the Washington State Department of Fish and Wildlife, shall be given written notice of the development proposal. In order for agency comments to be considered, the agencies shall have fourteen days from the date of mailing of the notice to submit written comments to the county. The referral is necessary to determine the accuracy of mapping, presence of habitat, and potential impacts of the development.

(B) If the site does contain wildlife habitat regulated by this section, the applicant shall meet the requirements outlined in subsections (1)(C) and (D) of this section.

(C) The administrator shall review written comments from the agencies and the following criteria to determine if the standards outlined in Section 1.080(2)(D) are adequate to protect wildlife habitat:

(i) Published guidelines regarding the protection and management of the affected species, including but not necessarily limited to those published by the Washington State Department of Fish and Wildlife;

(ii) Physical characteristics of the subject parcel and vicinity, including topography and vegetation;

(iii) Historic, current and proposed uses, proposed density of the development site, and development characteristics in the vicinity of the site;

(iv) Is the site within an urban growth area, rural area or resource land?

(v) What are the potential land uses for the site as identified by the comprehensive plan and zoning code?

(vi) Is the site's habitat fragmented or is it connected to significant habitat blocks or open spaces?

(vii) Consider the habitat located on the site and in the surrounding area. Would impacts of the development be site-specific or have the potential to be cumulative with existing and potential future developments in the area?

The administrator will have up to thirty days after the end of the comment period to determine if the standards outlined in Section 1.080(2)(D) provide adequate protection to wildlife habitat. If it is determined that the standards of Section 1.080(2)(D) are not adequate to protect wildlife habitat, a habitat management and mitigation plan shall be required pursuant to Section 1.110. The administrator shall base his or her decision on written findings of fact and conclusions.

(D) Major development within Class II wildlife habitat conservation areas shall be subject to the standards outlined in Section 1.080(2)(D).

(2) Minor development within Class II wildlife habitat conservation areas within a review area of one thousand feet from a mapped point location of a nest or den site or polygon of a priority species shall be subject to the following standards:

(A) Pertinent agencies, including but not limited to the Washington State Department of Fish and Wildlife, shall be given written notice of the development proposal. In order for agency comments to be considered, the agencies shall have fourteen days from the date of mailing of the notice to submit written comments to the county. The referral is necessary to determine the accuracy of mapping, presence of habitat, and potential impacts of the development.

(B) If the site does contain fish and wildlife habitat regulated by this chapter, the applicant must meet the requirements outlined in subsection (2)(C) of this section.

(C) The administrator shall review written comments from the agencies and the following criteria to determine if the standards outlined in Section 1.080(2)(D) are adequate to protect wildlife habitat:

(i) Published guidelines regarding the protection and management of the affected species, including but not necessarily limited to those published by the Washington State Department of Fish and Wildlife;

(ii) Physical characteristics of the subject parcel and vicinity, including topography and vegetation;

(iii) Historic, current and proposed uses, proposed density of the development site, and development characteristics in the vicinity of the site;

(iv) Is the site within an urban growth area, rural area or resource land?

(v) What are the potential land uses for the site as identified by the comprehensive plan and zoning code?

(vi) Is the site's habitat fragmented or is it connected to significant habitat blocks or open spaces?

(vi) Consider the habitat located on the site and in the surrounding area. Would impacts of the development be site-specific or have the potential to be cumulative with existing and potential future developments in the area?

The administrator will have up to thirty days after the end of the comment period to determine if the standards outlined in Section 1.080(2)(D) provide adequate protection to wildlife habitat. If it is determined that the standards of Section 1.080(2)(D) are not adequate to protect wildlife habitat, a habitat management and mitigation plan shall be required pursuant to Section 1.110. The administrator shall base his or her decision on written findings of fact and conclusions.

(3) Minor development within Class II wildlife habitat conservation areas shall have the following standards:

(A) Minor development within Class II wildlife habitat conservation areas may be subject to the minimum standards, all or in part, of Section 1.080(2)(D), as determined by the administrator utilizing the following criteria:

(i) Is the site's habitat fragmented or is it connected to significant habitat blocks or open spaces?

(ii) What is the level of human activity in the area and what are the surrounding land uses?

(iii) Is the site within an urban growth area, rural area or resource land?

(iv) What are the potential land uses for the site as identified by the comprehensive plan and zoning code?

(v) What are the potential impacts of the development to wildlife habitat and species?

(vi) Can a reasonable balance be achieved between wildlife habitat protection and the reasonable use of private property?

(4) Any person aggrieved by the administrator's decision can file an appeal of the decision in conformance with Section 7.13, Appeals of this SMP.

1.100 Riparian buffers.

(1) The area adjacent to the shoreline is the riparian buffer. The intent of the riparian buffer is to maintain riparian habitat functions, structure and value. The point of measurement for the riparian buffer begins at the ordinary high water mark on each bank and is measured horizontally from this point or from the top of the bank where the ordinary high water mark cannot be identified. No development, except as outlined in the provisions of this section, is allowed in this area. Riparian buffers apply to the following areas:

(A) Areas adjacent to Type S, F, Np and Ns waters per criteria as set forth in WAC 222-16-031, Interim water typing system, as amended; and

(B) Areas adjacent to shorelines of the state as defined in Chapter 90.58 RCW, the Shoreline Management Act (SMA) and the shoreline master program use regulations of Chelan County.

(2) Vegetation within the riparian buffer shall be maintained as riparian habitat. Noxious weeds in the riparian buffer should be controlled according to best management practices. The Chelan County noxious weed control board should be consulted for recommendations. Where riparian buffer vegetation disturbances have occurred, only revegetation with locally prescribed native vegetation is permitted,

except as provided for in this section. Consultation with one of the following agencies is recommended: the WSU Cooperative Extension Service, the Chelan County Conservation District, the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, or the USDA—Natural Resource Conservation Service.

(3) All riparian buffers shall be temporarily fenced between the construction activity and the riparian buffer with a highly visible and durable protective barrier, such as filter fencing and straw bales, during construction to prevent access and protect the riparian buffer. The administrator may waive this requirement if an alternative to fencing which achieves the same objective is proposed and approved.

(4) Riparian Buffer Widths.

(A) Water bodies designated by the shoreline master program use regulations of Chelan County environment classification, as amended, and water bodies meeting the definition of shorelines of the state per Chapter 90.58 RCW (the Shoreline Management Act), shall have the following required buffer widths:

Shoreline Rivers, Streams, Lakes and Ponds		
Environment Classification	Buffer Width	
	High Intensity (feet)	Low Intensity (feet)
Natural*	250	200
Conservancy*	250	200
Rural*	150	100
Urban*	100	75

*See subsection (5) of this section.

(B) Waterbodies not designated as shorelines of the state in the shoreline master program use regulations of Chelan County or the Shoreline Management Act shall utilize the water typing system (WAC 222-16-030) classification maps and listings. For those areas with streams that have not been typed by the Washington State Department of Natural Resources, the department shall utilize U.S.G.S. Quad maps to help identify those streams and drainages.

Nonshoreline Rivers, Streams, Lakes and Ponds		
Stream Type	Buffer Width	
	High Intensity (feet)	Low Intensity (feet)
Type S	250	200
Type F	200	150
Type Np	150	100
Type Ns	50	50

(5) All shoreline environment classifications within the Lower Lake Chelan Basin may be subject to a fifty-foot riparian buffer for high intensity land uses and a twenty-five-foot buffer for low intensity land uses if the following requirements are met:

(A) An enhanced on-site sewage system or public sewer is required, and stormwater must be retained on-site and not directly flow into surface water. A stormwater drainage plan is required with a submittal of a land use or building permit application; and

(B) Supplement the native vegetation with plant materials selected from an approved plant list developed jointly by Chelan County and the Washington State Department of Fish and Wildlife, available at the Chelan County department of building, fire safety and planning.

The Lower Lake Chelan Basin, for the purposes of this section, shall be considered to begin at Box Canyon, extending southeast to the city limits of the city of Chelan and extending northwest from the city limits of the city of Chelan to Deer Point.

(6) In those instances where a shoreline has been classified by both the shoreline master program use regulations of Chelan County and the water type system under WAC 222-16-030, the applicable shoreline master program designation and riparian buffer width requirements in subsection (4)(A) of this section shall apply.

1.110 Habitat management and mitigation plan.

(1) If required, this plan shall identify how the impacts from the proposed use or activity will be avoided or mitigated consistent with the purposes of this section. The Management Recommendations for Washington's Priority Habitat and Species (1991) as now or hereafter amended, other priority habitat and species publications, and consultation with a habitat biologist from the Washington State Department of Fish and Wildlife may be used as the basis for the plan.

(2) The habitat management and mitigation plan shall be approved or denied in writing by the administrator and shall contain but not be limited to the following information:

(A) A map(s) prepared at an easily readable scale (at least one inch equals two hundred feet) showing:

(i) The location of the proposed site;

(ii) The relationship of the site to surrounding topographic and built features;

(iii) The nature and density of the proposed use or activity;

(iv) Proposed building locations and arrangements;

(v) A legend which includes:

(a) A complete and accurate legal description. The description shall include the total acreage of the parcel,

(b) Title, scale and north arrow,

(c) Date;

(vi) Existing structures, improvements and landscape features including the name and location of all water bodies;

(vii) Location of priority habitat types and priority species point locations, including nesting, roosting and den sites, winter range areas, riparian zones and migration corridors.

(B) A report which contains:

(i) A description of the nature, density and intensity of the proposed use or activity in sufficient detail to allow analysis of such a land use change upon identified wildlife habitat including the proposed amounts of excavation, grading, and vegetation disturbance.

(ii) An analysis of the effect of the proposed use or activity upon fish and wildlife species and their habitats, identified within the priority habitat and species program.

(iii) A plan which explains how the applicant will avoid, minimize or mitigate adverse impacts to fish and/or wildlife habitats created by the proposed use or activity. Mitigation measures within the plan may include, but are not limited to:

(a) Establishment of buffer areas;

(b) Preservation of critically important plants and trees, preferably in consolidated areas;

(c) Limitation of access to habitat area;

(d) Seasonal restriction of construction activities;

(e) Clustering of development and preservation of open space, if permitted by the underlying zoning district;

(f) Signs marking habitats or habitat buffer areas;

(g) Title notice or plat dedication warning statements;

(h) Conservation easements;

(i) Preserve and introduce native plant species which serve as food and shelter from climatic extremes and predators and structure and cover for reproduction and rearing of young for critical wildlife;

(j) The use of native species or species recommended by the Washington State Department of Fish and Wildlife in the revegetation or landscaping of disturbed or developed areas and in any enhancement of habitat or buffers.

(iv) Review comments by a habitat biologist from the Washington State Department of Fish and Wildlife will be required.

The Washington State Department of Fish and Wildlife shall respond in writing to the administrator with review comments or a request for additional time for review within fourteen days from the date of mailing of a draft habitat management and mitigation plan. The administrator may grant an additional seven days for an agency to provide review comments. If review comments or a request for additional time to provide review comments is not received in the prescribed time frame, the state review comments on the habitat management and mitigation plan shall not be considered.

The administrator shall have the authority to approve or deny habitat management and mitigation plans or require additional information based upon criteria within this section and review comments from relevant agencies. The administrator shall base his or her decision on written findings of fact and conclusions. The

administrator's written decision shall be forwarded to the Washington State Department of Fish and Wildlife, other agencies or tribal entities which provided comments to the department and to any other agency/individual(s) who request a copy of the written decision.

(C) Mitigation shall be completed prior to granting of final occupancy, or the completion of final approval of any development activity for which mitigation measures have been required. Bonding at one hundred fifty percent of the cost of uncompleted activities is an acceptable alternative to completion where a contract to complete the work is in force. Bonding shall be in effect for a maximum of two years.

(3) Any person aggrieved by the administrator's decision can file an appeal of the decision in conformance with Section 7.13, Appeals of this SMP.

1.120 Water typing system.

See WAC 222-16-031.

1.130 Riparian buffer width averaging.

Riparian buffer widths may be modified by averaging the buffer widths. Riparian buffer width averaging shall be allowed only where the applicant demonstrates all of the following:

(1) That width averaging will not degrade the riparian habitat structure, functions and values; and

(2) The total area contained within the riparian buffer after averaging is no less than that contained within the riparian buffer width, outlined by the requirements of this chapter, prior to averaging. The revised riparian buffer width shall not be less than seventy-five percent of the riparian buffer widths outlined within this chapter or be less than twenty-five feet, whichever is greater; and

(3) The newly incorporated area contained within the revised riparian buffer provides habitat with at least equal or superior habitat structure, functions and values to that area that it is replacing; and

(4) Failure to adjust the buffer would result in a hardship to the property owner; and

(5) The need for buffer width averaging is not due to the landowner's own actions; and

(6) That low intensity land uses would be located adjacent to areas where buffer width is reduced, and that such low intensity land uses are guaranteed in perpetuity by covenant, deed restriction, easement or other legally binding mechanism; and

(7) Submission of a habitat management and mitigation plan, if required by the administrative authority, pursuant to Section 1.110, in support of the requested buffer width averaging.

1.140 Modification provision for real property with lot depths of three hundred feet or less in depth.

For real properties with lot depths of three hundred feet or less, existing prior to the date of adoption of the resolution codified in this chapter (June 6, 1999), the following riparian buffer width reduction is permitted; provided, that the administrator may

require a habitat management and mitigation plan pursuant to Section 1.110, adequate to avoid degradation of the riparian habitat functions, structure and value, utilizing the criteria in Section 1.090(1)(C)(i) through (vii) in reaching a conclusion:

(1) The riparian buffer may be reduced to a maximum of twenty-five percent of the lot depth; provided, said riparian buffer is not less than twenty-five feet in width or less than the common line setback, whichever is greater.

For Sections 1.150 through 1.190, consult the appropriate sections of the SMP for any additional requirements. Where there is a conflict between this Chapter and the SMP, the provisions providing greater protection of the resource apply.

1.150 Roadways and water crossings.

(1) Proposed roads within riparian buffers shall be kept to a minimum and should not run parallel to the water body. Crossings, where necessary, shall cross riparian buffers at as near right angles as possible. If no alternative exists to placing a roadway in the buffer, the administrator may require a habitat management and mitigation plan pursuant to Section 1.110, adequate to avoid degradation of the riparian habitat functions, structure and value, utilizing the criteria in Section 1.090(1)(C)(i) through (vii) in reaching a conclusion.

(2) Water crossings must be approved by the Washington State Department of Fish and Wildlife in accordance with RCW 75.20.100.

1.160 Bulkheads and retaining walls.

(1) Where no other practical alternative exists to placing bulkheads or retaining walls in a riparian buffer, necessary for the placement and/or protection of a single-family home, the administrator may require a habitat management and mitigation plan pursuant to Section 1.110, adequate to avoid degradation of the riparian habitat functions, structure and value, utilizing the criteria in Section 1.090(1)(C)(i) through (vii) in reaching a conclusion.

(2) Beach nourishment and bio-engineered erosion control projects are considered a normal protective bulkhead. Construction of bulkheads necessary for the placement of a single-family home shall be in conformance with the this SMP, Chapter 173-26 WAC, Shoreline Management Permit and Enforcement Procedures, Chapter 90.58 RCW, the Shoreline Management Act, and Chapter 220-110 WAC, Hydraulic Code Rules.

(3) Riparian vegetation disturbances within the riparian buffer shall be revegetated within one growing season with native vegetation.

1.170 Wells, tunnels, utilities and on-site septic systems.

(1) Where no other practical alternative exists to the excavation for and placement of wells, tunnels, utilities, or on-site septic systems in a riparian buffer, the administrator may require a habitat management and mitigation plan pursuant to Section 1.110, adequate to avoid degradation of the riparian habitat functions, structure and value, utilizing the criteria in Section 1.090(1)(C)(i) through (vii) in reaching a conclusion. Wells and on-site septic systems shall be in conformance with the Chelan-Douglas health

district requirements. On-site septic systems located within one hundred feet of the ordinary high water mark require a health district waiver which will provide for additional health district and reclamation conditions for approval.

(2) Riparian vegetation disturbances within the riparian buffer shall be revegetated within one growing season with native vegetation.

1.180 Pedestrian/bike/equestrian trails.

Equestrian/pedestrian/bike trails and associated facilities may be permitted in riparian buffers after review of a site plan by the administrator but should be set back fifty feet from the ordinary high water mark if possible and shall be a maximum of fourteen feet in width. The planning department may require a habitat management and mitigation plan, pursuant to Section 1.110, to address riparian habitat impacts in consultation with the Washington State Department of Fish and Wildlife, the Washington State Department of Ecology, the Army Corps of Engineers or other agencies as appropriate.

1.190 Fencing.

The intent of this section is to identify the type of fencing that is necessary and appropriate to protect the deer migration in the county while providing for the operation and protection of livestock or other agriculturally related land uses. Fencing in mule deer migration corridors, identified by Section 1.070(2)(E), shall conform to the following types:

(1) Type A Fence. Where fencing is proposed for development in mule deer migration corridors, Type A fencing, or other fencing type approved by Washington State Department of Fish and Wildlife, shall be required. Type A fence shall consist of no more than four horizontal, well-stretched, evenly spaced wires, placed so that the top wire is no more than forty-two inches above the ground and the bottom wire is at least seventeen inches from the ground and all other wires at intervals evenly spaced no less than eight inches, sixteen inches and twenty-four inches below the top wire. If posts are set more than sixteen feet apart, the wires shall be supported by stays, placed not more than eight feet from each other or from the posts. All other fences as strong and as well calculated as the fence described above shall be allowed.

(2) Type B Fence. Type B fence may be permitted for swimming pools, dog kennels, garden fences, corrals, horse pastures, sheep pastures, agricultural crops, and similar uses. Type B fence shall consist of braid mesh fabric or any other combination of materials that may create a continuous solid enclosure. Fence material shall be securely fastened to substantial posts.

1.200 Noncompliance.

In addition to the requirements stated above, the administrator may also require the following:

(1) Bonding at one hundred fifty percent of the cost of uncompleted restoration/rehabilitation work or other uncompleted activities necessary to resolve a noncompliant project or issue where a contract to complete the work is in force. Bonding shall be in effect for a maximum of two years.

(2) The development of a restoration/rehabilitation plan by the noncompliant party or parties. Restoration/rehabilitation that involves vegetation shall require that an eighty percent survival rate for each category of planting be achieved for a period of two years, utilizing native vegetation. The administrator shall have the authority to approve or deny the plan.

1.210 Reasonable use.

Nothing in this chapter is intended to preclude reasonable use of property, or to effect a taking in violation of the U.S. Constitution, the State of Washington Constitution and substantive due process. Variances may be granted by the hearing examiner as set forth in Section 7.8, Shoreline Variance Permits and Section 9.7, Shoreline Permits, Procedures and Administration of this SMP.

1.220 Subdivision notation.

In the event the applicant is dividing property through the short subdivision, major subdivision, binding site plan, plat alteration or amendment process, a notation shall appear on the face of the final plat mylar referencing the requirements of this chapter, as amended.

1.230 Incentives.

(1) The county encourages such mechanisms as the open space tax program, conservation easements and donations to land trusts, in order to provide taxation relief upon compliance with these regulations.

(2) Chelan County has adopted a public benefit rating system, which is a voluntary tax incentive program that allows landowners a reduced tax assessment of their land in return for a defined public benefit. There are federal income tax advantages that can be realized by an individual or estate, for gifts of real property for conservation purposes to local governments or nonprofit organizations such as land trusts. The specific rules on federal income tax deductions can be found in Section 170 of the Internal Revenue Code.

(3) Chelan County encourages citizens to work with the Chelan County natural resource department to develop and implement voluntary habitat restoration projects and practices on their property.

1.240 Education.

(1) A variety of educational materials are available through the Chelan County natural resource department for private landowners. Chelan County recognizes and supports community-based educational and service organizations to participate in programs which rehabilitate and/or maintain the quality of streams and other environmentally sensitive areas.

(2) Applicants have the opportunity of scheduling a preapplication conference through the Chelan County community development department to discuss pending development proposals with applicable reviewing agencies.

(3) Chelan County supports and encourages training and educational opportunities for staff to facilitate the implementation of this section.

Chapter 2
WETLAND AREAS OVERLAY DISTRICT (WOD)

Sections:

2.010 Purpose.

It is the purpose of this chapter to satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221, to protect the ecological and environmental functions of wetlands and protect the public health, safety and welfare benefits provided by wetlands by preventing the continual loss of wetlands and, where practical, enhancing or restoring wetland functions and values.

2.020 Applicability.

(1) When a chapter reference is used, it shall be inclusive of all of Appendix B.

The provisions of this chapter shall apply to development within the shoreline jurisdiction of the County that is proposed to be located within or adjacent to a designated wetland and buffer. In the event of any conflict between this chapter and regulations contained in the shoreline master program or any other zoning regulations, those regulations which provide greater protection of shoreline resources shall prevail, when consistent with SMA policy.

. The designation and classification of wetland areas does not authorize public use of these lands or prevent the landowner from enforcing trespassing laws.

2.030 Mitigation sequencing.

Development proposals affecting wetlands shall demonstrate that reasonable efforts have been examined with the intent to avoid and minimize impacts to the functions and values of the critical area. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized or compensated for in the following order of preference:

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

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

(3) Rectifying the impact to fish and wildlife conservation areas by repairing, rehabilitating, or restoring the affected environment to the historic conditions or the conditions at the time of the initiation of the project;

(4) Minimizing the impact by restoring or stabilizing the area through engineered or other methods;

(5) Reducing the impact over time by preservation and maintenance operation during the life of the action;

(6) Compensating for the impact by replacing, enhancing or providing substitute resources or environments; and

(7) Monitoring the required mitigation and taking remedial action when necessary.

2.040 Designation.

(1) All wetlands in Chelan County meeting the definition of wetlands in Chapter 8 of this SMP are designated wetlands.

(2) The approximate location and extent of wetlands in the county are displayed on the National Wetlands Inventory Maps and the Chelan County wetland inventory map, as it is developed. The wetland maps, along with other supportive documentation, are to be used as a guide to the general location and extent of wetlands. There may be wetlands that are not shown on the wetland inventory maps. There are also wetland areas that are mapped that are not necessarily wetlands. However, each potential wetland site must be evaluated by the administrator to determine the applicability of these requirements. In the event that any of the wetland designations shown on the maps conflict with the criteria set forth in this chapter, the criteria set forth shall take precedence.

2.050 Classification (Eastern Washington wetland rating system).

All designated wetlands shall be evaluated to reflect the relative function, value and uniqueness of the wetland. To determine wetland classes or classification in Chelan County, the following four-tier rating system as established in the "Washington State Wetland Rating System for Eastern Washington—Revised," (Ecology Publication #04-06-015, or as revised and approved by Ecology) as amended, shall be utilized. Each wetland that is classified shall receive a rating of one to four. Below are the wetland categories in

summary. A wetlands rating field data form must be used to make the actual determination. The rating system categories are as follows:

(1) Category 1 wetlands are those that (A) represent a unique or rare wetland type, (B) are more sensitive to disturbance than most wetlands, (C) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime, or (D) provide a high level of functions. Generally, these wetlands are not common and make up a small percentage of the wetlands in the region. Examples of Category 1 wetlands include the following:

(A) Alkali wetlands characterized by the occurrence of shallow saline water (extremely rare).

(B) Documented Natural Heritage wetland sites or high quality native wetland communities which qualify as Natural Heritage wetland sites or wetlands that support state threatened or endangered plant species.

(C) Bogs.

(D) Mature and old-growth forested wetlands with slow-growing trees over one-quarter acre in size.

(E) Forests with aspen stands.

(F) High functioning and high performing wetlands that score seventy points or more (out of one hundred) using the Washington State Wetland Rating System for Eastern Washington—Revised" (Ecology Publication #04-06-015, or as revised and approved by Ecology).

(2) Category 2 wetlands are those that are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category 1 wetlands but still need a relatively high level of protection. Examples of Category 2 wetlands include the following:

(A) Forested wetlands in the floodplains of rivers.

(B) Mature and old-growth forested wetlands with fast-growing trees with over one-quarter acre of forest dominated by fast-growing trees.

(C) Vernal pools, or "rainpools," located in a landscape with other wetlands and that are relatively undisturbed during the early spring.

(D) Wetlands that perform functions well, i.e., scoring between fifty-one and sixty-nine points.

(3) Category 3 wetlands are (A) isolated vernal pools, and/or (B) wetlands with a moderate level of functions (i.e., scoring between thirty and fifty points) that have generally been disturbed in some ways and are often smaller, less diverse and/or more isolated from other natural resources in the landscape than Category 2 wetlands.

(4) Category 4 wetlands have the lowest levels of functions (scoring less than thirty points) and are often heavily disturbed. Despite the level of disturbance, these wetlands may provide some important functions.

2.060 Delineation/classification requirements.

(1) In conjunction with the submittal of a land use or building application, the administrator shall determine the probable existence of a wetland on a parcel involved

in the land use or building application with the aid of the National Wetlands Inventory Maps, the Chelan County wetland inventory map, and/or a field investigation of the project site. If wetlands are found to exist on a parcel, a wetland delineation/classification is required.

(2) The delineation/classification shall be performed by a qualified professional wetland biologist/consultant and shall be prepared according to the most recent Washington State Wetlands Identification and Delineation Manual (Ecology Publication No. 96-94, or as revised and approved by Ecology). The applicant shall be responsible to provide a delineation/classification before a permit can be issued unless other requirements in this chapter which supersede these are satisfied.

(3) The location of the outer extent of the wetland buffer, the wetland boundary and the areas to be disturbed shall be marked in the field, and such field markings shall be approved by the administrator prior to the commencement of permitted activities. The location of these areas shall be clearly identified on the site plan. Such field markings shall be maintained throughout the duration of the permit.

2.070 Wetland buffer zone widths.

(1) Wetland buffer zones shall be required for all activities not deemed to be exempt in Section 11.80.020, contiguous to wetlands. Category 1, 2, 3 and 4 wetlands described in Section 2.050 along with the necessary field delineation shall be relied on for the classification of a particular wetland.

(2) Buffer areas protect wetlands from degradation by stabilizing soil and preventing erosion; filtering suspended solids, nutrients and harmful or toxic substances; moderating impacts of stormwater runoff; moderating system microclimate; protecting wetland wildlife habitat from adverse impacts; maintaining and enhancing habitat diversity and/or integrity; supporting and protecting wetland plant and animal species and biotic communities; and reducing disturbances to wetland resources caused by intrusion of humans and domestic animals.

(3) Except as otherwise specified, wetland buffer zones shall be retained in their natural condition. Where buffer disturbance has occurred during construction, revegetation with native vegetation shall be required.

(4) All wetland buffer areas shall be temporarily fenced between the construction activity and the buffer area with a highly visible and durable protective barrier(s) during construction to prevent access and sedimentation from disturbed areas from entering the wetland or its buffer. This requirement may be waived by the administrator if an alternative to fencing which achieves the same objective is proposed and approved.

(5) All buffers are measured horizontally from the wetland edge as marked in the field.

(6) Wetland Buffer Zone Widths.

Wetland Category	Buffer Width (feet)	
	High Intensity (feet)	Low Intensity (feet)
Category 1	300	200

Category 2	200	100
Category 3	150	75
Category 4	50	50

2.080 Wetland buffer width averaging.

Wetland buffer widths outlined within this chapter may be modified by averaging the wetland buffer widths. Wetland buffer width averaging shall be allowed only where the applicant demonstrates all of the following:

(1) That width averaging will not degrade the wetland structure, function and values; and

(2) The total area contained within the wetland buffer after averaging is no less than that contained within the wetland buffer, outlined by the requirements of this chapter, prior to averaging. The revised wetland buffer width shall not be less than seventy-five percent of the wetland buffer widths outlined within this chapter, or be less than twenty-five feet, whichever is greater; and

(3) Failure to adjust the buffer would result in a hardship to the property owner; and

(4) The need for buffer averaging is not due to the landowner's own actions; and

(5) That low-intensity land uses would be located adjacent to areas where buffer width is reduced, and that such low-intensity land uses are guaranteed in perpetuity by covenant, deed restriction, easement, or other legally binding mechanism; and

(6) A wetland report pursuant to Section 2.110, if required by the administrative authority, supporting the newly delineated wetland buffer, has been prepared and submitted.

2.090 Increased wetland buffer area width.

(1) The county may require increased buffer area widths on a case-by-case basis by the administrator 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 administrator may consult with state or federal agencies to provide appropriate technical assistance for the administrator to make this decision. 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; or

(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 thirty percent that would directly impact wetland functions and values.

(2) When a review agency requests an increase in a buffer width, such agency must provide supporting documentation and rationale for a greater level of protection.

2.100 Modification provisions for existing lots.

For those lots, tracts, and parcels legally created prior to January 5, 1999, and provided the requirements outlined below are satisfied, the administrator may vary the buffer widths outlined within this chapter. The buffer widths may be varied by not more than fifty percent, but in no case shall the buffer width be less than twenty-five feet, with granting the minimum necessary to afford relief to address hardship issues. In the case of a Category 1 wetland, the buffer shall not be reduced to less than one hundred fifty feet. The administrator may require a wetland report and mitigation plan in order to avoid impacts to the wetland area. In addition, all of the following conditions must be met:

(1) That the strict application of the bulk, dimensional or performance standards set forth in these requirements significantly interferes with reasonable use of the property; and

(2) That the hardship described in subsection (1) of this section is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this title, and not, for example, from deed restrictions or the applicant's own actions; and

(3) That the design of the project is compatible with other authorized uses planned for under the Chelan County comprehensive plan and the Chelan County shoreline master program and will not cause adverse impacts to the shoreline environment, if in continuity; and

(4) That the public interest will not suffer substantial detrimental effect.

2.110 Wetland reports.

When a regulated use or activity is proposed on a property which is within a wetland or wetland buffer area, a wetland report is required. The applicant or proponent shall provide a wetland report according to the standards below and using the Washington State Wetlands Identification and Delineation Manual (Ecology Publication No. 96-94, or as revised and approved by Ecology), including the Arid West Supplement to the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. A wetland report shall include the following:

(1) Vicinity map;

(2) When available, a copy of a National Wetland Inventory Map (U.S. Department of the Interior and/or the Chelan County wetland inventory map as developed) identifying the wetlands on or adjacent to the site;

(3) A site map setting forth all of the following:

(A) Surveyed wetland boundaries based upon a delineation;

(B) Site boundary property lines and roads;

(C) Internal property lines, rights-of-way, easements, etc.;

(D) Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.;

(E) Contours at the smallest readily available intervals, preferably at two-foot intervals;

(F) Hydrologic mapping showing patterns of surface water movement and known subsurface water movement into, through, and out of the site area;

(G) Location of all test holes and vegetation sample sites, numbered to correspond with flagging in the field and field data sheets;

(H) The department may require an air photo with overlays displaying the site boundaries and wetland delineation if available;

(4) A report which includes the following:

(A) Location information (legal description, parcel number and address); delineation report including data sheets. The wetland boundaries on the site established by the delineation shall be staked and flagged in the field. If the wetland expands outside the site, the delineation report shall discuss all wetland areas within 300 feet of the site, as they relate to the project site, but need only delineate those wetland boundaries within the site.

(B) General site conditions including topography, acreage, and surface areas of all wetlands identified on the National Wetland Inventory Map (U.S. Department of the Interior) and/or the Chelan County wetland inventory map as developed and water bodies within one quarter mile of the subject wetland(s);

(C) Hydrological analysis, including topography of existing surface and known significant subsurface flows into and out of the subject wetland(s);

(D) Analysis of functions and values of existing wetlands, including vegetative fauna and hydrologic conditions;

(5) A summary of proposed activity and potential impacts to the wetland(s);

(6) Recommended wetland category and attached worksheets, including rationale for the recommendation from the worksheet of the Washington State Wetlands Category Rating System for Eastern Washington;

(7) Recommended buffer boundaries, including rationale for boundary locations;

(8) Site plan of proposed activity, including location of all parcels, tracts, easements, roads, structures, and other modifications to the existing site. The location of all wetlands and buffers shall be identified on the site plan.

2.120 Mitigation plan.

(1) Unless otherwise provided by this chapter, mitigation shall be required for loss of area or functions and values of wetlands, and wetland buffers regulated under this chapter. The applicant must first demonstrate steps have been taken to avoid impacts to wetlands and their associated buffer areas. For those impacts that cannot be avoided, the applicant must demonstrate the steps that have been taken to minimize impacts. When mitigation is required by this chapter, it shall address restoration, rehabilitation and compensation in accordance with the following requirements:

(A) Restoration is required when a wetland or wetland buffer regulated under this chapter has been altered, after the date of adoption of the resolution codified in this chapter, prior to project approval unless the alteration was permitted; or when wetlands and/or wetland buffers are temporarily affected by construction or any other temporary phase of a project;

(B) Mitigation is required when a wetland or wetland buffer regulated under this chapter is permanently altered as a result of project approval or activity;

(C) Any person who degrades wetlands or wetland buffers shall restore, create or enhance areas equivalent or greater of wetlands and wetland buffers than those altered. The mitigation ratios shall comply with those 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);

(D) On-site mitigation is preferred so as to assure, to the greatest extent feasible, that the plan results in mitigation for direct impacts resulting from the alteration;

(E) Off-site mitigation within the same drainage may be considered when it can achieve greater benefits or functions than on-site or would restore or enhance functions that are limiting or important to the health of the watershed; and

(F) Mitigation shall be completed prior to granting of temporary or final occupancy, or the completion of final approval of any development activity for which mitigation measures have been required.

(3) Mitigation plans shall be approved prior to any development activity.

(4) To identify plant species which may be approved for mitigation purposes, applicants may refer to the National List of Plant Species That Occur in Wetlands; Northwest (Region 9)/Biological Report 88 (F26.9), published by the U.S. Fish and Wildlife Service, May 1988, or the 1993 Supplement to the List of Plant Species That Occur in Wetlands: Northwest (Region 9) December, 1993. Applicants may propose plant species which are not on these lists. All plant species proposed for mitigation shall be native and approved by the county.

2.130 Subdivision notation.

In the event the applicant is dividing property through the short subdivision, major subdivision, binding site plan, or plat alteration process, a notation shall appear on the face of the final plat mylar of the classification of the wetland(s) on the subject property, a reference to the requirements of this chapter, as amended; and the delineated wetland(s) boundary shall be shown.

2.140 Reasonable use.

Nothing in this section is intended to preclude reasonable use of property, or to effect a taking in violation of the U.S. Constitution, the State of Washington Constitution and substantive due process. Shoreline Variances may be granted by the hearing examiner as set forth in Section 7.8, Shoreline Variance Permits and Section 9.7, Shoreline Permits, Procedures and Administration of this SMP.

2.150 Noncompliance.

The administrator may also require the following:

(1) Bonding at one hundred fifty percent of the cost of uncompleted restoration/rehabilitation work or other uncompleted activities necessary to resolve a noncompliant project or issue where a contract to complete the work is in force. Bonding shall be in effect for a maximum of two years.

(2) The development of a restoration/rehabilitation plan by the noncompliant party or parties. Restoration/rehabilitation that involves vegetation shall require that an eighty percent survival rate for each category of planting be achieved for a period of two years, utilizing native vegetation. The administrator shall have the authority to approve or deny the plan.

2.160 Incentives.

(1) The county encourages such mechanisms as the open space tax program, conservation easements and other areas, in order to provide taxation relief upon compliance with these regulations.

(2) Chelan County has adopted a public benefit rating system, which is a voluntary tax incentive program that allows landowners a reduced tax assessment of their land in return for a defined public benefit. There are also federal income tax advantages that can be realized by an individual or estate, for gifts of real property for conservation purposes to local governments or nonprofit organizations such as land trusts. The specific rules on federal income tax deductions can be found in Section 170 of the Internal Revenue Code.

(3) Chelan County encourages citizens to work with the Chelan County natural resource department to develop and implement voluntary habitat restoration projects and practices on their property.

2.170 Education.

(1) A variety of educational materials are available through the Chelan County natural resource department for private landowners. Chelan County recognizes and supports community-based educational and service organizations to participate in programs, which rehabilitate and/or maintain the quality of streams and other environmentally sensitive areas.

(2) Applicants have the opportunity of scheduling a pre-application conference through the Chelan County community development department to discuss pending development proposals with applicable reviewing agencies.

(3) Chelan County supports and encourages training and educational opportunities for staff to facilitate the implementation of this section.

2.180 Restoration.

Wetland restoration projects by a public or private agency whose mandate includes such work, which is unassociated with the mitigation of a specific development proposal, may be allowed when consistent with the provisions of this chapter.

Chapter 3
AQUIFER RECHARGE AREAS OVERLAY DISTRICT (AROD)

Sections:

3.010 Classification.

(1) Classification is based on an evaluation of the potential for contaminant loading of a proposed land use, and the susceptibility of the proposed site. These factors identify a range, which shall be used to determine the relative vulnerability to contamination of an area.

(2) Sites within shoreline jurisdiction identified by this chapter as having a medium or high vulnerability rating shall be subject to the protection measures of this chapter.

3.020 Designation.

(1) There is insufficient scientific data at this time, to determine with any specificity the location of areas having a critical recharging effect on aquifers used for potable water within the boundary of Chelan County's shoreline jurisdiction. However, the best available science suggests that a susceptibility determination will allow Chelan County to designate critical aquifer recharge areas using a conservative approach, which provides a worst case scenario for contaminant movement in the subsurface. Therefore, any area found via this chapter to be an area having a high susceptibility rating shall be designated a critical aquifer recharge area, and a map or maps maintained by the Chelan County department of building/fire safety and planning shall set forth such areas.

(2) In addition, sole source aquifer recharge areas designated pursuant to the Federal Safe Drinking Water Act, areas established for special protection pursuant to a groundwater management program, Chapters 90.44, 90.48 and 90.54 RCW, and Chapters 173-100 and 173-200 WAC; areas designated for wellhead protection pursuant to the Federal Safe Drinking Water Act, and aquifer recharge areas mapped and identified by a qualified groundwater scientist shall also be designated as critical aquifer recharge areas.

3.030 Procedure.

(1) An applicant seeking to develop property which requires a development permit, not otherwise exempted from the requirements of this chapter, shall submit with the application a certified statement, on a form provided by the Chelan County department of building, fire safety, and planning, which lists each of the criteria as set forth in Section 3.040 and indicate whether the criteria applies or does not apply to the site or development. Any development application that fails to contain this statement or fails to indicate whether any one of the criteria applies or does not apply, shall be rejected and only accepted upon resubmission of the completed statement. "Unknown" or similar responses will not be accepted.

(2) If the development meets criterion (1), (2), (3), or (4) under Section 3.040 or if the site or development meets any two of the remaining criteria in Section 3.040, the department shall direct the applicant to determine the vulnerability rating for the development pursuant to Section 3.050. If the development has a high or medium vulnerability rating, the development shall be subject to the performance standards of Section 3.060.

(3) If an applicant's statement asserts that the criteria of Section 3.040 do not apply to the development, the department will accept the statement and proceed with the permitting or approval process. Except, if the department has or obtains information prior to the permit or approval being finalized, which clearly establishes the applicant's statement is incorrect. In which case, the applicant will be advised in writing of the inconsistent information and advised to either (A) provide an amended statement adding the evaluation criteria as being applicable and determine the vulnerability rating of the development pursuant to Section 3.050, or (B) present sufficient countering information clearly establishing that the basis for the department's concern is incorrect. If the applicant selects to proceed under (B), upon receipt of the applicant's information, the department shall review the information and obtain whatever additional assistance may be required to resolve the issue. The final determination as to whether a determination of vulnerability is required shall be made by the administrator.

3.040 Evaluation criteria.

The applicant shall be required to determine the vulnerability rating for any development permit, not otherwise exempted from this chapter, if the site or development meets criterion (1), (2), (3), or (4) or meets two or more of the remaining criteria below:

(1) Within a wellhead protection area designated under Chapter 246-290 WAC;

(2) Within an aquifer recharge area mapped and identified by a qualified groundwater scientist;

(3) The site will be utilized for hazardous substance (as now or hereafter defined in RCW 70.105D.020(7)) processing, storage or handling in applications or quantities larger than is typical of household use;

(4) The site will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended;

(5) The site contains highly permeable soils, which include soil types 1a, 1b and 2a under WAC 246-272-11001, Table II;

(6) Within a sole source aquifer recharge area designated pursuant to the Federal Safe Drinking Water Act;

(7) Within an area established for special protection pursuant to a groundwater management program, Chapters 90.44, 90.48 and 90.54 RCW, and Chapters 173-100 and 173-200 WAC;

(8) The development involves a major or short subdivision and includes present or future plans to construct three or more dwelling units where the dwelling units will not be connected to a public sewer system and any of the lots are less than one net acre in size;

(9) The proposed commercial and industrial site is not on a public sewer system and the main structure exceeds four thousand square feet;

(10) The proposed use is as a commercial feedlot;

(11) The development is within two hundred feet of the ordinary high water mark of a perennial river, stream, lake or pond.

3.050 Determining vulnerability rating.

(1) General. The vulnerability matrix is used to determine the vulnerability of the development and to rate it as a high, medium or low rating. This can be done by determining the "contaminant loading potential" of a proposed land use as outlined in subsection (4) of this section and the natural "susceptibility" of the site as outlined in subsection (3) of this section. A vulnerability rating is determined by numerical value for a proposed land use based on contaminant loading potential and susceptibility factors. When a proposed use is determined to have a medium or high vulnerability rating, protection measures, as specified in Section 3.060, shall be implemented that protect the potable water supply.

(2) Determining Susceptibility. The three basic components to determine a site's susceptibility are:

— Permeability of the vadose zone;

— Depth to groundwater;

— Slope.

(A) Permeability of the Vadose Zone. The vadose zone is composed of both the soil and the geologic materials underlying the soil. To adequately determine the overall ease with which water will travel from land surface to the aquifer, it is necessary to determine the overall permeability of both soil and geologic media. Soil permeability can be determined through use of the Chelan County soil survey developed by the USDA Soil Conservation Service, Table 6, pp. 66-73. The values shown on these pages are given in the inches per hour that water moves downward through a saturated soil. A determination of the permeability of the geologic material underlying the soil is more problematic.

(i) Incrementally, the permeability of local soils (upper vadose zone) is grouped into four ranges, and can be assigned a relative value to be used for determining susceptibility on the matrix. These are:

Soil Permeability Table Based on Soil Survey				
Condensed Description	**Soil Survey Description**	**Permeability (in./hr.)**	**Permeability (cm./sec.)**	**Rating**
Very slow	Very slow	<0.06	<0.00453	0
Slow	Slow	0.06 – 0.20	0.00453 – 0.1041	1
	Moderately slow	0.20 – 0.60	0.0131 – 0.0423	
Moderate	Moderate	0.60 – 2.0	0.0423 – 0.1411	2
	Moderately rapid	2.0 – 6.0	0.1411 – 0.4233	
Rapid	Rapid	6.0 – 20	0.4233 – 1.411	3
	Very rapid	>20	>1.411	

Where conclusive information does not exist for permeability of the soil, a relative value of 3 will be assigned.

(ii) Permeability of the lower vadose zone can be estimated using the geologic matrix table below by determining the material type and assigning the appropriate permeability range for the material(s) overlying the uppermost aquifer. In cases where heterogeneous materials are encountered, the least permeable layer with a thickness of not less than five feet shall determine the overall permeability to be applied to the entire vadose zone, excluding the soil layer.

Geologic Matrix Table			
Condensed Description	**Geologic Matrix**	**Permeability (cm./sec.)**	**Rating**
Very slow	Unfractured Igneous or Metamorphic Bedrock, Shale	$10^{-13} – 10^{-9}$	**0**
	Marine Clay, Clay, Dense Sandstone, Hardpan	$10^{-9} – 10^{-7}$	
Slow	Loess, Glacial Till, Fractured Igneous or Metamorphic Bedrock	$10^{-8} – 10^{-5}$	**1**
	Silt, Clayey Sands, Weathered Basalt	$10^{-7} – 10^{-3}$	
Moderate	Silty Sands, Fine Sands, Permeable Basalt	$10^{-4} – 10^{-1}$ (0.0001 – 0.1)	**2**
	Clean Sands, Karst Limestone	> 0.1 – 1.0	
Rapid	Sand and Gravel	> 1.0 – 10	**3**
	Gravel	> 10 – 100+	
Where conclusive information does not exist for permeability of the geologic matrix, a relative value of 3 will be assigned.			

(B) Depth to Groundwater. Depth to groundwater can be determined by utilizing local well log information or specific well information for the site. Depth to groundwater is also assigned a relative value used for determining susceptibility on the matrix. These are:

Depth to Groundwater Table		
Condensed Description	**Depth to Water (Feet)**	**Rating**
Very Low	Confined Aquifer	**0**
	> 50	
Low	25 – 50	**1**
Moderate	10 – 25	**2**
High	0 – 10	**3**
Where conclusive information does not exist for depth to groundwater, a relative value of 3 will be assigned.		

(C) Slope. Slope, or gradient, is related to the infiltration characteristics of an area. The steeper the slope, the less infiltration of surface waters occur. Slope is assigned a relative value used for determining susceptibility on the matrix. These are:

Slope—As a Percent	Slope Relative Value
>45%	0
>30% – 45%	1
15% – 30%	2
<15%	3

Where conclusive information does not exist for slope, a relative value of 3 will be assigned.

(3) Determining the Susceptibility Rating. A susceptibility rating is determined by adding the relative values of permeability of the soils and geologic matrix of the vadose zone, depth to groundwater and slope. This is a baseline determination for susceptibility. The range of values are as follows:

High susceptibility rating = total range from	8 – 12	High
Medium susceptibility rating = total range from	4 – 7	Medium
Low susceptibility rating = total range from	0 – 3	Low

Low Susceptibility	**Medium Susceptibility**	**High Susceptibility**

0 – 3	4 – 7	8 – 12

(4) Determining the Contaminant Loading Rating.

(A) Contaminant loading potential is dependent on the presence of critical materials on the site. A critical material is a substance present in sufficient quantity that its accidental or intentional release would result in the impairment of the aquifer water to be used as potable drinking water. For the purpose of administration of this section, the critical materials use activity list in Annex A is established.

(B) This is a list of commercial and industrial activities known to use critical materials, coupled with the names of critical materials normally associated with the activity. Proposed activities fitting one of the general business descriptions provided or having one of the specified standard industrial classification (SIC) codes should be assumed to have critical material on-site with a high contaminant loading potential unless the proponent provides assurance otherwise. Activities with a high contaminant loading potential have a high contaminant loading rating.

Contaminants in addition to those listed on the critical material activities list may be found on some sites. In some cases SIC codes other than those listed may be associated with a general category. Sites or uses which the Department believes would be utilized for hazardous substance (as now or hereafter defined in RCW 70.105D.020(7)) processing, storage or handling in applications or quantities larger than is typical of household use or sites which the Department believes will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended, but may not be covered in the critical materials use activity list, shall also be considered to be a critical material or critical material use activity with a high contaminant loading potential and rating, unless the proponent provides assurance otherwise.

Those uses or activities not determined to have a high contaminant loading rating are considered to have a low contaminant loading potential and rating.

(C) The following process shall be used to determine whether or not critical materials are involved.

(i) An initial screening will be performed by the department by comparing the proposed use, and upon request by said department, other pertinent information as provided by the proponent at his/her expense with the critical materials use activity list. The department will exercise any discretion in judgment in the favor of aquifer protection.

(a) If the proposed use is judged to be on the critical materials use activity list, the department shall require the applicant to provide the department with a list of materials, including quantities, to be used, stored or transported as associated with the proposed activity. Additional information shall also be provided by the proponent at his or her expense if requested by the department.

(b) After the review of the information supplied by the applicant, the department may confirm the designation as a critical materials use activity or nullify the tentative designation.

(c) The applicant may respond by accepting the designation as a critical materials use activity or may appeal to the board of adjustment, in writing, within twenty calendar days.

(I) The DOE, DOH, and the Chelan County health district shall be notified of all hearing proceedings and legal advertising consistent with that for appeals to the hearing examiner.

(II) The hearing examiner shall have authority to request additional information from either the appellant or the applicant, as appropriate, and at their expense.

(d) If the proposed use is not on the list, the department may designate the activity as not involving critical materials or may exercise subsection (4)(C)(i)(e) of this section.

(e) If a proposed use or contaminant, which the department believes will be present on the site, is not located on the critical materials use activity list but meets the criteria under subsection (4)(B) or (C) of this section, the department shall act to designate the proposed use as a critical materials use activity and proceed as in subsection (4)(C)(i)(a) of this section. The department may consult with such persons as may be appropriate to assist in the determination. The department may eventually designate the activity as a critical materials use activity. The process would then proceed as in subsection (4)(C)(i)(b) of this section, and the applicant may respond as in subsection (4)(C)(i)(c) of this section.

(5) Vulnerability Matrix.

(A) A determination of a high, medium, or low vulnerability rating is determined from the vulnerability matrix by identifying susceptibility and contaminant loading ratings.

	Susceptibility	
High susceptibility rating = Total range from	8 – 12	High
Medium susceptibility rating = Total range from	4 – 7	Medium
Low susceptibility rating = Total range from	0 – 3	Low

	Contaminant Loading
High Contaminant Loading Rating =	High
Low Contaminant Loading Rating =	Low

(B) After determining the susceptibility and contaminant loading ratings for the proposed use and site, check the appropriate box on each axis of the vulnerability matrix located in Annex B to determine the vulnerability rating.

3.060 Performance standards for uses determined to have a medium or high vulnerability rating.

(1) General. All development regulated by this chapter which has a high or medium vulnerability rating, as determined by this chapter, shall be required to meet the requirements of this section.

(2) Application of Aquifer Recharge Area Performance Standards.

(A) Residential dwelling units and their accessory uses are exempt from the aquifer recharge area regulations under this chapter. New residential subdivisions are subject to the provisions of subsection (9) of this section.

(B) The standards for approval of development regulated by this chapter shall be defined in subsequent sections.

(C) The assurance that these standards are applied to development regulated by this chapter is the responsibility of the administrator.

(i) Appropriate standards for approval as applied to development regulated by this chapter shall be the responsibility of the Chelan County department of building, fire safety, and planning and hearing examiner as otherwise described in agency rules.

(ii) Appropriate safeguards, to be included in the design of buildings newly constructed or remodeled, shall be the responsibility of the Chelan County department of building, fire safety and planning.

(iii) Site planning and other considerations for areas outside of buildings shall be the responsibility of the appropriate office or agency as may be elsewhere described in agency rules.

(iv) Appropriate sanitary, industrial and solid waste disposal practices employed shall be the responsibility of the Chelan-Douglas health district or other appropriate agency (e.g., DOH, DOE).

(v) When the occupancy of a building changes, any new commercial or industrial occupant shall not operate without a certificate of occupancy as issued by the Chelan County department of building, fire safety and planning; such certificate of occupancy is subject to review pursuant to subsection (2)(C) of this section.

(D) If the applicant does not have a specific proposal, the department shall recommend that the action be conditioned, or shall so condition a license/permit, with the performance criteria of subsections (3) through (11) of this section.

(E) Even though an activity is permitted in the underlying zone classification, any activity which, following review in accordance with this chapter, is determined to have a medium or high vulnerability rating shall be required to conform to the conditions set forth in subsections (3) through (11) of this section.

(3) Agricultural Activities. Agricultural activities shall incorporate best management practices concerning waste disposal, fertilizer use, pesticide use, and stream corridor

management. If necessary, farmers shall seek technical assistance from the Chelan County Conservation District, WSU cooperative extension agent and local fieldmen.

(4) Landfills. Landfills, junkyards, salvage yards and auto wrecking yards are prohibited within designated critical aquifer recharge areas. Landfills, junkyards, salvage yards and auto wrecking yards which are proposed to be located outside of designated critical aquifer recharge areas and which have a high or medium vulnerability rating must satisfactorily demonstrate that potential negative impacts to the groundwater would be overcome in such a manner as to prevent adverse impacts to groundwater.

(5) Parks, Schools and Recreation Facilities. Fertilizer, herbicide and pesticide management practices of schools, parks, golf courses and other nonresidential facilities that maintain large landscaped areas shall be evaluated in relation to best management practices as recommended by the cooperative extension service.

(6) Commercial, Industrial and Mining Uses.

(A) For the purposes of this section, all forms of mining activities shall be considered an industrial use.

(B) Contingency Plans.

(i) All commercial and industrial uses that are rated as having a medium or high vulnerability shall submit a contingency plan that identifies:

(a) Types of hazardous wastes that would be used for the proposed land use;

(b) On-site containment facilities designed to handle accidental releases of critical materials;

(c) Spill response and notification procedures.

(C) Changes in occupancy of an existing site and/or expansions of existing activities are subject to complete evaluation by the county under the provisions of this chapter.

(D) All activities designated as critical materials use activities shall only be approved as conditioned so that:

(i) Facilities will be designed and built so that any spilled or leaked materials are contained on-site; and

(ii) Facilities will be designed and built so that any spilled or leaked materials cannot infiltrate into the ground; and

(iii) No permanent disposal of any waste containing critical materials shall be allowed on-site.

(E) Commercial or industrial activities designated as critical materials use activities shall have specially designed and installed storm runoff drainage facilities in areas where spills might occur. Such facilities shall be designed and installed to:

(i) Prevent the comingling of storm runoff and critical materials spills; and

(ii) Enhance spill cleanup procedures.

(F) Mining activities in areas determined to have a medium or high vulnerability shall comply with the following conditions:

(i) Six-foot fencing shall be provided and maintained in good condition at all times in the following locations:

(a) Exterior boundary of any portion of any site on which active operations exist; and

(b) Exterior boundary of any portion of the site which has been mined and not yet rehabilitated;

(ii) No excavation within one hundred feet of a well or surface water used for potable drinking water;

(iii) No excavation into an aquifer used for potable drinking water is allowed;

(iv) The operators shall comply with all existing water quality monitoring regulations of WSDOE and the Chelan-Douglas health district;

(v) A drainage channel shall be constructed around active gravel pit areas to keep surface runoff from outside the pit excavation from entering the pit areas;

(vi) Fuel storage areas and service facilities shall incorporate provisions to prevent lubricants and petroleum products from contaminating either pit areas or drainage channels;

(vii) No liquid, asphalt, cement, or water used in a mining operation shall be disposed of in the bottom of a pit;

(viii) A protective eight-foot-high berm or retaining wall shall be required adjacent to property lines where the edge of a pit is within one hundred feet of a street or railroad right-of-way;

(ix) The use of fertilizers, pesticides, herbicides, and critical materials shall not be allowed within fifty feet of an active pit;

(x) A sufficient amount of topsoil or suitable material shall be retained on-site for re-vegetation/rehabilitation purposes;

(xi) Reclamation plans for these sites shall include:

(a) A specification of the amount of materials to be left between the aquifer high water mark (or elevation) and the final grade of the reclaimed site;

(b) Physical barriers, as required in subsection (6)(F)(viii) of this section, shall remain unless they are specifically permitted to be removed in a subsequent land use decision by the hearing body; and

(c) Provisions shall be made for limitations of access to, and activities within, the rehabilitated site until the use of the land is changed;

(xii) In rehabilitated gravel pits over an aquifer used for a potable water source, new uses requested for the property may be limited or specifically conditioned as determined by the appropriate hearing body;

(xiii) All mining activities shall be reclaimed per a reclamation plan approved by the Washington State Department of Natural Resources.

(7) Utilities. Utility facilities shall be reviewed and approved consistent with the requirements of subsection (6) of this section.

(8) Aboveground Application of Sewage or Sludge. Projects which involve application of sewage or sludge in areas determined to have a medium or high susceptibility to groundwater contamination shall provide hydrologic information and a management plan that identifies measures that effectively mitigate the threat to contamination; and shall conform to all other applicable state regulations.

(9) Residential Land Subdivisions. Residential land subdivisions regulated by this section shall be evaluated for their impact on groundwater quality. One or more of the following measures shall be required upon recommendation of the Chelan-Douglas health district:

(A) An analysis of the potential nitrate loading to the groundwater may be required to assess the impact on groundwater quality;

(B) Alternative site designs, phased development and/or groundwater quality monitoring will be required to reduce contaminant loading where site conditions indicate that the proposed action will measurably degrade groundwater quality;

(C) Open spaces may be required on development proposals overlying areas highly susceptible for contamination of groundwater resources;

(D) Community/public water systems, community drainfields, and hookup to public sewer systems (in conformance with the Chelan-Douglas health district requirements, the provisions of the sewer purveyor, and Chapter 36.70A RCW) are encouraged and may be required where site conditions indicate a high degree of potential contamination to individual wells from on-site or off-site sources. Where required, community systems shall be placed in the most favorable location for the prevention of groundwater contamination;

(E) Where wells are required to be abandoned, the applicant shall ensure that they are abandoned according to state guidelines;

(F) Known contaminants shall be removed from stormwater runoff prior to their point of entry into surface or groundwater resources using available and reasonable best management practices.

(10) Wood Treatment Facilities. Wood treatment facilities shall conform to the provisions of subsection (6) of this section. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces, both natural and manmade, are prohibited.

(11) Underground Injection Wells. Class I, III and IV injection wells are prohibited. Class II injection wells are permitted under Chapter 173-218 WAC by the Washington State Department of Ecology in conjunction with the Washington State Department of Natural Resources. Class V injection wells, involving the injection of critical materials, may be prohibited by the Washington State Department of Ecology or a permit may be required by said agency. In addition, commercial or industrial uses proposing the injection of critical materials are subject to the provisions of subsection (6) of this section.

3.070 Subdivision notation.

In the event the applicant is dividing property through the short subdivision, major subdivision, binding site plan, plat alteration or amendment process, a notation shall appear on the face of the final plat mylar referencing the requirements of this chapter, as amended.

3.080 Reasonable use.

Nothing in this chapter is intended to preclude reasonable use of property, or to effect a taking in violation of the U.S. Constitution, the State of Washington Constitution and substantive due process. Any landowner requesting relief from the performance standards in this chapter has the option to apply for a Shoreline Variance. The hearing examiner may grant variances as set out in Section 7.8, Shoreline Variance Permits of this SMP.

Annex A Critical materials use activity list.

Updated: June 15, 1999.

Type of Business	SIC Codes	Possible Critical Materials	
Agricultural chemicals warehousing and distribution	2879	Ammonium	Chloride
		Nitrate	Pesticides and herbicides
		Sulfate	
Aluminum manufacturing	3334 3341	Acetylene	Hydrocarbon solvents
		Alumina	Kerosene
		Aluminum fluoride	Magnesium
		Aluminum skim/dross	Mapp gas
		Anthracite coal	Methyl napthalene
		Asbestos	Miscellaneous cement constables, refractor
		Boiler additives	Miscellaneous oils and waste oils
		Calcium carbonate	Molten aluminum
		Calcium fluoride	Paint thinners
		Cast iron	PCB oils
		Chlorine	Petroleum coke
		Coal tar pitch	Potlining carbon w/ cryolite
		Copper	Reacted alumina
		Diethylene glycol	Silicon
		Ethylene glycol	Sodium
		Ferro phosphorous	Sodium carbonate
		Ferro silicon	Sodium hydroxide
		Gasoline and diesel fuels	Spent potlining
		Hall cell bath	
Aluminum manufacturing (Continued)		Stoddard solvents	Zinc
		Strontium	
Asphalt paving companies	9999	Waste neugenic solvent, water and asphalt	
Auto and home supply stores	5531	Evaporating wastewater	
Chemical manufacturers	2813 2899	Chlorine	Sodium dichloroisocyanurate
		Calcium oxychloride	Trichloroisocyanuric acid

Type of Business	SIC Codes	Possible Critical Materials	
Concrete batch plants	3273		
Crop preparation services	0723	Liquid nitrogen	
Deciduous tree fruit packing and storage	0175	Lab pack	Liquid nitrogen
Dehydrated fruits, vegetables, soups processing	0715	Liquid nitrogen	
Drycleaning and laundry establishments	7215 7216 7217	Drycleaning filters	Tetrachloroethene
		Drycleaning perc.	Hydrocarbon solvents
		Trichloroethene	
Educational institutions	8221 8222	All chemicals that may be present in laboratory quantities	Mineral spirits
		Contaminated debris	Mixed lab bulk wastes
		Cleaning solvents	Pesticide waste
		Lab pack	Shop bulks
		Maintenance shop waste	
Electrical and electronic industries and businesses	3612	Metal salts	
	4911	3D supreme, breakthrough, sodium hydroxide	Mercury
		Floor stripper	Mixed solvent/paint
		Lead	Solvent/paint waste
Electronic components and accessories companies	3677 3679 3825 3993 3678	Acetone	Lead powder and ceramic manufacturing debris
		Contaminated solvent	Residual liquids from solvent distillation
		Dehydrated rinse water and fire water	
Farm supply distributors	5191	Farm chemicals and minerals used in the soil and on trees	Petroleum distillates
		Gasoline and diesel fuel	Kerosene
Forestry sciences lab	0811 0831 0851	Ammonium hydroxide	Nitric acid
		Formaldehyde	Perchlonc acid
		Hydrochloric acid	Sodium hydroxide
Furniture reupholstery and repair businesses	7641	Methylene chloride	Hydrocarbon solvents
		Acetone	Paint-related products
Gasoline distribution	5541	Gasoline	Ethylene glycol
		Diesel fuel	Methyl alcohol
		Lubricating oils	
General government, NEC	9199 9121 9111	Chlorine	Lab pack

Type of Business	SIC Codes	Possible Critical Materials	
Gold and silver ore mining operations	1041	Dilute picric acid	Waste bromine
		Hydrofluoric acid	Waste corrosive solid
		Monethanel amine	Waste cyanides
		Petroleum grease, 1,1,1—trichloroethane	Waste flammable liquid
		Petroleum naphtha	Waste oxidizing substance
		Tetrabromoethane, arsenic solution	Waste perchloric acid
		Thiourea, lead acetate	Waste substance which in contact with water emits flammable gases
Hardwood dimension and flooring mills industries	2646	NALKAT 7607	BUSPERSE 2168
		NALSIZE 7542	BL 2066
		NOLCO 625	BASF BASAZOL VIOLET 49L
		NALSIZE 7541	CASCAMID C-20
Hot mix asphalt plants	2951		
Industrial gases industries	2813	Chlorine	
Land, mineral, wildlife conservation agencies	9512	Formaldehyde	
Logging, commercial	2411	Spent parts washing solvent	Spent Safety-Kleen Stoddard solvent
Machinery, equipment and supplies sales and repair	5082 5084 7699	Mineral spirits, parts cleaning solvent	
Manufacturing industries, NEC	3999	Paint-related material, stains, lacquers, latex coatings	Still bottoms
		Paint sweepings	Waste solvent from Safety-Kleen and painting operations
Medical and veterinary facilities	0742 8062 8069 8071	Mono and polycyclic Prescription drugs Biological contaminants	
Metal fabrication	3441 3442 3444	Metal salts (Cr, Cu, Ni and Zn)	Xylene
		Hydrochloric acid	Caustic soda
		Sulfuric acid	Sodium phosphate
		Hydrocarbon solvents	Sodium hydroxide
New and used car sales and repair shops	2992 5511 753	Benzene	Paint waste and bottoms
		Evaporating waste water	Solvent mineral spirits
		Lead	Solvent tank cleaner—Parts washer
		Oil	Tetrachloroethylene
		Paint booth filters	Xylene

Type of Business	SIC Codes	Possible Critical Materials	
		Paint materials and waste bottoms	
Paint distributors	2851	Phthalate esters	Methyl ethyl ketone
		Methylene chloride	Hydrocarbon solvents
Petroleum products production and storage: bulk distribution of petroleum products	5171 5172	Diesel fuel and heating oil	Ethylene glycol
		Lubricating oils	Methyl alcohol
Photo copying and duplicating services	7333 7334 7335	Silver salts	Cyanide
		Phenols	Aromatic hydrocarbons
Plastics foam products packaging	3086	Absorbent for ink	Petroleum naphtha
		Acetone	Polypropylene absorbent for oil and paint
		Aqueous cleaner	Toluene
		Electrical transformer waste	Waste ink
		Lead	Waste oils and solvents
		Lighting ballasts (non-PCBs)	Waste pentane
		Mercury	Xylene
		Paint-related material	
Printing establishments	2711 2752 2761	Silver salts	Cyanides
		Phenols	Tetrachloroethene
Research and testing services	8734	Inorganic waste leaf, soil, and water analysis	Solvent wastes from glassware prep and pesticide residue analysis
		Lab solvents, pesticide residue analysis	Soil and sludge sample retains pesticide residue and metals analysis
		Sample vials, pesticide residue analysis	
Sand and gravel mines	1442		
Saw mills and planing mills	242	Spent parts washing solvent	Spent Safety-Kleen Stoddard solvent
Secondary metals refining	3341	Metal salts (Al, Cr, Zn)	Sulfate
		Chloride	
Solvent recycling	2911	1.1.1-Trichloroethane	Tetrachloroethene
		Trichloroethene	
Trucking companies and bus terminal and service facilities	4171 4172 4231	Gasoline and diesel	Caustic soda cleaning solution
		Hydrocarbon solvents	Hydrocarbon solvents
		Ethylene glycol	
Quarries	1429		

Source: WSDOE Tier 2, RCRIC and Hazardous Waste Handlers Lists for Chelan County. Lists transmitted by WSDOE May—June, 1998.

Annex B Vulnerability matrix.

CONTAMINANT LOADING →

SUSCEPTIBILITY ↓

	LOW	HIGH	General Description (susceptibility)
0 TO 3			Typically low permeability. Depth to groundwater is fairly deep and fairly significant slopes
4 TO 7			Higher permeability and shallower depth to groundwater. Less slope potential
8 TO 12			Extremely permeable soils. Shallow depth to groundwater and fairly flat terrain.

LOW VULNERABILITY
MEDIUM VULNERABILITY
HIGH VULNERABILITY

Table I

The susceptibility and contaminant loading ratings for the proposed use and site should be marked at each axis. The vulnerability of the site is then determined by the intersection of the susceptibility rating and the contaminant loading rating to be either low, medium, or high. For example, the project site has a susceptibility rating of six and the proposed use has a high contaminant loading rating. The intersection of those two factors shows that the proposed project would have a medium vulnerability rating. See Table II for a graphic display of the example.

Vulnerability Matrix Example

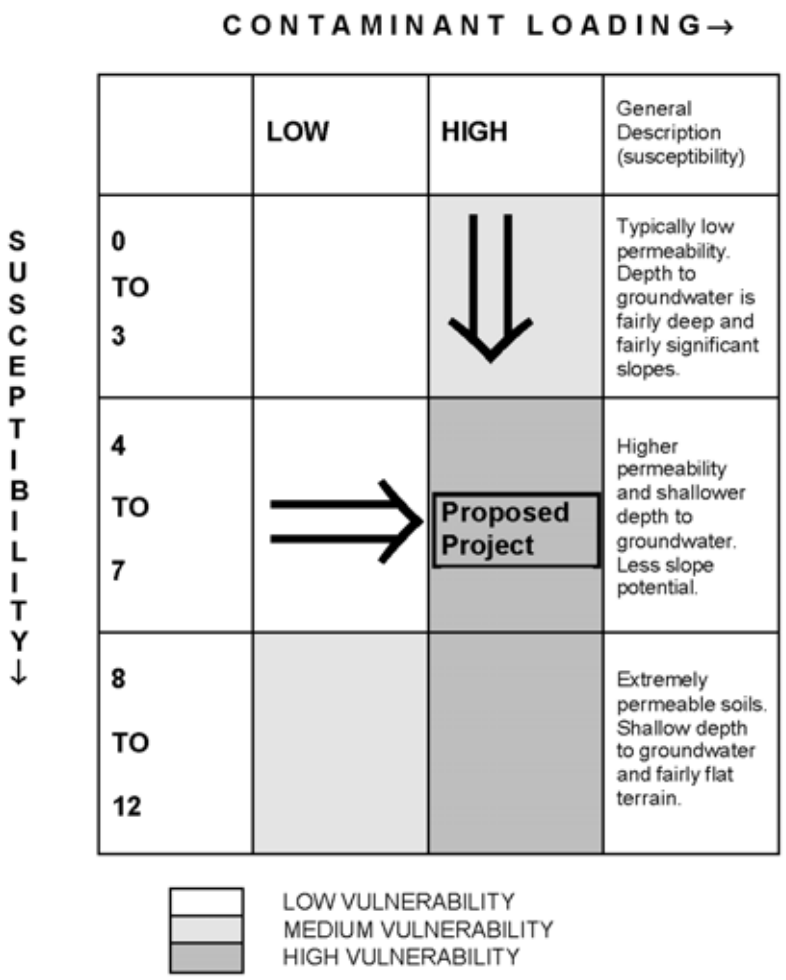


Table II

Chapter 4
FREQUENTLY FLOODED AREAS OVERLAY DISTRICT (FFOD)

Sections:

4.010 Classification.

Those areas located within the one-hundred-year floodplain as defined by the Federal Emergency Management Agency are classified as frequently flooded areas. Only those frequently flooded areas located in shoreline jurisdiction are subject to these regulations and this SMP.

4.020 Designation.

Best available science will be used in the designation of the county's frequently flooded areas. The flood insurance rate maps (FIRM) and floodway maps along with the Flood Insurance Study—Chelan County prepared by the National Flood Insurance Program (NFIP) are adopted as the formal designation for frequently flooded areas. Upon review and approval by the county, subsequent studies delineating the boundaries of the floodways and floodway fringe areas of the one-hundred-year floodplains for the county, or portion thereof, shall constitute the best available science and be utilized as the official designation information for frequently flooded areas. A review committee comprised of the directors of the department of building, fire safety and planning, and the public works department shall review each set of new information to make a recommendation to the Chelan County board of commissioners whether it should be adopted as new designation criteria. Before final adoption, this will be distributed for public and agency review.

When base flood elevation data is not available from the above information to designate frequently flooded areas, the above-defined review committee shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from federal and state governmental agencies or other sources including but not limited to historical data, high water marks or photographs of past flooding to make the appropriate designations.

4.030 Protection measures.

(1) New lots may be created within frequently flooded areas, provided:

(A) A designated buildable area in each lot is provided for outside the floodway and is identified on the face of the final plat, short plat or binding site plan mylar;

(B) All improvements, including parking areas, are located outside the floodway;

(C) Roads necessary to access permitted improvements may cross the floodway if no reasonable route exists outside the floodway;

(D) Open space lots may be located within the one-hundred-year floodplain; and

(2) No residential structures may be built or placed within a designated floodway;

(3) Development in frequently flooded areas within Chelan County currently must comply with the development regulations contained within this section, Chapter 1 of Appendix B, Chapter 2 of Appendix B and the

(B) Chelan County shoreline master program, as amended.

4.040 Subdivision notation.

In the event the applicant is dividing property through the short subdivision, major subdivision, binding site plan, or plat alteration process, a notation shall appear on the face of the final plat referencing the requirements of this chapter, as amended, and the delineated floodway and floodway fringe of the one-hundred-year floodplain shall be shown.

4.050 Reasonable use.

Nothing in this chapter is intended to preclude reasonable use of property, or to effect a taking in violation of the U.S. Constitution, the State of Washington Constitution and substantive due process. Shoreline Variances may be granted by the hearing examiner as set forth in Section 7.8, Shoreline Variance Permits and Section 9.7, Shoreline Permits, Procedures and Administration of this SMP

Chapter 5
GEOLOGICALLY HAZARDOUS AREAS OVERLAY DISTRICT (GHOD)

Sections:

5.010 Purpose.

The purpose of the geologically hazardous overlay district is to reduce the risk to the health and safety of citizens by designating and regulating geologically hazardous critical areas in shoreline jurisdiction consistent with the Growth Management Act and Chapter 395-190 WAC, Minimum Guidelines to Classify Agricultural, Forest, Mineral Lands and Critical Areas.

5.020 Applicability.

The provisions of this chapter shall apply to any land use or development under county shoreline jurisdiction that is proposed to be located within designated geologically hazardous areas with the exception of (1) residential footprint expansions less than fifty percent of the square footage of the primary structure to be expanded, including any attached nonhabitable space, and (2) accessory structures that do not contain habitable space. Designated geologically hazardous areas include all areas classified as geologically hazardous areas under Section 5.030.

5.030 Classification.

Classification of each geologically hazardous area will be based upon the risk to development. The following categories shall be used:

(1) Known or Suspected Risk. Areas that are susceptible to one or more of the following types of hazards shall be classified as a geologically hazardous area with a known or suspected risk and shall require a geologic site assessment as described in Section 5.090.

(A) Erosion hazard areas identified by the U.S. Department of Agriculture Soil Conservation Service Chelan County Soil Survey Manual as having a "severe" erosion hazard.

(B) Landslide hazard areas shall include areas potentially subject to landslides based on a combination of geologic, topographic and hydrologic factors. They include any areas susceptible to mass movement because of any combination of bedrock soil, slope (gradient), slope aspect, structure, hydrology, damage or removal of vegetative cover, or other factors. Examples of these may include, but are not limited to, the following:

(i) Sites that are located on or within two hundred fifty feet of areas of documented or historic failures, such as:

(a) Those areas delineated by the United States Department of Natural Resource Conservation Service as having a "severe" limitation for building site development.

(b) Areas designated as quaternary slumps, earthflows, mudflows, or landslides on maps published by the United States Geological Survey or the Department of Natural Resources Division of Geology and Earth Resources.

(c) Areas located on a landslide feature which has shown movement during the past ten thousand years or which is underlain or covered by mass wastage debris of that period.

(d) Slopes that are adjacent to existing fault planes or similar geologic formations.

(ii) Sites that are located on or within two hundred fifty feet from areas with all three of the following characteristics:

(a) Slopes steeper than fifteen percent; and

(b) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

(c) Springs or groundwater seepage.

(iii) Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action.

(iv) Areas located on or within two hundred fifty feet from an alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding.

(v) Steep Slopes. Any slope of forty percent or steeper with ten feet of relief or areas adjacent to these slopes, of which shall cover a distance equal to the vertical height of the slope or two hundred fifty feet, whichever is less.

(vi) Areas that show evidence of, or are at risk from, sliding that may pose a threat to the public health and safety.

(C) Sites that are located on or within five hundred feet from snow avalanche areas. Snow avalanche areas include areas that show evidence of, or are at risk from, snow avalanches.

(D) Upon examination of the subject property by a qualified professional pursuant to Section 5.080, if a determination is made that none of the foregoing conditions are present on or adjacent to the property, the qualified professional may state in letter form the circumstances under which the site assessment or report may be waived.

(2) No Risk. Areas classified initially as geologically hazardous areas with a known or suspected risk or unknown risk may, upon further study, actually pose no risk to development or to the public health and safety. Where the administrator can determine that no risk from the geologically hazardous area is present, based upon geotechnical reports or best available science, these areas shall be classified as geologically hazardous areas determined to be of no risk.

(3) Unknown Risk. Geologically hazardous areas may be present in the county that cannot readily be identified based upon the criteria of subsection (1) of this section. Geologically hazardous areas of unknown risk include areas where data is not available to determine the presence or absence of a geological hazard. The administrator may require a geologic site assessment and/or geotechnical report to determine the actual presence or absence of a geologically hazardous area.

5.040 Classification challenge.

An applicant may challenge the geologically hazardous area classification determination made by the administrator. Said challenge shall be in the form of a geotechnical report under the provisions of Section 5.090. If the geotechnical report indicates that the geologically hazardous area does not exist or should be classified as no risk, the administrator may find that the performance standards outlined in this chapter do not apply to the site or project.

5.050 Administrative review.

The administrator may modify the requirements of this chapter when existing or intervening natural or manmade features would preclude the development proposal from geologic risk. An applicant may request such review from the department of community development as part of the permit application process.

5.060 Designation.

Areas classified as geologically hazardous areas pursuant to Section 5.030 are designated as geologically hazardous areas.

5.070 Performance standards.

(1) Upon completion of a geotechnical report, the following performance standards shall be applied during county review of proposed development projects that are the subject of the geotechnical report. Additional mitigation measures may be required pursuant to the findings of a geotechnical report. The administrator may agree to alternative mitigation measures set forth by the geotechnical report, if such alternative measures provide greater or equal protection than the application of the performance standards below. Development proposals may be approved pursuant to the performance standards of this section and/or mitigation measures of a geotechnical report, if they are determined to satisfy the purposes of this chapter. A development permit may be denied based upon the administrator's evaluation of the inability of said measures to reduce risks associated with the geologically hazardous area. Performance standards to be utilized include:

(A) Construction methods should be used which minimize risks to structures and do not increase the risk to the site, or to adjacent properties and their structures, from the geologic hazard. Development shall not increase instability or create a hazard to the site or adjacent properties, or result in a significant increase in sedimentation or erosion.

(B) Site planning should minimize disruption of existing topography and vegetation, and should incorporate opportunities for phased clearing.

(C) Disturbed areas shall be replanted within one year of project completion, in accordance with an approved revegetation plan, and be appropriately bonded for.

(D) Impervious surface coverage shall be minimized.

(E) Excavation and grading shall be minimized. A clearing and grading schedule shall consider limitations based upon seasonal weather conditions.

(F) Detailed drainage plans may be required for projects affecting areas of geologic hazard. These plans shall indicate the effect the project may have on the hazard areas and adjacent properties and mitigating measures, with stormwater detention standards based upon the technical studies required under this document.

(G) Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval should be marked in the field and approved by the county prior to undertaking the project.

(H) A monitoring program should be prepared for construction activities occurring in geologic hazard areas and be marked on the face of the building permit.

(I) All authorized clearing for roads, utilities, etc., should be limited to the minimum necessary to accomplish engineering design. Alternatives should meet the following requirements:

(i) Clearing, grading or filling of sloped sites containing erosion hazard areas shall be limited by weather conditions and an approved erosion control plan.

(ii) The face of cut and fill on slopes shall be prepared and maintained to control against erosion.

(J) An erosion control plan shall be submitted by the applicant for a development, prior to approval of the proposal. Temporary erosion and sedimentation controls shall be utilized during construction and until a permanent control measure is achieved. Further, to minimize blowing soil during development, appropriate water and/or mulch material should be applied to any areas without a vegetative cover.

(K) To maintain the natural integrity of landslide hazard areas and to protect the environment, and the public health and safety, adequate vegetation shall be maintained around all sides of the landslide hazard area.

(L) Development proposals that involve altering land upon areas identified as landslide or avalanche hazard areas must demonstrate the following for approval:

(i) There is no evidence of recent landslides or avalanches in the vicinity of the proposed development and quantitative analysis of slope stability and/or other pertinent factors indicate no significant risk to the proposed development or other properties.

(ii) The landslide or avalanche hazard areas can be modified or the project can be designed so that the landslide or avalanche hazard to the project is eliminated.

(iii) The development proposal would cause no increase in surface water discharge, sedimentation, or avalanche hazard to other properties, and will not decrease slope stability on other properties.

(iv) Disturbance of trees and vegetation shall be the minimum necessary in order to prevent erosion and/or an increase in avalanche hazard, to stabilize slopes, and preserve the natural character of the area.

(v) Structures and improvements shall be located to preserve the most sensitive portion of the site and its natural landforms and vegetation.

(M) Projects in snow avalanche hazard areas shall provide technical studies, which identify the location and extent of the potential avalanche area and include mitigation measures, which ensure that the proposed activity will not increase the potential for an avalanche on the subject property and adjacent properties.

(2) Performance standards or mitigation measures outlined in a geologic site assessment or geotechnical report shall be implemented and incorporated into conditions of approval, if applicable.

(3) If performance standards or mitigation measures are outlined in a geologic site assessment or geotechnical report, an engineer or geologist shall verify that said measures/standards have been adequately completed and provide written notification of completion to the department.

5.080 Report preparer qualifications and criteria.

(1) A geologic site assessment, when required, shall be prepared by either a professional civil engineer with geologic expertise licensed by the state of Washington; a geologist licensed by the state of Washington; an engineering geologist licensed by the

state of Washington; or a person with applicable qualifications as determined by the administrator.

(2) A geotechnical report, when required, shall be prepared by either an engineering geologist licensed by the state of Washington or a professional civil engineer licensed by the state of Washington. A civil engineer must also have the following experience and background.

(A) Five years of geotechnical experience evaluating geologically hazardous conditions and site development activities, such as landform recognition; unstable geologic units; roads; structural footings, foundations and retaining walls; swimming pools and sport courts; and other activities such as timber removal, site disturbance and mining.

5.090 Site assessment and report requirements.

Geologic site assessments and geotechnical reports shall be prepared in compliance with the following provisions. A geotechnical report contains all of the provisions of a geologic site assessment and shall be considered to meet the requirements of a geologic site assessment.

(1) The geologic site assessment shall include the following:

(A) Evaluate the actual presence of geologically hazardous areas within or in the vicinity of the site and the need for a geotechnical report. Specifically mention the circumstances or conditions which require the report to be prepared (steep slopes, erodible soils, suspected landslide or avalanche hazard, adverse hydrologic or flood risk, etc.).

(B) Evaluate safety issues related to proposed activities. Address issues that could involve personal injury, worksite safety, or property damage.

(C) Address existing geologic, topographic, and hydrologic conditions on the site, including an evaluation of the ability of the site to accommodate the proposed activity. Describe the proposed development, including property size and location, nature and extent of the planned development (i.e., house, garage, shop, swimming pool, etc.), and its specific location on the property. Include evidence of prior grading, excavation, cut banks, fill areas, or mining activity, and their potential impact on the project. Note and evaluate any features that could adversely affect development such as drainage gullies, erosion channeling, alluvial fans, evidence for debris flow or avalanche, surface creep and slope failure, observed or suspected spring activity and flood risk potential.

(D) A discussion of the surface and subsurface geological and engineering properties of the soils, sediments, and/or rocks on the subject property and adjacent properties and their effect on the stability of the slope. Where known from field inspection or reference maps and literature, include bedrock identification and age, structural attitude with respect to slope inclination, fracturing, faults and shear zones, hydrothermal alteration, weathering characteristics, presence of landslide diamictite and its age and consolidation, etc. Use cross-sections if necessary for better representation of subsurface character.

(E) A description of the soils in accordance with the Unified Soil Classification System. Give general soil characteristics that could affect site development (i.e., frost action and shrink/swell potential, permeability, plasticity and wet/dry behavior, erodibility, etc.). Especially note the presence or suspected presence of clay-rich horizons and their position/location in the soil profile, and any indication that a building site could be subjected to differential soil compression or setting.

(F) Evidence and history of avalanches, faults, significant geologic contacts, landslides, or downslope soil movement on the subject property and adjacent properties not detailed in subsection (1)(C) of this section.

(G) A summary of the site assessment and its conclusions, mentioning the presence or absence of geohazards and site suitability. Include any recommendations for mitigation of potential hazards that can be dealt with without requiring a complete geotechnical report (control measures such as footing or intercept drainage systems, retaining walls, erosion control, vegetative management and restoration, and the probable need for engineering consultation and design).

(H) A topographic map showing the proposed development site location and approximate parcel shape location and boundaries.

(I) Cite all references and information used in the assessment preparation, such as United States Geologic Survey (USGS) and Department of Natural Resources Geologic Maps and Bulletins, soil studies, surveys and previous reports.

(2) The geotechnical report determined to be required by the geologic site assessment shall include the following:

All of the information required for a geologic site assessment as well as the following:

(A) Determine the appropriate hazard category according to the classification of the geologically hazardous area consistent with Section 5.030.

(B) Determine the appropriate application of the performance standards of Section 5.070 and/or alternative mitigation measures that provide an equal or greater level of protection.

(C) Include a contour map of the proposed site, at a scale of one inch equals twenty feet or as deemed appropriate by the administrator. Slopes shall be clearly delineated for the ranges between fifteen and twenty-nine percent, and thirty percent or greater, including figures for a real coverage of each slope category on the site. When site-specific conditions indicate the necessity, the administrator may require the topographic data to be field surveyed.

(D) A site development plan drawn to scale which shows the boundary lines and dimensions of the subject property, the location, size and type of any existing or proposed structures, impervious surfaces, wells, drainfields, drainfield reserve areas, roads, easements, and utilities proposed or located on site.

(E) The location of springs, seeps, or other surface expressions of groundwater. The location of surface water or evidence of seasonal surface water runoff or groundwater.

(F) The extent and type of vegetative cover prior to development activity or site disturbance.

(G) The proposed method of drainage and locations of all existing and proposed surface and subsurface drainage facilities and patterns, and the locations and methods for erosion control.

(H) An identification of all existing fill areas.

(I) Information demonstrating compliance with all applicable codes and ordinances for the proposed development permit.

(J) A vegetation management and restoration plan or other means for maintaining long-term stability of slopes.

(3) Geologic site assessments and geotechnical reports, when completed in accordance with this chapter, shall be valid for a period of five years. A qualified professional, as outlined in Section 5.080(2), may extend the applicability of a valid geologic site assessment or geotechnical report by five years by submittal of a letter stating the validity of the existing document and its application for the five-year extension; provided, that such letter must address any changes in surrounding land use activity or site conditions.

5.100 Subdivision notation.

In the event the applicant is dividing property through the short subdivision, major subdivision, binding site plan, or plat alteration process, and all or a portion of the property division is located within a geologically hazardous area, a notation shall appear on the face of the final plat mylar that states the following:

> All or part of this area may be located within a suspected or known geologically hazardous area, and development proposals proposed within this area will be subject to the requirements of Chapter 5: Geologically Hazardous Areas Overlay District (GHOD) of the County's Shoreline Master Program. Geologic site assessments and technical reports completed for subdivision approval may not be adequate for site development and additional assessment may be necessary.

5.110 Whispering Pines geologically hazardous areas overlay district.

The following review criteria and standards shall apply to the Whispering Pines I subdivision, the area commonly known as Whispering Pines II and areas of influence as depicted and described on the Historical Debris Torrents Map, Figure #3 in the Whispering Pines Debris Torrent Hazard Study, Lake Wenatchee, Chelan County, Washington, submitted to Chelan County January 15, 2001, by Shannon and Wilson, Inc., Geotechnical and Environmental Consultants, excluding Sections 13 and 19. These requirements apply only to Sections 17 and 18 as depicted on Map Figure #3, Historical Debris Torrents.

On-site evidence as entered into the record by property owners questions the accuracy of the Shannon and Wilson study as it pertains to actual property lines, debris/torrent path(s) and associated channel(s). If an applicant's site plan is inconsistent with the Map Figure #3, Chelan County staff will conduct an on-site visit to field confirm the dimensional accuracy of site plan.

The subject area is designated as a geologically hazardous area pursuant to the provisions of the Chelan County Code. Building and/or development permits may be issued in conformance with the following requirements:

(1) No building or development permits shall be issued for structures, development, activity or uses within the scoured channel(s) and cobble/boulder deposit as delineated on Map Figure #3, Historical Debris Torrents.

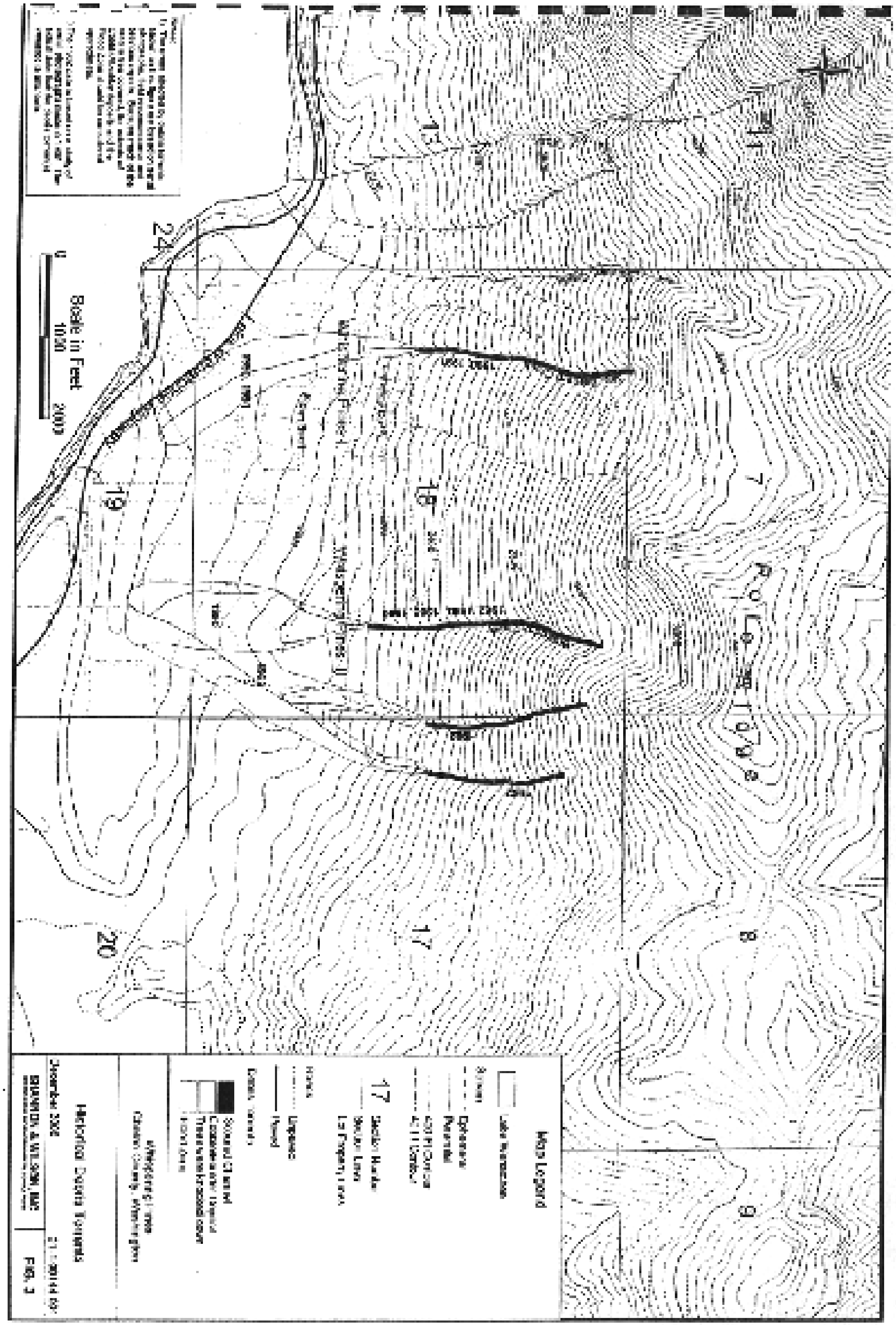
(2) The area designated as the flood zone on the Historical Debris Torrent Hazard Map, Figure #3, shall be referred to herein as "areas of potential geologic hazard." Building or development permits may be issued in the "areas of potential geologic hazard" in conformance with the findings, recommendations, mitigations and requirements of a geologic site assessment pursuant to the requirements of this chapter.

(3) A hold harmless agreement (notice, acknowledgement, waiver, release and indemnification) on forms provided by the Chelan County department of building/fire safety and planning shall be required prior to the issuance of a building/development permit located within the "areas of potential geologic hazard." The hold harmless agreement shall be recorded with the Chelan County auditor to run with the title to the land and shall also serve as a notice to title.

(4) A geologic site assessment will not be required for real property located within one thousand feet of the scoured channel(s), cobble/boulder deposits and "areas of potential geologic hazard" as delineated on Map Figure #3, except as may be required by subsection (5) of this section.

(5) A setback less than fifty feet from the top of the scoured channel will require a geologic site assessment in conformance with the requirements of this chapter.

(6) Geologic site assessments shall be prepared in conformance with this chapter and shall be signed and stamped by an engineering geologist or geotechnical engineer licensed by the state of Washington.


Scale in Feet
0
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Map Legend
Historical Debris Torrents

CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION

CITY OF CASHMERE

Chapters:

CHAPTER 1 - GENERAL PROVISIONS

Sections:

1.010 Purpose.

The purpose of this title is to provide for reasonable protection of the natural environment and the general public health, safety and welfare, and satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221 by:

A. Implementing the City of Cashmere Comprehensive Plan;

B. Establishing standards to protect critical areas;

C. Protecting the general public, resources and facilities from injury, loss of life, property damage or financial loss due to flooding, landslides, or failure of steep slopes;

D. Protecting unique, fragile and valuable elements of the environment;

E. Meeting the requirements of the National Flood Insurance program and maintaining the city as an eligible community for federal flood insurance benefits;

F. Preventing cumulative adverse environmental impacts on water availability, water quality, groundwater, wetlands, rivers and streams;

G. Providing appropriate guidance and protection measures for addressing the needs and concerns associated with critical areas that help define the quality of life in the city;

H. Encouraging the retention of open space and development of recreational opportunities, conserving fish and wildlife habitat, and increasing access to natural resource lands and water;

I. Implementing applicable mandated federal and state regulations; and

J. Incorporating best available science in determining appropriate measures to protect the functions and values of critical areas and for the preservation and/or enhancement of anadromous fisheries.

1.020 Applicability.

A. When a chapter reference is used, it shall be inclusive of all of Appendix B.

B. This chapter classifies and designates critical areas in the city and establishes protection measures for critical areas within the shoreline jurisdiction of the city's incorporated limits. Any development authorized to alter the condition of any land, water or vegetation; or to alter or construct any building, structure or improvement shall be in compliance with the requirements of this chapter.

C. When the provisions of this title or any other provisions of the city's municipal code are in direct conflict with each other or with other federal or state regulations, the provision that is more protective of shoreline resources shall prevail, when consistent with SMA policy.

1.030 Reference maps and inventories.

The distribution of critical areas within the city is described and displayed in reference materials and on maps maintained by the city. These reference materials, in the most current form, are intended for general information only and do not depict site-specific designations. They are intended to advise the city, applicants and other participants in the development permit review process that a critical area may exist and that further study, review and consideration may be necessary. These reference materials shall include but are not limited to the following:

A. Maps.

1. City of Cashmere Critical Area Reference Map: Wetland Areas;
2. City of Cashmere Critical Area Reference Map: Fish and Wildlife Habitat Areas;
3. City of Cashmere Critical Area Reference Map: Geologically Hazardous Areas;
4. City of Cashmere Critical Area Reference Map: Frequently Flooded Areas;
5. Flood Insurance Rate Maps (1976);
6. Flood Boundary and Floodway Maps (1976);
7. U.S. Fish and Wildlife Service National Wetlands Inventory;
8. Washington State Department of Fish and Wildlife Priority Habitats and Species Maps;

9. U.S.G.S. 7.5 Minute Series Topographic Quadrangle Maps; and
10. Aerial photos.

B. Documents.

1. Approved special reports previously completed for a subject property;
2. The Flood Insurance Study for the Town of Cashmere (1976);
3. City of Cashmere Comprehensive Plan;
4. City of Cashmere Shoreline Master Program;
5. NRCS Soil Survey Maps for Chelan County Area;
6. Federal Wetlands Delineation Manual (1987);
7. Washington State Wetlands Identification and Delineation Manual (DOE, March 1997);
8. Washington State Wetlands Rating System for Eastern Washington (DOE #91-58).

1.040 Disclosure.

The presence of any known or suspected critical areas on or within 300 feet of property that is the subject of a development permit shall be identified by the applicant in the application materials submitted to the city.

1.050 Review process.

Provisions of this chapter shall be considered and applied appropriately during development permit application reviews within shoreline jurisdiction initiated under applicable titles of the CMC. Review of development within frequently flooded areas, aquifer recharge areas, geologically hazardous areas, fish and wildlife habitat conservation areas, and wetlands and any associated buffers within shoreline jurisdiction that do not require a development permit application shall be subject to the provisions of Section 1.080C of Appendix B.

1.060 Mitigation, maintenance, monitoring and contingency.

A. Mitigation, maintenance, monitoring and contingency plans shall be implemented by the developer to protect critical areas and their buffers prior to the commencement of any development activities.

B. The property owner shall be responsible for reporting to the city and undertaking appropriate corrective action when monitoring reveals a significant deviation from predicted impacts or a failure of mitigation or maintenance measures.

1.070 Surety.

If a development proposal is subject to mitigation, maintenance or monitoring plans, an assurance device or surety may be required by the city in accordance with the CMC.

1.080 Special reports.

A. In order to maintain and protect critical areas, as well as to assist in classifying and designating such areas, site-specific environmental information will be required when evaluating a development proposal.

B. Special reports shall be submitted for review and approval in conjunction with development applications when required by the city. Each chapter that deals with a specific critical area also contains a description of when special reports may be required. The city shall establish and maintain a list of qualified consultants for the different types of reports, plans, studies, etc.

C. When no other application review process is required, final special reports shall be reviewed and approved by the city according to the provisions governing limited administrative reviews.

D. The preparation of special reports or tests required by this chapter is the responsibility of the applicant for a development permit. Costs incurred by the city to engage technical consultants or for staff review and interpretation of data and findings submitted by or on behalf of the developer or applicant shall be reimbursed by the applicant in accordance with a schedule adopted by the city.

E. Special studies and reports, including site plans, shall be submitted in such a manner that they conform to the most current version of the city's design guidelines, as determined by the public works coordinator.

F. The city may waive the requirement for a special report(s) in the following instances:

1. If the proposed development is a minor development that will not cause adverse impacts;

2. There is adequate, existing information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigation measures; or

3. If the city determines, after a site visit, that the proposal is not located within a critical area, even though it may appear on the reference maps identified in Section 1.030

1.090 Drainage and erosion control plan.

A. All drainage and erosion control plans shall be prepared by an engineer licensed in the state of Washington. Upon the city's review and approval of the drainage and erosion control plans, the identified measures to prevent contaminated stormwater from being discharged off the construction site must be in place prior to any clearing, grading or construction.

B. All drainage and erosion control plans shall address methods to minimize and contain soil within the project boundaries during construction and to provide for stormwater drainage from the site and its surroundings during and after construction. Best management practices (BMPs) must be used to prevent any sediment, oil, gas, pesticide-contaminated soil or other pollutants from entering surface or ground water.

C. All drainage and erosion control plans shall be prepared using the Type 2 SCS model, taking into account a storm event equal to or exceeding two inches of rainfall in 90 minutes..

1.100 Grading and excavation plan.

All grading and excavation plans shall be prepared by an engineer licensed in the state of Washington, and shall meet the standards and requirements set forth in Chapter 15.11 CMC, Appendix Chapter 33 of the Uniform Building Code, and shall contain the following information:

A. A cover sheet showing the location of work, the name and address of the owner and the engineer who prepared the plans;

B. General vicinity of the proposed site;

C. Property limits and accurate contours of existing ground and details of terrain and area drainage. Contour intervals for slopes 10 percent or less shall be no more than two feet, and intervals for slopes exceeding 10 percent shall be no more than five feet;

D. Limits of proposed excavation and fill sites, finished contours to be achieved by the grading, and proposed drainage channels to offset stormwater impacts during grading and excavation (and related construction);

E. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains;

F. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners which are within 15 feet of the property;

G. Recommendations included in a soils engineering report and the engineering geology report shall be incorporated in the grading plans or specifications. When approved by the building official, specific recommendations contained in the soils engineering report and the engineering geology report, which are applicable to grading, may be included by reference;

H. The dates of the soils engineering and engineering geology reports together with the names, seals, license numbers, addresses and phone numbers of the firms and/or individuals who prepared the reports.

1.110 Definitions.

A. Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions of this Shoreline Master Program and supplemented herein. Except where specifically defined in this chapter or Chapter 8 of the SMP, all words used in this title shall carry their customary meanings. Words used in the present tense include the future; the plural includes the singular; the word “shall” is always mandatory; the word “may” denotes a use of discretion in making a decision; the words “used” or “occupied” shall be considered as though followed by the words “or intended, arranged or designed to be used or occupied.” The definition of any word or phrase not listed in the definitions that is in question when administering this chapter shall be defined from one of the following sources, which shall be utilized by finding the desired definition from source number one, but if it is not available there, then source number two may be used and so on. The sources are as follows:

1. This Shoreline Master Program

2. The Shoreline Management Act or the Shoreline Master Program Guidelines;

3. Any city resolution, ordinance, code, regulation or formally adopted comprehensive plan, shoreline master program or other formally adopted land use plan;

4. Any statute or regulation of the state of Washington;

5. Legal definitions from Washington common law or a law dictionary;

6. The common dictionary.

B. As used in this title, the following definitions shall apply:

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

2. "Best Available Science" means current scientific information used in the process to designate, protect, or restore critical areas, that is, derived from a valid scientific process as defined by WAC 365-195-900 through 925. Examples of best available science are included in Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas published by the Washington State Department of Community, Trade and Economic Development.

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

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

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

c. Protect trees, vegetation and soils designated to be retained during and following site construction and use native plant species appropriate to the site for re-vegetation of disturbed areas; and

d. Provide standards for proper use of chemical herbicides within critical areas.

4. "Bog" means a low nutrient, acidic wetland with organic soils and characteristic bog plants, which is sensitive to disturbance and impossible to re-create through compensatory mitigation.

5. "Buffer or buffer zone" means the area contiguous with a critical area that maintains the functions and/or structural stability of the critical area.

6. "Classification" means defining value and hazard categories to which critical areas will be assigned.

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

8. "Compensatory Mitigation" means mitigation for wetland losses or impacts resulting from alteration of wetlands and/or their buffers. It includes but is not limited to, creation, enhancement, and restoration.

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

10. "Creation" means the manipulation of the physical, chemical, or biological characteristics to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Creation results in a gain in wetland acreage [and function]. [A typical action is the excavation of upland soils to elevations that will produce a wetland hydroperiod and hydric soils, and support the growth of hydrophytic plant species.]

11. "Cumulative Impacts or Effects" means the combined, incremental effects of human activity on ecological or critical areas functions and values. Cumulative impacts result when the effects of an action are added to or interact with the effects of other actions in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis and changes to policies and permitting decisions.

12. "Developable Area" means a site or portion of a site that may be used as the location of development, in accordance with the rules of this Chapter.

13. "Development" means a land use consisting of the construction or exterior alteration of structures; grading, dredging, drilling, or dumping; filling; removal of sand, gravel, or minerals; bulk heading; driving of pilings; or any project of a temporary or permanent nature which modifies structures, land, or shorelines and which does not fall within the allowable exemptions contained in the City Code.

14. "Enhancement" means the manipulation of the physical, chemical, or biological characteristics of a wetland to heighten, intensify or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in wetland function(s) and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. [Examples are planting vegetation, controlling non-native or invasive species, and modifying site elevations to alter hydroperiods.]

15. "Functions and Values" means the services provided by critical areas to society; including, but not limited to, improving and maintaining water quality; providing fish and wildlife habitat; supporting terrestrial and aquatic food chains reducing flooding and erosive flows, wave attenuation; historical or archaeological importance; educational opportunities; and recreation.

16. "Growth Management Act" means RCW 36.70A, as amended.

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

18. "Historic Condition" means condition of the land including flora, fauna, soil, topography, and hydrology that existed before the area and vicinity were developed or altered by Euro-American settlement, or in some cases before any human habitation occurred.

19. "Impervious Surface" means any alterations to the surface of a soil that prevents or retards the entry of water into it compared to its undisturbed condition, or any reductions in infiltration that cause water to run off the surface in greater quantities or at an increased rate of flow than that present prior to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, lawns, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.

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

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

22. "Isolated Wetlands" means those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water, including other wetlands.

23. "Major development" means an activity that is required to obtain a permit from the city that is classified by CMC Title 14 as a "full administrative" or "quasi-judicial" review process.

24. "Mature Forested Wetland" means a wetland where at least 1 acre of the wetland surface is covered by woody vegetation greater than 20 feet in height with a crown cover of at least 30 percent and where at least 8 trees/acre are 80 to 200 years old OR have average diameters (dbh) exceeding 21 inches (53 centimeters) measured from the uphill side of the tree trunk at 4.5 feet up from the ground.

25. "Minor development" means an activity that is required to obtain a permit from the city that is classified by CMC Title 14 as a "limited administrative" review process.

26. "Mitigation" means avoiding, minimizing, or compensating for adverse critical areas impacts. Mitigation, in the following sequential order of preference, is:

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

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

c. Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;

d. Minimizing or eliminating a hazard by restoring or stabilizing the hazard area through engineered or other methods;

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

f. Compensating for the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and

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

Mitigation for individual actions may include a combination of the above measures.

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

28. "Native Vegetation" means plant species that occur naturally in a particular region or environment and were not introduced by human activities.

29. "Off-Site Compensation" means to replace critical areas away from the site on which a critical area has been impacted.

30. "On-Site Compensation" means to replace critical areas at or adjacent to the site on which a critical areas has been impacted.

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

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

33. "Preservation" means the removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This term includes the purchase of land or easements, repairing water control structures or fences, or structural protection. Preservation does not result in a gain of wetland acres [but may result in a gain in functions over the long term].

34. "Project Area" means all areas within fifty (50) feet of the area proposed to be disturbed, altered, or used by the proposed activity or the construction of any proposed structures. When the action binds the land, such as a subdivision, short subdivision, binding site plan, planned unit development, or rezone, the project area shall include the entire parcel, at a minimum.

35. "Prior converted croplands" (PCCs) are defined in federal law as wetlands that were drained, dredged, filled, leveled or otherwise manipulated, including the removal of woody vegetation, before December 23, 1985, to enable production of an agricultural commodity, and that: 1) have had an agricultural commodity planted or produced at least once prior to December 23, 1985; 2) do not have standing water for more than 14 consecutive days during the growing season, and 3) have not since been abandoned.

36. "Qualified Professional" means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise

appropriate for the relevant critical area subject in accordance with WAC 365-195-905. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and have at least five years of related work experience.

a. A qualified professional for wetlands must be a professional wetland scientist with at least two years of full-time work experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.

b. A qualified professional for habitat must have a degree in biology or a related degree and professional experience related to the subject species.

c. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.

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

37. "Re-establishment" means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres [and functions]. [Activities could include removing fill, plugging ditches, or breaking drain tiles.]

38. "Rehabilitation" means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions [and processes] 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 returning tidal influence to a wetland.]

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

40. "Restoration" means measures taken to restore an altered or damaged natural feature including:

a. Active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and

b. Actions performed to reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

41. "SEPA – Washington State Environmental Policy Act" means Subchapter 43.21C RCW.

42. "Soil Survey" means the most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.

43. "Species" means any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

44. "Species, Endangered" means any wildlife species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state (WAC 232-12-297, Section 2.4).

45. "Species, Priority" means any fish or wildlife species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels as classified by the Washington Department of Fish and Wildlife, including endangered, threatened, sensitive, candidate and monitor species, and those of recreational, commercial, or tribal importance.

46. "Species, Threatened" means any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats (WAC 232-12-297, Section 2.5).

47. "Species, Sensitive" means any wildlife species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened throughout a significant portion of its range within the state without cooperative management or removal of threats (WAC 232-12-297, Section 2.6).

48. "Stream" means an area where open surface water produces a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses, unless they are used by salmonids or are used to convey a watercourse naturally occurring prior to construction. A channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

49. "Unavoidable Impacts" means adverse impacts that remain after all appropriate and practicable avoidance and minimization has been achieved.

50. "Washington Administration Code (WAC)" means administrative guidelines implementing the Growth Management Act, WAC 365-190 and WAC 365-195, as amended.

51. "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.

52. "Wetland Mitigation Bank" means a site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing advance mitigation to compensate for future, permitted impacts to similar resources.

53. "Wetland Mosaic" means an area with a concentration of multiple small wetlands, in which each patch of wetland is less than one acre; on average, patches are less than 100 feet from each other; and areas delineated as vegetated wetland are more than 50% of the total area of the entire mosaic, including uplands and open water.

1.160 Enforcement.

The provisions of the Shoreline Management Permit and Enforcement Procedures (WAC 173-27) shall be applied and interpreted for the enforcement of violations of the provisions contained within these chapters.

CHAPTER 2 - WETLANDS

Sections:

2.010 Purpose.

The purposes of this Chapter are to:

A. Recognize and protect the beneficial functions performed by many wetlands, which include, but are not limited to, providing food, breeding, nesting and/or rearing habitat for fish and wildlife; recharging and discharging ground water; contributing to stream flow during low flow periods; stabilizing stream banks and shorelines; storing storm and flood waters to reduce flooding and erosion; and improving water quality through biofiltration, adsorption, retention and transformation of sediments, nutrients, and toxicants.

B. Regulate land use to avoid adverse effects on wetlands and maintain the functions and values of wetlands throughout Cashmere's shoreline jurisdiction.

C. Establish review procedures for development proposals in and adjacent to wetlands located in shoreline jurisdiction.

2.020 Identification and Rating.

A. Identification and Delineation. Wetlands shall be identified and delineated by a qualified wetland professional in accordance with the Washington State Wetlands Identification and Delineation Manual (Washington Department of Ecology Publication #96-94, or as revised and approved by Ecology).

B. Rating. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Eastern Washington (Ecology Publication #04-06-015, or as revised and approved by Ecology), which contains the definitions and methods for determining if the criteria below are met.

1. Category I wetlands are: 1) wetlands that are identified by scientists of the Washington Natural Heritage Program/DNR as high quality wetlands; 2) bogs; 3) mature and old-growth forested wetlands over ¼ acre with slow-growing trees; 4) forests with stands of aspen; and 5) wetlands that perform many functions very well (scores of 70 points or more). These wetlands are those that 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; or 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of function.

2. Category II wetlands are: 1) forested wetlands in the floodplains of rivers; 2) mature and old-growth forested wetlands over ¼ acre with fast-growing trees; and 3) wetlands that perform functions well (scores between 51-69 points).

3. Category III wetlands are: 1) wetlands with a moderate level of functions (scores between 30-50 points).

4. Category IV wetlands have the lowest level of functions (scores less than 30 points) and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected.

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

2.030 Regulated Activities.

A. For any regulated activity, a critical areas report (see Section 2.060 of this Chapter) may be required to support the requested activity.

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

1. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind
2. The dumping of, discharging of, or filling with any material
3. The draining, flooding, or disturbing the water level or water table
4. Pile driving
5. The placing of obstructions
6. The construction, reconstruction, demolition, or expansion of any structure

7. 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

8. "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.

9. Activities that result in:

a. A significant change of water temperature

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

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

d. The introduction of pollutants

2.040 Allowed Uses in Wetlands and Wetland Buffers.

A. Activities Allowed in Wetlands and Wetland Buffers. The activities listed below are allowed in wetlands. These activities do not require submission of a critical area report, except where such activities result in a loss to the functions and values of a wetland or wetland buffer. These activities include:

1. Those activities and uses conducted pursuant to the Washington State Forest Practices Act and its rules and regulations, WAC 222-12-030, where state law specifically exempts local authority, except those developments requiring local approval for Class 4 -General Forest Practice Permits (conversions) as defined in RCW 76.09 and WAC 222-12.

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

3. 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.

4. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer, provided that the drilling does not interrupt the ground water 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 ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

5. Enhancement of a wetland or buffer 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.

6. Activities determined by the City as having minimal adverse impacts such as educational and scientific research activities, fishing, etc

7. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way or easement, provided that the maintenance or repair does not expand the footprint or use of the facility, right-of-way or easement.

8. Site study work such as surveys, soil logs, and other related activities necessary for the submittal of a land-use application.

2.050 Wetland Buffers.

A. Buffer Requirements**.** The standard buffer widths in Table 2.1 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington State wetland rating system for Eastern Washington,

1. The use of the standard buffer widths requires the implementation of the measures in Table 2.2, where applicable, to minimize the impacts of the adjacent land uses.

2. If an applicant chooses not to apply the mitigation measures in Table 2.2, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 99.75 foot buffer without them (eg.75ft X 1.33% =99.75).

3. 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 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.

4. Additional buffer widths may be required in addition to the standard buffer widths. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 150 feet (75 + 75).

Table 2.1 Minimum Wetland Buffer Requirements

Wetland Category	Standard Buffer Width	Additional buffer width if wetland scores 21-25 habitat points	Additional buffer width if wetland scores 26-29 habitat points	Additional buffer width if wetland scores 30-36 habitat points
Category I – based on total score	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I - Forested	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I -Bogs	190 ft	NA	NA	NA
Category I - Natural Heritage Wetlands	190 ft	N/A	NA	NA
Category II – based on total score	75 ft	Add 15 ft	Add 45 ft	Add 75ft
Category II - Forested	75 ft	Add 15 ft	Add 45 ft	Add 75ft
Category III (all)	60 ft	Add 30 ft	Add 60 ft	NA

Category IV (all)	40 ft	NA	NA	NA

Table 2.2. Required measures to minimize impacts to wetlands.
(Measures are required, where applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer.
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per PSAT publication on LID techniques)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management/construction practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed. • Restore corridors or connections to offsite habitats by replanting.

5. 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, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower rated area.

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 areas report from a qualified wetland professional.

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

6. Averaging to allow reasonable use of a parcel may be permitted when all of the following are met:

a. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.

b. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.

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

d. The buffer at its narrowest point is never less than either ¾ 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.

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

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

E. Buffer Maintenance**.** Except as otherwise specified or allowed in accordance with this Chapter, wetland buffers shall be retained in an undisturbed or enhanced condition.

F. Impacts to Buffers**.** Requirements for the compensation for impacts to buffers are outlined in Section 2.070 of this Chapter.

G. Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

H. Allowed Buffer Uses. Low impact uses are allowed in buffers consistent with 2.040(A). In addition, the following are permitted within buffers:

1. Passive Recreation. Passive recreation facilities designed and in accordance with an approved critical area report, including pedestrian walkways and trails and wildlife viewing platforms. When trails within wetland buffers cannot be located on existing disturbed areas, trail facilities shall be located in the outer 25 percent of the wetland buffer away from the wetland edge. Trails and walkways should be located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable.

2. Stormwater Management Facilities. Stormwater management facilities are limited to stormwater facilities within Category III and IV wetland buffers. Facilities may be allowed within the outer twenty-five percent (25%) of the buffer provided no

other location is feasible and that it will not affect the hydroperiod of the wetland or adversely affect water quality.

3. Existing Structure(s) and Development(s). Lawfully existing structures built prior to the adoption of this Shoreline Master Program shall be exempt from the terms of this chapter. Expansion of existing legally permitted structure shall be allowed to expand/encroach 50% of structure foot print, and shall be parallel to structure or side away from critical area. Expansion shall be limited to one expansion/encroachment.

4. Requests for building permits on property which is unplatted shall require a review under the terms of this chapter.

I. Signs and Fencing of Wetlands and Buffers

1. Temporary Markers. The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary "clearing limits" fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the City prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place. Signs must be posted at an interval of one (1) per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner. Sign shall be no greater than 4 square feet in size.

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

a. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another non-treated material of equal durability. Signs must be posted at an interval of one (1) per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner in perpetuity. Sign shall not be greater than 4 square feet in size. The sign shall be worded as follows or with alternative language approved by the Administrator:

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

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

3. Fencing

a. 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.

b. Fencing installed as part of a proposed activity or as required in this Subsection shall be designed so as to not interfere with species migration, including fish

runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

2.060 Critical Area Report for Wetlands

A. If the Administrator determines that the site of a proposed development includes, is likely to include, or is adjacent to a wetland, a wetland report, prepared by a qualified professional, shall be required. The expense of preparing the wetland report shall be borne by the applicant.

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

1. The written report shall include at a minimum:

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

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

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

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

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

f. For each wetland identified on-site and within 300 feet of the project site provide: the wetland rating per *Wetland Ratings* (Section 2.020.B of this Chapter); required buffers; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site;

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

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

i. A description of reasonable efforts made to apply mitigation sequencing pursuant to *Mitigation Sequencing* (Chapter 2.070.A) to avoid, minimize, and mitigate impacts to critical areas;

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

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

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

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

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

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

2.070 Criteria for Compensatory, Location, and Mitigation Sequence.

A. Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to wetlands and their buffers. When an alteration to a wetland or its buffer is proposed, such alteration shall be avoided, minimized, or compensated for in the following sequential order of preference which shall be discussed in the compensatory mitigation plan as they relate to the proposal:

1. Avoiding the impacts altogether by not taking a certain action or parts of an action;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or affirmative steps, such as projects design, relocations, or timing, to avid or reduce impacts;

3. Rectifying the impact to wetlands or wetland buffers by repairing, rehabilitating, or restoring the affected environment;

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

5. Compensating for the impact by replacing, enhancing, or providing substantial resources or environments; and

6. Monitoring the impact and the compensation projects and taking appropriate corrective action when necessary.

Mitigation for individual for actions may include a combination of the above measure.

B. The applicant shall have a wetland specialist develop a plan that provides for construction, maintenance, monitoring, and contingencies of the replacement wetland. The plan should be prepared according to the guidance provided in Wetland Mitigation Plan (Version 1, Publication # 06-06-011b, March 2006 as amended), and shall demonstrate, when implemented, that there shall be no net loss of wetland area and functions including lost time when the wetland does not perform the function. In addition, the applicant and landowner shall meet the following criteria:

1. The restored, created, or enhanced wetland shall be as persistent as the wetland it replaces.

2. The applicant shall demonstrate sufficient capability to carry out the compensation projects.

3. The compensation area shall be provided with permanent protection and management to avoid further development or degradation and to provide for the long term persistence of the compensation area as designated.

4. Mitigation planting survival shall be 100 percent for the first year. Any vegetation that does not survive the first year must be replaced consist with the mitigation planting scheme.

5. The survival rate for successive years shall be at least 80 percent.

6. Mitigation must be installed no later than the next growing season after completion of site improvements, unless otherwise approved by the City.

7. Where necessary, a permanent means of irrigation shall be installed for the mitigation planting that is designed by a professional experienced in the design and installation of irrigation systems. The design shall meet the specific needs of the wetland, riparian and shrub steppe vegetation, as may be applicable.

C. In cases in which it is determined that compensatory mitigation is appropriate, the following shall apply:

1. Compensatory mitigation shall be provided on-site, except where on-site mitigation is not scientifically feasible or practical due to physical features of the site. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on-site.

2. Mitigation projects shall be concurrent with other activities on the site, unless a phased schedule is agreed upon between the city and the applicant.

D. Wetland and Buffer Mitigation Ratios: Where wetlands are altered, the applicant shall meet the minimum requirements of this section. When it is proposed to alter or eliminate a wetland, the applicant shall be required to replace the affected wetland. A reduction in overall wetland area is allowed if approved by the city. If off-site mitigation measures are determined to be appropriate, off-site mitigation shall be located in the same watershed as the development, within Cashmere or Chelan County. The recommended ratios for replacement and/or compensation for Category I, II, III, and IV wetlands are as follows:

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement	Preservation
Category I—Bog,	Not considered	6:1	Case-by-case	10:1

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement	Preservation
Natural Heritage site	possible			
Category I—Mature Forested	6:1	12:1	24:1	24:1
Category I—Based on functions	4:1	8:1	16:1	20:1
Category II—Based on functions	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

E. Surety/Bonding. If a development proposal is subject to mitigation, maintenance or monitoring plans, the City of Cashmere, in a form acceptable to the City Attorney shall require an assurance devise or surety.

2.080 Unauthorized Alterations and Enforcement

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

B. Requirement for Restoration Plan**.** All development work shall remain stopped until a restoration plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described in Subsection (C). The City shall, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. 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:

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

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

3. 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; and

4. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the City.

D. Site Investigations**.** The City is authorized to make site inspections and take such actions as are necessary to enforce this Chapter. The City shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

E. Penalties**.** Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the State of Washington. The City may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Chapter. The civil penalty may be assessed at a maximum rate of $250 dollars per day per violation.

If the wetland affected cannot be restored, monies collected as penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The City may coordinate its preservation or restoration activities with other City or County in the watershed to optimize the effectiveness of the restoration action.

CHAPTER 3 - FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Sections:

3.010 Permitted uses and activities.

Uses and activities allowed within designated fish and wildlife habitat conservation areas are those uses permitted by this Shoreline Master Program subject to the provisions of this chapter.

3.020 Classification.

A. All fish and wildlife habitat conservation areas shall be classified by the city to reflect the relative function, value and uniqueness of the habitat area as established through an approved habitat ranking evaluation submitted by the applicant for any development permit. The city may use the following information sources as guidance in

identifying the presence of potential fish and wildlife habitat conservation areas and the subsequent need for a habitat boundary survey:

1. All sources identified in Section 1.030;
2. The city shoreline master program;
3. Washington Department of Fish and Wildlife priority habitat and species maps;
4. Previous habitat boundary surveys; and
5. On-site inspection.

B. Fish and wildlife habitat conservation areas shall be classified according to the following system:

1. Level 1 Critical. These are habitat areas which may be significantly disrupted by development in the immediate vicinity. Critical habitat may include winter ranges, migration routes, nesting sites, perches and wetlands, riparian, aquatic and upland habitat areas. These habitats are designated as critical habitat on the City of Cashmere Critical Area Reference Map: Fish and Wildlife Habitat Areas. Aquatic habitats and their associated riparian or upland habitat areas that are designated as Shorelines are regulated under previous chapters of this Master Program, not this chapter of Appendix B. Only non-shoreline aquatic habitats are regulated under this chapter.

2. Level 2 Awareness. These habitat areas are those surrounding or adjacent to designated Level 1 Critical areas that, if disturbed, could impact the Level 1 area. These habitats are designated as awareness habitat on the City of Cashmere Critical Area Reference Map: Fish and Wildlife Habitat Areas..

3.030 Designation.

All existing areas of the city classified according to the provisions contained in this chapter, as determined by the city, are designated as fish and wildlife habitat conservation areas. Only those fish and wildlife habitat conservation areas located in shoreline jurisdiction are subject to this chapter and this Shoreline Master Program.

3.040 Application requirements.

Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures to fish and wildlife habitat conservation areas may be required if deemed necessary.

A. Minor Development. Projects processed by the city according to the provisions governing limited administrative review within a fish or wildlife habitat conservation area or its buffer shall disclose, at a minimum, the following information on a site plan drawn to scale:

1. The location and boundaries of the habitat conservation area;
2. The location and dimensions of all existing and proposed buildings, roads and other improvements, and their physical relationship to the habitat conservation area;
3. The location and type of any proposed buffers, including the identification of any other protective measures.

B. Major Development. Projects processed by the city according to the provisions governing full administrative review or quasi-judicial review within a fish or wildlife habitat conservation area or its buffer shall provide the following information, in addition to the information described in subsection A of this section:

1. Habitat boundary survey and ranking evaluation as defined in this chapter;
2. Habitat management and mitigation plan as defined in this chapter;
3. A drainage and erosion control plan as defined in this chapter; and
4. A grading and excavation plan as defined in this chapter.

3.050 Habitat boundary survey and ranking evaluation.

A. A wildlife habitat boundary survey and ranking evaluation shall be conducted by a wildlife biologist who is knowledgeable of wildlife habitat within North Central Washington and who derives his/her livelihood from employment in this occupation. The wildlife habitat boundary shall be field staked by the biologist and surveyed by a land surveyor for disclosure on all final plats, maps, etc.

B. The Management Recommendations for Washington's Priority Habitats and Species may be used as a tool for identifying and delineating the habitat boundary.

C. The city may waive the requirement for the survey for minor development as defined in this chapter, if:

1. The proposed development is not within the extended proximity of the associated habitat;
2. There is adequate information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigating measures; and
3. The applicant provides voluntary deed restrictions that are approved by the city.

D. An evaluation of any unranked fish and wildlife habitat is necessary when there is a proposed development or activity to be located adjacent to or within an area containing a wetland within the shoreline management zone.

E. The evaluation shall be used to determine if the fish and wildlife habitat is a Level 1 Critical or a Level 2 Awareness fish and wildlife habitat conservation area. It shall evaluate those factors identified in Chapter 3 that are used to distinguish between these categories, and it shall take into consideration historical information on the area in question, the dynamic nature of habitat conservation areas and an evaluation of the entire habitat conservation area, as opposed to isolated indicators on individual parcels.

F. The wildlife habitat boundary and associated buffer shall be identified on all plats, maps, plans and specifications submitted for the project.

3.060 Fish/wildlife habitat management and mitigation plan.

A. A fish/wildlife habitat management and mitigation plan shall be prepared by a wildlife biologist who is knowledgeable of wildlife habitat within North Central Washington and who derives his/her livelihood from employment in this field.

B. The fish/wildlife habitat management and mitigation plan shall demonstrate, when implemented, that there shall be no net loss of ecological function of habitat.

C. The fish/wildlife habitat management and mitigation plan shall identify how impacts from the proposed project shall be mitigated, as well as the necessary monitoring and contingency actions for the continued maintenance of the classified habitat conservation area and its associated buffer.

D. The fish/wildlife habitat management and mitigation plan shall contain a report containing, but not limited to, the following information:

1. Vicinity maps, regional 1:24,000 and local 1:4,800;

2. Location maps at a scale consistent with the city of Cashmere design guidelines;

3. A map or maps indicating the boundary of the habitat conservation areas; the width and length of all existing and proposed structures, utilities, roads, easements; wastewater and stormwater facilities; adjacent land uses, zoning districts and comprehensive plan designations;

4. A description of the proposed project including the nature, density and intensity of the proposed development and the associated grading, structures, roads, easements, wastewater facilities, stormwater facilities, utilities, etc., in sufficient detail to allow analysis of such land use change upon the habitat conservation area;

5. A detailed discussion of surface and subsurface hydrologic features both on and adjacent to the site where the city determines appropriate;

6. A description of the vegetation in the habitat conservation area, on the overall project site and adjacent to the site;

7. A detailed description of the proposed project's effect on the habitat conservation area, and a discussion of any federal, state or local management recommendations which have been developed for the species or habitats in the area;

8. A discussion of the following mitigation alternatives as they relate to the proposal:

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 to avoid or reduce impacts,

c. Rectifying the impact by repairing, rehabilitating or restoring the affected environment,

d. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

9. A plan by the applicant that explains how any adverse impacts created by the proposed development will be mitigated, including without limitation the following techniques:

a. Establishment of buffer zones,

b. Preservation of critically important plants and trees,

c. Limitation of access to the habitat conservation area,

d. Seasonal restriction of construction activities,

e. Establishment of a timetable for periodic review of the plan;

10. A detailed discussion of ongoing management practices which will protect the habitat conservation area after the project site has been fully developed, including proposed monitoring, contingency, maintenance and surety programs.

3.070 General standards.

The following minimum standards shall apply to all development activities occurring within designated habitat conservation areas and/or their associated buffers. For minor developments within a Level 2 Awareness area, as defined herein, the city may waive the requirements for management and mitigation plans where it is determined by the city that there will be little or no impact to the habitat conservation area.

A. Level 1 Critical habitat conservation areas will be left undisturbed, unless the development proposal involves appropriate mitigation and enhancement measures, as determined on a site-specific basis.

B. Level 2 Awareness habitat conservation areas will be afforded the maximum amount of protection possible through appropriate development techniques such as establishing critical area buffers, access limitations, enhancement of the habitat conservation areas, etc. To ensure long-term success of a project containing habitat conservation areas, a comprehensive habitat management and mitigation plan will be submitted to the city for its approval. Such plans will provide for sufficient monitoring and contingencies to ensure natural habitat conservation area persistence.

C. Whenever possible, the maximum amount of vegetation will be maintained in its natural state and will be disturbed only as minimally necessary for the development.

D. Riparian vegetation will not be removed unless there are no other alternatives available. When it is necessary, only those areas of vegetation that are absolutely unavoidable may be cleared, and shall be revegetated with natural riparian vegetation as soon as possible.

E. Revegetation of disturbed areas which re-establishes desirable native plants adapted to the site that enhance applicable fish and wildlife populations will be, at a minimum, encouraged, as specified in the conditions for approval of the development. Said revegetation will be maintained in good growing condition, as well as being kept free of noxious weeds.

F. When appropriate, fencing standards that protect wildlife, as well as providing for the operation and protection of a particular land use, may be part of the conditions placed on approval of a development application.

G. Access restrictions may be necessary which protect fish and wildlife habitat conservation areas, particularly during critical times of the year.

H. Particularly in instances where a development proposal involves more intense uses, all or part of the required open space (common and/or private) will be dedicated to fish and wildlife habitat conservation, based on the extent and importance of the habitat.

I. In certain instances it may be necessary to provide vegetation screenings and to provide controls on domestic animals to protect the function of critical habitat areas by reducing the potential for harassment from people and/or domesticated animals.

J. Appropriate buffer areas shall be maintained between all permitted uses and activities and designated habitat conservation areas.

1. All buffers shall be measured on a horizontal plane from the habitat edge, as established by the approved habitat boundary survey. For buffers adjacent to aquatic habitat, distances shall be measured from the ordinary high water mark (OHWM), or from the top of the bank where the OHWM cannot be identified. The distance of the buffer shall be increased to include stream-side wetlands which provide overflow storage for storm waters, feed water back to the water body during low flows or provide shelter and food for fish. In braided channels, the OHWM or top of bank shall be defined so as to include the entire stream feature.

2. All buffer areas shall be temporarily fenced between the construction activity and the buffer with a highly visible and durable protective barrier during construction to prevent access and protect the designated habitat conservation area and associated buffer. This requirement may be waived by the city if an alterative to fencing which achieves the same objective is proposed and approved.

3. Except as otherwise allowed, buffers shall be retained in their natural condition. Any habitat created, restored or enhanced as compensation for approved habitat alterations shall have the standard buffer required for the category of the created, restored or enhanced habitat.

4. The width of the buffer may be increased by the city for a development project on a case-by-case basis when a larger buffer is necessary to protect the designated habitat conservation area function and value. The determination shall be based on site-specific and project-related conditions which include without limitation:

a. The designated habitat conservation area is used for feeding, nesting and resting by species proposed or listed by the federal or state government as endangered, threatened, sensitive, candidate, monitor or critical; or if it is an outstanding potential 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 habitat impacts;

c. The proposed development adjacent to the designated habitat conservation area would be a high intensity land use.

5. Standard buffer widths may be modified by the city for a development proposal by averaging buffer widths based on a report submitted by the applicant and prepared by a qualified professional approved by the city (e.g., wildlife biologist), and shall only be allowed where the applicant demonstrates all of the following:

a. Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property;

b. The designated habitat conservation area contains variations in sensitivity due to existing physical characteristics;

c. The width averaging will not adversely impact the designated habitat conservation area's functional value;

d. The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging; and

e. The buffer width shall not be reduced, at any location, by more than 25 percent of the required buffer described below, and in no case may the buffer be less than 25 feet in width.

K. Aquatic Habitat Conservation Areas. Aquatic habitat conservation areas are those riparian and water-ward areas which may support both fish and wildlife species. All development within designated aquatic habitat conservation areas other than the Wenatchee River and Mission Creek (see SMP Section 10.4.5, Vegetation Conservation and Shoreline Buffers) shall comply with the following minimum standards:

1. Level 1 Critical Buffer Areas.
   a. Minor development: 75 feet;
   b. Major development: 100 feet.
2. Level 2 Awareness Buffer Areas.
   a. Minor development: 50 feet;
   b. Major development: 75 feet.

3. Land divisions within designated aquatic habitat conservation areas shall require a minimum lot frontage along the protective buffer or shoreline of 100 feet, measured in a straight line, and required buffer areas shall be dedicated as open space tracts, nonbuildable lot(s), buffer areas and/or common areas, with ownership and control transferred to a homeowner's association.

L. Wildlife Conservation Areas. The width of a designated wildlife habitat conservation area buffer shall be as follows:

1. Level 1 Critical: 100 feet.
2. Level 2 Awareness: 75 feet.

3.080 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 3.070.

A. Road Repair and Construction. When no other practical alternative exists, public or private road repair, maintenance, expansion or construction may be authorized within a designated habitat conservation area, subject to the following minimum standards:

1. The road shall serve multiple properties;

2. No significant adverse impacts to the designated habitat conservation area shall result from the repair, maintenance, expansion or construction of any public or private road;

3. The road shall provide for the location of public utilities, pedestrian or bicycle easements, viewing points, etc.; and

4. Road repair and construction is the minimum necessary to provide safe traveling surfaces.

B. Major Developments. All major developments processed by the city according to the provisions governing full administrative review or quasi-judicial review authorized

within a designated habitat conservation area shall comply with the following minimum standards:

1. Inundated and/or submerged lands shall not be used in calculating minimum lot area for proposed lots;

2. A habitat management and mitigation plan shall be required for major developments containing Level 1 Critical habitat conservation areas, and may be required for major developments containing Level 2 Awareness habitat conservation areas;

3. All plats shall disclose the presence on each residential lot of one building site, including access, that is suitable for development and which is not within the designated habitat conservation area or its associated buffer;

4. All designated habitat conservation areas and their associated buffers shall be clearly identified on all final plats, maps, documents, etc.;

5. Designated habitat conservation areas and their associated buffers shall be designated and disclosed on the final plats, maps, documents, etc. as open space tracts, nonbuildable lots, buffer areas or common areas, with ownership and control transferred to a homeowner's association. Associated habitat conservation area buffers may alternatively be designated and disclosed on the final plats, maps, documents, etc. as an easement or covenant encumbering the property.

C. Surface Water Management. When no other practical alternative exists, surface water management activities may be authorized within an aquatic habitat area, subject to the following minimum standard:

1. Aquatic habitat areas may be used for retention/detention facilities, subject to all of the following criteria:

a. The functions and water quality of the aquatic habitat area or buffer shall not be adversely impacted;

b. The rate of flow into or the hydro-period of the aquatic habitat area shall not increase above natural flow rates;

c. All surface water discharged from impervious surfaces shall be treated by oil/water separators prior to entering an aquatic habitat area or buffer; and

d. The temperature of the aquatic habitat area shall not be increased above natural temperatures.

2. New surface water discharges to wetlands from detention facilities, pre-settlement ponds, or other surface water management structures may be authorized, subject to all of the following criteria:

a. The discharge does not increase the rate of flow into or the hydro-period of the wetland above the natural rates;

b. All surface water discharged from impervious surfaces shall be treated prior to entering a wetland or buffer; and

c. The water quality of the wetland is not decreased.

D. Stream Crossings. Expansion or construction of stream crossings may be authorized within a designated habitat conservation area, subject to the following minimum standards:

1. Bridges are required for streams that support salmonids, unless culvert design and construction ensures proper passage opportunities;

2. All crossings using culverts shall use superspan or oversized culverts;

3. Crossings shall not occur in salmonid spawning areas unless no other feasible crossing site exists;

4. Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists;

5. Crossings shall not diminish flood carrying capacity; and

6. Crossings shall serve multiple properties whenever possible.

E. Trails and Trail-Related Facilities. Construction of public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, viewing platforms and campsites may be authorized within a habitat conservation area, subject to the following minimum standards:

1. Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;

2. Trail facilities shall minimize the removal of trees, shrubs, snags and important habitat features;

3. Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of wildlife and/or critical characteristics of the designated habitat conservation area;

4. Trail facilities shall be located at least a distance equal to the width of the trail corridor away from the habitat conservation area edge, as established by the approved boundary survey; and

5. All facilities shall be constructed with materials complementary to the surrounding environment.

F. Utilities. When no other practical alternative exists, construction of utilities within a designated habitat conservation area may be authorized, subject to the following minimum standards:

1. Utility corridors shall be jointly used;

2. Corridor construction and maintenance shall protect the designated habitat conservation area, and shall be aligned to avoid cutting trees greater than six inches in diameter at breast height when possible;

3. No pesticides, herbicides or other hazardous or toxic substances shall be used;

4. Utility corridors, including maintenance roads, authorized by the city, shall be located at least a distance equal to the width of the utility corridor away from the habitat area edge;

5. Corridors shall be revegetated to pre-construction densities with appropriate native vegetation immediately upon completion of construction, or as soon thereafter as possible given seasonal growing constraints. The utility purveyor shall provide an assurance device or surety in accordance with the CMC which ensures that such vegetation survives;

6. Any additional corridor access for maintenance shall be provided as much as possible at specific points rather than by parallel roads. If parallel roads are necessary

they shall be no greater than 15 feet in width, and shall be contiguous to the location of the utility corridor on the side opposite the designated habitat conservation area;

7. Construction of sewer lines within designated habitat conservation areas which are necessary to meet state and/or local health code requirements shall not adversely impact the function and quality of the designated habitat conservation area.

CHAPTER 4 - AQUIFER RECHARGE AREAS

Sections:

4.010 Permitted uses and activities.

Uses and activities allowed within designated aquifer recharge areas in shoreline jurisdiction are those uses permitted by this Shoreline Master Program subject to the provisions of this chapter.

4.020 Classification.

A. Aquifer recharge areas will be rated according to the vulnerability of the aquifer, with vulnerability being the combined effect of susceptibility to contamination and the contamination loading potential. The categories of vulnerability shall be high, medium and low, with high vulnerability being characterized by a combination of land uses that contribute to contamination that may degrade ground water, and hydrogeologic conditions that facilitate that degradation.

1. Hydrogeologic susceptibility will be characterized by looking at the following attributes:

a. Depth to ground water;

b. Aquifer properties such as hydraulic conductivity and gradients;

c. Soil (texture, permeability, and contaminant attenuation properties);

d. Characteristics of the vadose zone including permeability and attenuation properties; and

e. Other relevant factors.

2. Contamination loading potential can be evaluated by considering the following:

a. General land use;

b. Waste disposal sites;

c. Agriculture activities;

d. Well logs and water quality test results;

e. Density of septic systems in use in the area; and

f. Other information about the potential for contamination.

B. Aquifer recharge areas shall be classified according to the following system:

1. Level 1 Critical aquifer recharge areas shall be those areas found to have a high vulnerability rating.

2. Level 2 Awareness aquifer recharge areas shall be those areas found to have a medium vulnerability rating..

4.030 Designation.

All existing areas of the city in shoreline jurisdiction classified according to the provisions contained in this chapter, as determined by the city, are designated as aquifer recharge areas. Because there is insufficient scientific data at this time to determine with any precision and/or certainty the location of areas having a critical recharging effect on aquifers used for potable water, specific designations have not been made. However, the best available science suggests that using a vulnerability determination system based on the above classification system will allow the city to designate critical aquifer recharge areas using a conservative approach, which provides a worst case scenario for contaminant movement in the subsurface. As areas are determined to be either a Level 1 Critical or Level 2 Awareness aquifer recharge area, they will be included on a map or maps that are maintained by the city. Additionally, if any of the following areas are established within the city's urban growth area, they shall be included on these maps:

A. Sole source aquifer recharge areas designated pursuant to the Federal Safe Drinking Water Act;

B. Areas established for special protection pursuant to the Washington State groundwater management program;

C. Areas designated for wellhead protection pursuant to the Federal Safe Drinking Water Act; and

D. Aquifer recharge areas mapped and identified by a qualified ground water scientist.

4.040 Application requirements – Vulnerability determination system – Procedures, criteria.

A. Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures to aquifer recharge areas may be required if deemed necessary.

B. The procedure for determining if a development proposal must complete a vulnerability rating shall be as follows:

1. The applicant shall submit a certified statement with the application materials indicating which of the criteria identified in subsection C of this section apply to the development proposal, if any. The application will not be considered complete until this certified statement is submitted.

2. If the applicant's statement asserts that the criteria do not apply, as identified in subsection (B)(3) of this section, to the development proposal, the city will accept the statement and proceed with the development permit review. However, if the city has or obtains information prior to the permit or approval being finalized that clearly establishes the applicant's statement is incorrect, the applicant will be advised in writing of the inconsistent information and must either:

a. Provide an amended statement adding the evaluation criteria as being applicable and determine the vulnerability rating of the development pursuant to Section 4.050; or

b. Present sufficient countering information clearly establishing that the basis for the city's concern is incorrect.

If the applicant selects to proceed under subsection (B)(2)(b) of this section, after receiving the applicant's information, the city shall review the information and obtain whatever additional assistance may be required to resolve the issue. The final determination as to whether a determination of vulnerability is required shall be made by the city.

3. If a development proposal meets the criteria in subsections (C)(1), (2), (3) or (4) of this section, or if the site or development proposal meets any two of the remaining criteria, the application shall determine the vulnerability rating for the development proposal according to Section 4.050.

4. If the development has a high or medium vulnerability rating, the development shall be subject to the development standards contained within this chapter.

C. The applicant shall be required to determine the vulnerability rating for any development permit, not otherwise exempted from this chapter, if the site or development meets criteria (C)(1), (2), (3), or (4) of this section or meets two or more of the remaining criteria below:

1. The development proposal is within a wellhead protection area designated under Chapter 246-290 WAC, Public Water Supplies;

2. The development proposal is within an aquifer recharge area mapped and identified by a qualified ground water scientist;

3. The site will be utilized for processing, storing, or handling hazardous substances (as now or hereafter defined in Chapter 70.105D RCW, Hazardous Waste Cleanup – Model Toxics Control Act) in applications or quantities larger than is typical of household use;

4. The site will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended;

5. The site contains highly permeable soils as designated in the NRCS Soil Survey for the Chelan area;

6. The development proposal is within a sole source aquifer recharge area designated pursuant to the Federal Safe Drinking Water Act;

7. The development proposal is within an area established for special protection pursuant to a groundwater management program, Chapter 90.44 RCW, Regulations of Public Ground Waters, Chapter 90.48 RCW, Water Pollution Control, and Chapter 90.54

RCW, Water Resources Act of 1971, and Chapter 173-100 WAC, Ground Water Management Areas, and Chapter 173-200 WAC, Water Quality Standards for Ground Waters of the State of Washington;

8. The development proposal involves a major or short subdivision and includes present or future plans to construct three or more dwelling units where the dwelling units will not be connected to a public sewer system and any of the lots are less than one net acre in size;

9. The development proposal involves a commercial and/or industrial site that is not on a public sewer system and the main structure exceeds 4,000 square feet;

10. The development is within 200 feet of the ordinary high water mark of a perennial river, stream, lake or pond.

4.050 Determining vulnerability rating.

A. General. The vulnerability matrix is used to determine the vulnerability of the development and to rate it as a high, medium or low rating. This can be done by determining the "contaminant loading potential" of a proposed land use and the natural "susceptibility" of the site as outlined in this chapter and creating a numerical vulnerability value for a proposed land use. When a proposed use is determined to have a medium or high vulnerability rating, the protection measures described in this chapter shall be implemented that protect the potable water supply.

B. Determining Susceptibility. There are three basic components to determine a site's susceptibility, as follows:

1. Permeability of the Vadose Zone. The vadose zone is composed of both the soil and the geologic materials underlying the soil. To adequately determine the overall ease with which water will travel from land surface to the aquifer, it is necessary to determine the overall permeability of both soil and geologic media. Soil permeability can be determined through use of the NRCS Soil Survey for the Chelan Area, particularly Table 6. The values shown on these pages are given in the inches per hour that water moves downward through a saturated soil. A determination of the permeability of the geologic material underlying the soil is more problematic.

a. Incrementally, the permeability of local soils (upper vadose zone) is grouped into four ranges that are assigned a relative value to be used for determining susceptibility on the matrix. Where conclusive information does not exist for permeability of the soil, a relative value of three will be assigned.

Soil Permeability Table Based on Soil Survey

Condensed Description	Soil Survey Description	Permeability (in/hr)	Permeability (cm/sec)	Rating
Very Slow	Very Slow	< 0.06	< 0.00423	0
Slow	Slow	0.06 0.20	0.00423 0.0141	1
	Moderately Slow	0.20 0.60	0.0141 0.0423	
Moderate	Moderate	0.60 2.0	0.0423 0.1411	2
	Moderately Rapid	2.0 6.0	0.1411 0.4233	
Rapid	Rapid	6.0 20	0.4233 1.411	3

	Very Rapid	> 20	> 1.411

b. Permeability of the lower vadose zone can be estimated using the Geologic Matrix Table below by determining the material type and assigning the appropriate permeability range for the material(s) overlying the uppermost aquifer. In cases where heterogeneous materials are encountered, the least permeable layer with a thickness of not less than five feet shall determine the overall permeability to be applied to the entire vadose zone, excluding the soil layer. Where conclusive information does not exist for permeability of the geologic matrix, a relative value of three will be assigned.

Geologic Matrix Table

Condensed Description	Geologic Matrix	Permeability (cm/sec)	Rating
Very Slow	Unfractured Igneous or Metamorphic Bedrock, Shale	10-13 10-9	0
	Marine Clay, Clay, Dense Sandstone, Hardpan	10-9 10-7	
Slow	Loess, Glacial Till, Fractured Igneous or Metamorphic Bedrock	10-8 10-5	1
	Silt, Clayey Sands, Weathered Basalt	10-7 10-3	
Moderate	Silty Sands, Fine Sands, Permeable Basalt	10-4 10-1 (0.0001 0.1)	2
	Clean Sands, Karst Limestone	>0.1 1.0	
Rapid	Sand and Gravel	>1.0 10	3
	Gravel	>10 100+	

2. Depth to Groundwater. Depth to groundwater can be determined by utilizing local well log information or specific well information for the site. Depth to groundwater is also assigned a relative value used for determining susceptibility on the matrix. Where conclusive information does not exist for depth to groundwater, a relative value of three will be assigned.

Depth to Groundwater Table

Condensed Description	Depth to Water (Feet)	Rating
Very Low	Confined Aquifer	0
	> 50	
Low	25 50	1
Moderate	10 25	2
High	0 10	3

3. Slope. Slope, or gradient, is related to the infiltration characteristics of an area. The steeper the slope, the less infiltration of surface waters occur. Slope is assigned a relative value used for determining susceptibility on the matrix. Where conclusive information does not exist for slope, a relative value of three will be assigned.

Slope – As a Percent	Slope Relative Value
>45%	0
30% – 45%	1
15% – 30%	2

<15%	3

C. Determining the Susceptibility Rating. A susceptibility rating is determined by adding the relative values of permeability of the soils and geologic matrix of the vadose zone, depth to groundwater and slope. This is a baseline determination for susceptibility. The range of values are as follows:

1. High susceptibility rating equals total range from eight to 12;
2. Medium susceptibility rating equals total range from four to seven;
3. Low susceptibility rating equals total range from zero to three.

D. Determining the Contaminant Loading Rating. Contaminant loading potential is dependent on the presence of critical materials on the site. A critical material is a substance present in sufficient quantity that its accidental or intentional release would result in the impairment of the aquifer water to be used as potable drinking water.

1. For the purpose of administration of this section, the city will maintain a critical materials use activity list, which is a list of commercial and industrial activities known to use critical materials, coupled with the names of critical materials normally associated with the activity. The following situations will be considered as having a high contaminant loading rating, unless the project proponent provides assurances otherwise:

a. Proposed activities fitting one of the general business descriptions provided or having one of the specified Standard Industrial Classification (SIC) codes identified on the city's critical materials use activity list;

b. Sites or uses that the city believes would be utilized for processing, storing or handling hazardous substance(s) (as now or hereafter defined in Chapter 70.105D RCW, Hazardous Waste Cleanup – Model Toxics Control Act) in applications or quantities larger than is typical of household use;

c. Sites that the city believes will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended, but may not be covered in the critical materials use activity list;

d. Other contaminants and/or SIC codes that are not currently found on the critical materials use activity list that are subsequently determined by the city to have a high contaminant loading rating.

Those uses or activities determined not to have a high contaminant loading rating are considered to have a low contaminant loading potential and rating.

2. The following process shall be used to determine whether or not critical materials are involved:

a. An initial screening will be performed by the city by comparing the proposed use and any other pertinent information provided by the proponent at his/her expense with the critical materials use activity list. The city will exercise any discretion in judgment in the favor of aquifer protection.

b. If the proposed use is determined to meet one of the criteria under subsection (D)(1) of this section, the city shall require the applicant to provide a list of materials, including quantities to be used, stored or transported in conjunction with the proposed

activity. Additional information may be required by the city to be provided by the proponent at his or her expense.

c. After the review of the information supplied by the applicant, the city will either confirm the designation as a critical materials use activity or nullify the tentative designation.

d. If the designation as a critical materials use activity is confirmed, the applicant may respond by accepting the designation as a critical materials use activity or he/she may appeal the designation through the procedures governing appeals of administrative decisions, according to CMC Title 14. Where an appeal is filed, the Washington Department of Ecology, the Washington Department of Health and the Chelan-Douglas Health District shall be notified of all appeal proceedings.

E. Vulnerability Matrix. A determination of a high, medium, or low vulnerability rating is made by the city from the vulnerability matrix by identifying susceptibility and contaminant loading ratings, as identified above (susceptibility = high [eight to 12], medium [four to seven] or low [zero to three]; contaminant loading = high or low). After determining the susceptibility and contaminant loading ratings for the proposed use and site, the appropriate box on each axis of the vulnerability matrix below will be checked to determine the vulnerability rating. The vulnerability of the site is then determined by the intersection of the susceptibility rating and the contaminant loading rating to be low, medium, or high.

Vulnerability Matrix

CONTAMINANT LOADING →

SUSCEPTIBILITY ↓		**LOW**	**HIGH**	General Description (susceptibility)
	0 TO 3			Typically low permeability. Depth to groundwater is fairly deep and fairly significant slopes.
	4 TO 7			Higher permeability and shallower depth to groundwater. Less slope potential.
	8 TO 12			Extremely permeable soils. Shallow depth to groundwater and fairly flat terrain.

Low Vulnerability
Medium Vulnerability
High Vulnerability

4.060 General standards.

The following minimum standards shall apply to all development activities determined to have a high or medium vulnerability rating, as determined by this chapter.

A. Development activities within an aquifer recharge area shall be designed, developed and operated in a manner that will not potentially degrade groundwater resources.

B. Alternative site designs, phased development and/or groundwater quality monitoring may be required to reduce contaminant loading where site conditions indicate that the proposed action will potentially degrade groundwater quality.

C. Open space may be required on development proposals overlying areas that are highly susceptible to contamination of groundwater resources.

D. When wells are required to be abandoned, the applicant shall ensure that they are abandoned according to the State Department of Ecology requirements.

E. Known contaminants shall be removed from stormwater runoff prior to their point of entry into surface or groundwater resources using available and reasonable best management practices.

F. Changes in occupancy and/or use of an existing site, and/or expansions of existing activities are subject to complete evaluation by the city under the provisions of this chapter.

4.070 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 4.060.

A. Any agricultural activities shall incorporate best management practices concerning waste disposal, fertilizer use, pesticide use, and stream corridor management. If necessary, farmers shall seek technical assistance from the Chelan County Conservation District, WSU Cooperative Extension Agent and local field agents.

B. Where otherwise permitted by applicable zoning regulations, landfills, junkyards, salvage yards and auto wrecking yards are prohibited within designated critical aquifer recharge areas. Landfills, junkyards, salvage yards and auto wrecking yards that are proposed to be located outside of designated critical aquifer recharge areas and that have a high or medium vulnerability rating must satisfactorily demonstrate that potential negative impacts to the groundwater would be overcome in such a manner as to prevent adverse impacts to groundwater.

C. Fertilizer, herbicide and pesticide management practices of schools, parks, golf courses and other nonresidential facilities that maintain large landscaped areas shall be evaluated in relation to best management practices as recommended by the Cooperative Extension Service.

D. Commercial, industrial and/or mining uses shall comply with the following minimum provisions:

1. For the purposes of this section, all forms of mining activities shall be considered an industrial use.

2. All commercial and industrial uses that are rated as having a medium or high vulnerability shall submit a contingency plan that identifies the following:

a. Types of hazardous wastes that would be used for the proposed land use.

b. On-site containment facilities designed to handle accidental releases of critical materials.

c. Spill response and notification procedures.

3. All activities designated as critical materials use activities shall only be approved so that:

a. Facilities will be designed and built so that any spilled or leaked materials are contained on site; and

b. Facilities will be designed and built so that any spilled or leaked materials cannot infiltrate into the ground; and

c. No permanent disposal of any waste containing critical materials shall be allowed on site.

4. Commercial or industrial activities designated as critical materials use activities shall have specially designed and installed storm runoff drainage facilities in areas where spills might occur. Such facilities shall be designed and installed to:

a. Prevent the commingling of storm runoff and critical materials spills; and

b. Enhance spill cleanup procedures.

5. Mining activities in areas determined to have a medium or high vulnerability shall comply with the following conditions:

a. Six-foot fencing shall be provided and maintained in good condition at all times in the following locations:

i. Exterior boundary of any portion of any site on which active operations exist; and

ii. Exterior boundary of any portion of the site that has been mined and not yet rehabilitated;

b. No excavation within 100 feet of a well or surface water used for potable drinking water is allowed;

c. No excavation into an aquifer used for potable drinking water is allowed;

d. The operators shall comply with all existing water quality monitoring regulations of WSDOE and the Chelan-Douglas health district;

e. A drainage channel shall be constructed around active gravel pit areas to keep surface runoff from outside the pit excavation from entering the pit areas;

f. Fuel storage areas and service facilities shall incorporate provisions to prevent lubricants and petroleum products from contaminating either pit areas or drainage channels;

g. No liquid, asphalt, cement, or water used in a mining operation shall be disposed of in the bottom of a pit;

h. A protective eight-foot high berm or retaining wall shall be required adjacent to property lines where the edge of a pit is within 100 feet of a street or railroad right-of-way;

i. The use of fertilizers, pesticides, herbicides, and critical materials shall not be allowed within 50 feet of an active pit;

j. A sufficient amount of topsoil or suitable material shall be retained on site for revegetation/rehabilitation purposes;

k. Reclamation plans for these sites shall include:

i. A specification of the amount of materials to be left between the aquifer high-water mark (or elevation) and the final grade of the reclaimed site;

ii. Physical barriers, as required in subsection (D)(5)(h) of this section, shall remain unless they are specifically permitted to be removed in a subsequent land use decision by the hearing body; and

iii. Provisions shall be made for limitations of access to, and activities within, the rehabilitated site until the use of the land is changed;

l. In rehabilitated gravel pits over an aquifer used for a potable water source, new uses requested for the property may be limited or specifically conditioned as determined by the appropriate hearing body; and

m. All mining activities shall be reclaimed per a reclamation plan approved by the Washington State Department of Natural Resources.

E. Utility facilities shall be reviewed and approved consistent with the requirements of subsection D of this section.

F. Underground storage tanks and on-site sewage disposal systems are prohibited within designated critical aquifer recharge areas. Underground storage tanks and on-site sewage disposal systems that are proposed to be located outside of designated critical aquifer recharge areas and that have a high or medium vulnerability rating must satisfactorily demonstrate that potential negative impacts to the groundwater would be overcome in such a manner as to prevent adverse impacts to groundwater.

G. All residential land divisions within the city of Cashmere city limits shall be connected to the city's sanitary sewage collection and treatment facilities. Where an area subject to a land division process occurs within a designated aquifer recharge area, as described by this chapter, a notation shall appear on the face of the final plat indicating the aquifer recharge area designation, and referencing the requirements of this chapter.

H. Wood treatment facilities shall conform to the provisions of subsection D of this section. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces, both natural and man made, are prohibited.

I. As defined and regulated in Chapter 173-218 WAC, Underground Injection Control Program, Class I, III and IV underground injection wells are prohibited. Class II injection wells are permitted under Chapter 173-218 WAC by the Washington State Department of Ecology in conjunction with the Washington State Department of Natural Resources. Class V injection wells, involving the injection of critical materials, may be prohibited by the Washington State Department of Ecology or a permit may be required by said agency. In addition, commercial or industrial uses proposing the injection of critical materials are subject to the provisions of this chapter.

CHAPTER 5 - FREQUENTLY FLOODED AREAS

Sections:

5.010 Statutory authorization.

The legislature of the state has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council ordains as set forth in this chapter.

5.020 Findings of fact.

A. The flood hazard areas identified by the FEMA maps and study adopted in this chapter are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities and, when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

5.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

A. To protect human life and health;

B. To minimize expenditure of public money and costly flood control projects;

C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. To minimize prolonged business interruptions;

E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;

F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

5.040 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers which help accommodate or channel floodwaters;

D. Controlling filling, grading, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers that will unnaturally divert floodwaters or may increase flood hazards in other areas.

5.050 Definitions.

Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions, of this Program and supplemented herein. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

A. "Appeal" means a request for a review of the city's interpretation of any provision of this chapter or a request for a variance.

B. "Area of shallow flooding" means designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

C. "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

D. "Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letter A or V.

E. "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

F. "Breakaway wall" means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

G. "Critical facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.

H. "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

I. "Elevated building" means for insurance purposes, a nonbasement building, which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

J. "Existing manufactured home park or subdivision" means a manufactured home park or subdivision which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

K. "Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

L. "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; and/or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

M. "Flood Insurance Rate Map (FIRM)" means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

N. "Floods Insurance Study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

O. "Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter found at Section 5.180(A)(2).

P. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, or other similar vehicles.

Q. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

R. "New construction" means a structure for which the "start of construction" commenced on or after the effective date of the Shoreline Master Program.

S. "Recreational vehicles" means a vehicular-type unit primarily designed for recreational camping or travel use that has its own motive power or is mounted on or towed by another vehicle. The units include travel trailers, fifth-wheel trailers, folding camp trailers, truck campers, and motor homes as defined in the American National Standards Institute A119.2 standard for recreational vehicles. They are built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck and designed primarily not for use as permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

T. "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

U. "Structure" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

V. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

W. "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

1. Before the improvement or repair is started; or

2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

3. The term does not, however, include either:

a. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or

b. Any alteration of a structure listed on the National Register of Historic Places or the State Inventory of Historic Places.

5.060 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within the shoreline jurisdiction of the city.

5.070 Basis for establishing the areas of special flood hazard.

Within shoreline jurisdiction, the 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 Cashmere" dated August 27, 2003, with accompanying flood insurance maps is adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at City Hall, 101 Woodring, Cashmere, Washington. The best available information for flood hazard area identification shall be the basis for regulation until a new FIRM is issued which incorporates the date utilized.

5.100 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

A. Considered as minimum requirements;

B. Liberally construed in favor of the governing body; and

C. Deemed neither to limit nor repeal any other powers granted under state statutes.

Potential impacts to wetlands, fish and wildlife habitat and other critical areas shall be addressed in accordance with the applicable sections of this chapter.

5.110 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or

flood damages. This chapter shall not create liability on the part of the city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

5.120b Establishment of development permit.

A. Development Permit Required. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in this section. The permit shall be for all structures including manufactured homes, as set forth in Chapter 8 of this Master Program and Section 5..050 of Appendix B, and for all development including fill and other activities, also as set forth in Chapter 8 of this Master Program and Section 5.050 of Appendix B. Depending upon the nature of the development, the proposal may also require review and approval of shoreline permits as specified by this Master Program.

B. Application for Development Permit. Application for a development permit shall be made on forms furnished by the city and may include but not be limited to: plans in duplicate drawn to scale showing the nature, locations, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

1. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;

2. Elevation in relation to mean sea level to which any structure has been floodproofed;

3. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 5.180(B); and

4. Description of the extent to which a watercourse will be altered or relocated as a result of the proposed development..

5.130 Designation of the planning director.

The planning director is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

5.140 Duties and responsibilities of the planning director.

Duties of the planning director shall include, but not be limited to:

A. Review all development permits to determine:

1. That the permit requirements of this chapter have been satisfied;

2. That all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required;

3. If the proposed development is located in the floodway, assure that the provisions of Section 5.190 are met.

B. When base flood elevation data has not been provided in accordance with Section 5.070, the city administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Sections 5.180 and 5.190.

C. Obtain and maintain the following information:

1. Where base flood elevation data is provided through the Flood Insurance Study or acquired as in subsection B of this section, obtain and record the actual (as built) elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures, and whether or not the structure contains a basement;

2. For all new or substantially improved floodproofed structures:

a. Verify and record the actual elevation (in relation to mean sea level); and

b. Maintain the floodproofing certifications required in Section 5.120(B)(3);

3. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Where there are proposed alteration(s) of watercourses, accomplish the following:

1. Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration;

2. Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Make interpretations, where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). A person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in CMC Title 14 for administrative appeals. In passing upon such applications, the hearing officer shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands to the injury of others;

2. The danger to life and property due to flooding or erosion damage;

3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

4.The importance of the services provided by the proposed facility to the community;

5.The necessity to the facility of a waterfront location, where applicable;

6.The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

7.The compatibility of the proposed use with existing and anticipated development;

8.The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

9.The safety of access to the property in times of flood for ordinary and emergency vehicles;

10.The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and

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

F. The planning director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

5.160 Variances.

Variances of the requirements of Chapter 5 of Appendix B may be granted as outlined below and as outlined in Chapter 7.8 of this Master Program.

A. Variances, as interpreted in the National Flood Insurance Program, are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, or economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

B. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

C. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

D. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing Section 5.140(E)(1) through (11) have been fully considered. As the lot size increases, the technical justification required for issuing the variance increases.

E. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

F. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection A of this section, and otherwise complies with Section 5.170(A) and (B) and Chapter 7.8 of this Master Program.

G. Variances shall only be issued upon:

1. A showing of good and sufficient cause;

2. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 5.140, or conflict with existing local laws or ordinances.

H. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation..

5.170 General standards.

In all areas of special flood hazards, the following standards are required:

A. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;

2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

B. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage;

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

C. Utilities.

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and

3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. Subdivision Proposals.

1. All subdivision proposals shall be consistent with the need to minimize flood damage;

2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage;

4. All subdivisions shall disclose the presence on each residential lot of one building site, including access, that is suitable for development and is not within the area of special flood hazard; and

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

5.180 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Sections 5.070 or 5.140(B), the following provisions are required:

A. Residential Construction.

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

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

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

b. The bottom of all openings shall be no higher than one foot above grade;

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

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

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

2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 5.140(C)(2);

4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (A)(2) of this section;

5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to one foot above the base flood level will be rated as at the base flood level).

C. Manufactured Homes. Any manufactured home to be placed or substantially improved within Zones A1-A30, AH, and AE on the community's FIRM shall be

elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot or more above the base flood elevation, and be securely anchored to an adequately anchored foundation system in accordance with the provisions of Section 5.170(A)(2).

D. Recreational Vehicles. Recreational vehicles placed on sites are required to:

1. Be on site not more than 14 consecutive days;

2. Be fully licensed and ready for highway use, on their wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions.

5.190 Floodways.

Located within areas of special flood hazard established in Section 5.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating through hydrologic or hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood damage.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

2. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure, either (a) before the repair, reconstruction, or improvement is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes or to structures identified as historic places shall not be included in the 50 percent.

C. If subsection A of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this chapter..

5.200 Encroachments.

The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point..

5.210 Standards for shallow flooding areas (AO zones).

Shallow flooding areas appear on FIRMs as AO Zones with depth designations. The base flood depths in these zones range from one to three feet above ground where a

clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

A. New construction and substantial improvements of residential structures within AO Zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified).

B. New construction and substantial improvements of nonresidential structures within AO Zones shall either:

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

2. Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in Section 5.180(B)(3).

C. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

CHAPTER 6 - GEOLOGICALLY HAZARDOUS AREAS

Sections:

6.010 Permitted uses and activities.

Uses and activities allowed within designated geologically hazardous areas within shoreline jurisdiction are those uses permitted by this Shoreline Master Program, subject to the provisions of this chapter..

6.020 Classification.

A. Geologically hazardous areas in the city consist of erosion hazard areas (wind and water) and steep slopes. Classification and rating of geologically hazardous areas will be based upon the risk to development. The categories of risk shall be (1) known or suspected risk; (2) no risk; and (3) risk unknown, meaning data is not available to

determine the presence or absence of a geological hazard. The classification system for geologically hazardous areas shall be as described below.

1. Level 1 Critical hazard areas shall be those areas with a known or suspected risk.

2. Level 2 Awareness hazard areas shall be those areas that have an unknown risk.

B. The determination of the level of risk will be established through an approved geotechnical report submitted by the applicant for any development permit. The city may use on-site inspections and the information sources identified within this title as guidance in identifying the presence of potential geologically hazardous areas.

C. Any land containing soils, geology or slopes that meet any of the following criteria shall be classified as having a known or suspected risk of being geologically hazardous areas:

1. Soils classified in the soil survey of Chelan County Area as having a moderate or high hazard for wind and/or water erosion;

2. Soil complexes containing at least one soil type classified as a moderate to severe erosion hazard when occurring on slopes of 15 percent or greater;

3. Any areas with slopes 30 percent and greater;

4. Areas of historic failures or potentially unstable slopes designated on the Natural Resource Conservation Service slide hazard area studies, and those areas mapped as slumps, earthflows, mudflows, lahars or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources;

5. Any area with a combination of:

a. Slopes 15 percent or steeper, and

b. Impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel), and

c. Springs or ground water seepage;

6. Any area which has shown geologically significant movement during the past 10,000 years or which is underlain by mass wastage debris from that period of time;

7. Any area potentially unstable as a result of rapid stream incision or stream bank erosion;

8. Areas located in a canyon or ravine, or on a bluff;

9. Any area located on an alluvial fan, presently or potentially subject to inundation by debris flows or deposition of stream-transported sediments.

6.030 Designation.

All existing areas of the city in shoreline jurisdiction classified according to the provisions contained in this chapter, as determined by the city, are designated as geologically hazardous areas..

6.040 Application requirements.

Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures

to geologically hazardous areas may be required if deemed necessary. Generally, within Level 1 Critical hazard areas, detailed studies and reports will be required to determine whether or not development will be allowed, and if so, what mitigation measures will be required. Within Level 2 Awareness hazard areas, detailed studies and reports may be necessary to determine the existence of a geologically hazardous area, and if so, whether or not development will be allowed and what mitigation measures might be necessary where development may occur.

A. A site plan which discloses the following:

1. The location and boundaries of the geologically hazardous area;

2. The location and dimensions of all existing and proposed buildings, roads and other improvements, and their physical relationship to the geologically hazardous area;

3. The location and type of any proposed buffers, including the identification of any other protective measures; and

4. Locations and results of any test holes, excavations, etc., used in evaluating the existence and extent of the geologic hazard;

B. A geotechnical report prepared as described within this title; and

C. A certification from the geotechnical engineer and/or geologist preparing the study and report stating all of the following:

1. The risk of damage from the project, both on- and off-site, is minimal;

2. The project will not materially increase the risk of occurrence of the hazard; and

3. The specific measures incorporated into the design and operational plan of the project to eliminate or reduce the risk of damage due to the hazard.

6.050 Geotechnical report.

A. All geotechnical reports shall be prepared by a consultant team including a geologist and/or a geotechnical engineer, or an engineer or an engineering geologist who is knowledgeable of regional geologic conditions and who derives his/her livelihood from employment in one of these specialized fields.

B. A geotechnical report shall include a description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations on the suitability of the site to be developed. More specifically, the report shall evaluate the actual presence of geologic conditions giving rise to the geologic hazard, including without limitation the following:

1. Documentation of site history, evidence of past geologically hazardous activities in the vicinity, quantitative analysis of slope stability and available geologic information;

2. Surface reconnaissance of the site and adjacent areas;

3. Subsurface exploration of the site to assess potential geologic impacts of the proposal;

4. Hydrologic analysis of slope and/or soil stability;

5. Approximate depth to groundwater;

6. Evaluation of the safety of the proposed project, and identification of construction practices, monitoring programs and other mitigation measures necessary; and

7. Demonstration of the following:

a. There will be no increase in surface water discharge or sedimentation to adjacent properties;

b. There will be no decrease in slope stability on the site nor on adjacent properties;

c. There is no hazard as proven by evidence of no past geologically hazardous activity in the vicinity of the proposed development and a quantitative analysis of slope stability indicates no significant risk to the development proposal and adjacent properties; and

d. The geologically hazardous area can be modified or the development proposal can be designed such that the hazard is eliminated or mitigated, making the site as safe as one without a hazard.

C. The recommendations from a soils engineering report and the engineering geology report shall be incorporated in a geotechnical report and in the grading plan specifications.

1. The soils engineering report, prepared according to Appendix, Chapter and Section 3309.5 of the Uniform Building Code (U.B.C.), shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures if necessary.

2. The engineering geology report, prepared according to Appendix, Chapter and Section 3309.6 of the U.B.C., shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinion on the adequacy for the intended use of sites to be developed by the proposed grading.

6.060 General standards.

The following minimum standards shall apply to all development activities occurring within designated geologically hazardous areas and their buffers.

A. All projects shall be evaluated to determine whether the project is proposed to be located in a geologically hazardous area, the project's potential impact on the geologically hazardous area, and the potential impact of the geologic hazard on the proposed project.

B. Appropriate buffer areas shall be maintained between all permitted uses and activities and designated geologically hazardous areas.

1. A minimum buffer of 50 feet shall be established from the top, toe and all edges of geologically hazardous areas.

2. Existing native vegetation within the buffer area shall be maintained.

3. The buffer may be reduced to a minimum of 30 feet when an applicant demonstrates, to the satisfaction of the city, that the reduction will adequately protect the proposed development and the designated geologically hazardous area.

4. Normal nondestructive pruning and trimming of vegetation for maintenance purposes, or thinning of limbs of individual trees to provide for a view corridor, is allowed within the buffer area.

C. Appropriate drainage and erosion control measures, as determined by the city, shall be implemented in designated geologically hazardous areas.

1. All development shall submit for review and approval a drainage and erosion control plan pursuant to the provisions of this title, unless waived by the city.

2. All disturbed areas shall be revegetated in accordance with an approved plan, and completed within six months.

3. Surface drainage shall not be directed across the face of a bluff or into a ravine. If drainage must be discharged from the bluff into adjacent waters, it shall be collected above the face of the bluff and directed to the water by a sealed drain line, and provided with an energy dissipating device.

D. Appropriate grading and excavation measures, as determined by the city, shall be implemented in designated geologically hazardous areas.

1. All development shall submit for review and approval a grading and excavation plan as specified in Chapter 1, unless waived by the city. There shall be minimum disturbance of trees and vegetation on steep slopes and in ravines to minimize erosion and instability.

2. Excavation, grading and earthwork construction in designated geologically hazardous areas shall only be allowed from April 1st to October 15th, except for the following circumstances:

a. Up to 5,000 square feet may be cleared on any lot, subject to approval of a drainage and erosion control and grading plan as required above; and

b. Timber harvest pursuant to DNR-approved forest practices or a clearing and grading permit may be allowed.

3. All disturbed areas shall be revegetated in accordance with an approved plan, and completed within six months.

4. All clearing shall be marked in the field for inspection and approval prior to alteration of the site.

5. The face of any cuts and/or fills on slopes will be prepared, maintained and revegetated to control against erosion.

E. Construction methods should be utilized which minimize risks to structures and which do not increase the risk to the site, or to adjacent properties and their structures, from the geologic hazard.

F. Site planning shall minimize disruption of existing topography and natural vegetation, and shall incorporate opportunities for phased clearing.

G. Impervious surface coverage shall be minimized.

H. Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval shall be marked in the field and approved by the city prior to undertaking the project.

I. A monitoring program shall be prepared for construction activities occurring in critical geologic hazard areas.

J. Development shall not increase instability or create a hazard to the site or adjacent properties, or result in a significant increase in sedimentation or erosion..

6.070 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 6.050.

A. Road Repair and Construction. Construction of any new public or private road is prohibited in a designated geologically hazardous area. Any existing private or public road repair or maintenance may be authorized, subject to the following minimum standards:

1. The repair and maintenance shall not create additional significant adverse impacts to the geologically hazardous area; and

2. Road repair and maintenance is the minimum necessary to provide safe traveling surfaces.

B. Major Developments. All major developments processed by the city according to the provisions governing full administrative review or quasi-judicial review authorized within a designated geologically hazardous area shall comply with the following minimum standards:

1. All plats shall disclose the presence on each residential lot of one building site, including sufficient building area, sewage system, setbacks, and access, that is suitable for development and which is not within the designated geologically hazardous area or its associated buffer;

2. All geologically hazardous areas and their buffers shall be clearly identified on all plats, maps, documents, etc.;

3. Designated geologically hazardous areas and their associated buffers shall be designated and disclosed on the final plats, maps, documents, etc., as open space tracts, nonbuildable lot and buffer areas, or as common areas, with ownership and control transferred to a homeowner's association. Associated geologically hazardous area buffers may alternatively be designated and disclosed on the final plats, maps, documents, etc., as an easement or covenant encumbering the property; and

4. Areas which pose an immediate, significant threat to public safety shall be appropriately fenced and identified, as determined by the city.

C. Surface Water Management. Stormwater retention and detention systems, including percolation systems utilizing buried pipe or french drain, are prohibited within designated geologically hazardous areas and their buffers, unless a geotechnical report indicates such a system shall not affect slope stability and the systems are designed by an engineer. The engineer shall also certify that the systems were installed as designed.

D. Trails and Trail-Related Facilities. Construction of public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, viewing platforms and campsites may be authorized within a designated geologically hazardous area, subject to the following minimum standards:

1. Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;

2. Trail facilities shall minimize the removal of trees, shrubs, snags and other important features;

3. Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of the geologically hazardous area; and

4. All structures shall be constructed with materials complementary to the surrounding environment.

E. Utilities. When no other practical alternative exists, construction of utilities within a designated geologically hazardous area may be authorized, subject to the following minimum standards:

1. Utility corridor shall be jointly used;

2. Corridors shall be revegetated to pre-construction densities with appropriate native vegetation immediately upon completion of construction, or as soon thereafter as possible given seasonal growing constraints. The utility purveyor shall provide an assurance device or surety in accordance with CMC which ensures that such vegetation survives;

3. Any additional corridor access for maintenance shall be provided as much as possible at specific points rather than by parallel roads. If parallel roads are necessary they shall be no greater than 15 feet in width, and shall be contiguous to the location of the utility corridor on the side opposite the designated geologically hazardous area;

4. Construction of sewer lines within a designated geologically hazardous area which are necessary to meet state and/or local health code requirements may be authorized, provided the severity of the designated geologically hazardous area is not increased;

5. Septic system drain fields shall be located outside of the geologically hazardous area and the associated buffers, unless otherwise justified and certified by a qualified geotechnical engineer.

CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION CITY OF CHELAN

Sections:

1.010 Purpose.

The purpose of this chapter is to satisfy the requirements of the Shoreline Management Act for critical areas protection in shoreline jurisdiction as provided in WAC 173-26-221comply with the provisions of the Washington State Growth Management Act of 1990, Chapter 17, Chapter 36.70A RCW, as amended, to supplement the development requirements contained in the Chelan Municipal Code, and to establish special standards for the use and development of lands within the city's shoreline jurisdiction based on the existence of critical areas including critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands. Those critical areas are of special concern to the city. The standards and procedures established in this chapter are intended to protect critical areas and the public health, safety, and welfare by preventing the adverse impacts of development listed in this section while accommodating the rights of property owners to reasonable use of their property. By regulating development and alterations to critical areas this chapter seeks to:

A. Protect members of the public and public and private resources and facilities from injury, loss of life, property damage or financial losses due to flooding, erosion, landslide, seismic events or steep slope failure;

B. Protect unique fragile and valuable elements of the environment, including ravines and wetlands;

C. Mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to those areas;

D. Provide city officials with the information and authority to protect critical areas and implement the policies of the State Environmental Policy Act, Chapter 43.21C RCW, the city of Chelan comprehensive plan, and the Growth Management Act of 1990.

1.020 Definitions.

Words, terms and phrases used in these regulations are defined in Chapter 8, Definitions of this Shoreline Master Program and supplemented herein. Except where specifically defined in Chapter 8 of the SMP or the following section, all words used shall carry their customary meanings unless the context indicates otherwise:

"Administrator" means the planning director or his or her designee.

"Alteration" means any human-induced action that changes the existing condition of a critical area. Alterations include, but are not limited to: grading; filling; dredging; draining; channelizing; discharging pollutants except storm water; paving, construction, application of gravel; modifying for surface water management purposes; vegetation removal or any other human activity that changes the existing landforms, vegetation, hydrology, wildlife or wildlife habitat of a critical area.

"Best management practice" is a method, technique or product, or some combination thereof, that has been demonstrated to be the most effective and reliable in minimizing impacts.

"Buffer" means an area of land immediately adjacent to a critical area that is protected from development or alteration, and may be restored or enhanced, to help protect critical area functions and values. A buffer may afford limited public access and accommodate certain other specified uses.

"Building setback" means the required separation between the top of a ravine sidewall and the foundation of a building or structure, measured on a horizontal plane and perpendicular to the top of the ravine sidewall.

"Critical area study" means an evaluation of a specific development site performed by a qualified professional as a part of a permitting process in the city or its UGA.

"Critical areas" include: areas with a critical recharging effect on aquifers used for drinking water; fish and wildlife habitat conservation areas; frequently flooded areas; geologically hazardous areas; and wetlands.

"Critical areas review checklist" is a form provided by the city and completed by the applicant that provides an indication of the presence of critical areas and the critical area study information that will be required by the city.

"Development proposal" means any activity relating to the use and/or development of land requiring a permit or approval from the city, including but not limited to: commercial or residential building permit; grading or clearing permit; conditional use permit; planned development; shoreline substantial development permit; variance or conditional use permit; subdivision; short subdivision; variance; rezone; or any subsequently required permit or approval not expressly exempted by this chapter.

"Emergency" means an unanticipated event or occurrence that poses an imminent threat to public health, safety, welfare or the environment, and that requires immediate action within a time too short to allow full compliance with these regulations.

"Erosion hazard areas" are those areas that can result in hazards to public health and safety when the ground is disturbed.

"Excavation and grading" is the mechanical removal of earth material, clearing of trees, brush, shrubs or grass, including any filling or leveling of surface contours.

"Fish and wildlife habitat conservation areas" are areas reserved for management and maintenance of fish and wildlife habitats, as designated in this chapter.

"Frequently flooded area" means any area of special flood hazard, as designated in these regulations.

"Geologically hazardous area" means any area in the city or its UGA that, because of its susceptibility to erosion, sliding, earthquake, or other geological events, is not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

"Geotechnical assessment" means an assessment prepared by a qualified professional for geological hazards detailing the surface and subsurface conditions of a site and delineating the areas of a property subject to geologic hazards.

"Geotechnical engineer" is a person with a Washington State license in civil engineering who has at least four years of professional employment as a geotechnical engineer with experience in landslide, erosion and seismic hazards identification and mitigation.

"Geotechnical report" means a report prepared by a qualified professional for geological hazards that evaluates the site conditions and mitigating measures necessary to ensure that the risks associated with geologic hazards are eliminated on the site proposed to be altered.

"Hydrogeologic evaluation" means a systematic study of geologic and ground water resources, focusing on near-surface geologic, ground water, and pollution sensitivity, for the purpose of determining any potential risk to human health, ground water quality, and the environment.

"Intermittent stream" means a stream that flows for only part of the year, including streams that flow for only hours or days after significant rainfall or during snowmelt.

"Landslide hazard areas" means areas potentially subject to landslides based on a combination of geologic, topographic and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), aspect, structure, hydrology or other factors.

"Mitigation" is an action involving avoidance, reduction or compensation for anticipated adverse impacts. The types of mitigation, from least to most intrusive, are listed in order of preference under the heading "Mitigation Sequencing" in Section 1.030(J)(2).

"Monitoring" is the process of collecting and evaluating data to assess the biological, hydrological or geological performance of newly created, restored, rehabilitated and/or affected critical areas.

"Potential critical area" means any area that, based on the reference materials and designations in this chapter, is reasonably likely to be a critical area.

"Qualified professional" means a person with experience and training in the pertinent scientific discipline. A qualified professional must have obtained a B.S. or B.A. or equivalent degree and two years of related work experience.

- A qualified professional for fish and wildlife habitat conservation areas must have a degree in biology or a related academic field and professional experience with habitat management in the Inland Northwest.
- A qualified professional for wetlands must be a certified professional wetland scientist or a noncertified wetland scientist with a minimum of five years' experience as a wetlands professional in the Inland Northwest, including delineating wetlands using the state or federal manuals, preparing wetlands reports, conducting functional assessments, and developing and implementing mitigation plans.
- A qualified professional for geological hazards must be a geologist or engineer licensed in the state of Washington, with experience evaluating the type of geologic hazard known or suspected to occur at the subject site.
- A qualified professional for aquifer recharge areas must be a geologist or engineer licensed in the state of Washington, with experience in preparing hydrogeologic evaluations.

"Ravine" means the steep-sided valley of a stream (whether perennial or intermittent) created by the wearing action of the stream and including the valley floor and sidewalls.

"Ravine sidewall area" means that portion of a ravine that abuts and rises from the valley floor. Ravine sidewalls contain slopes predominantly in excess of forty percent, although portions may be less than forty percent. The toe of a ravine sidewall is the stream valley floor. The top of a ravine sidewall is typically a distinct line where the slope abruptly levels out. Where there is no distinct break in slope, the top is where the slope diminishes to less than twenty percent. Minor natural or manmade breaks in the slope of ravine sidewalls shall not be considered as the top. Benches with slopes less than twenty percent and containing developed or developable areas shall be considered as the top.

"Regulated wetland" means a wetland designated in this chapter.

"Seismic hazard area" means any area subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting.

"Slope," when used as a noun, means an inclined ground surface, the inclination of which is expressed as a ratio (percentage) of vertical distance to horizontal distance by the following formula: y1-y2/x1-x2, where y1 and y2 are points on the vertical axis and x1 and x2 are points on the horizontal axis.

"Steep slope area" means any area in the city or its UGA in which slopes measure thirty percent or greater over a vertical distance of at least ten feet. A slope is

delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical distance.

"Streams" are surface water contained within a defined bed or channel, whether permanent or intermittent. This definition does not include ditches, canals, storm water runoff devices or other entirely artificial watercourses. A stream which has been altered to carry naturally occurring waters is a stream within this definition.

"Wetland(s)" or "wetland areas" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support (and that under normal circumstances do support) a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

1.030 General provisions.

A. Applicability. All development or other alterations in or within two hundred and fifty feet of critical areas and located in shoreline jurisdiction, whether public or private, shall comply with the requirements and purposes of this chapter. Responsibility for the enforcement of the provisions of this chapter shall rest with the administrator.

1. For the purposes of this chapter, "development" includes proposals which require any of the following: commercial or residential building permit; grading or clearing permit; conditional use permit; planned development; shoreline substantial development permit; conditional use permit; subdivision; short subdivision; variance; rezone or any subsequently required permit or approval not expressly exempted by this chapter.

2. Alterations include, but are not limited to, construction or exterior alteration of a structure or structures, dredging, drilling, dumping, filling, removal of vegetation or natural resources, placing of obstructions, any project of a permanent nature or changes in the use of land or preparation for the change of use of land.

3. This chapter shall not alter the city's responsibility for the enforcement of the State Environmental Policy Act or the International Building Code.

B. Reference Maps and Materials. The city shall maintain reference maps and materials that provide information on the general locations of critical areas and their functions and values. Since boundaries are generalized, the application of this chapter and the actual type, extent, and boundaries of critical areas shall be determined and governed by the designation and classification sections for each critical area. In the event of any conflict between the maps and the provisions of this chapter or the site-specific

conditions, the provisions and/or site-specific conditions shall prevail. Reference materials shall include, but shall not be limited to, the following (or, where applicable, any subsequent or amended version):

1. City of Chelan generalized critical areas map.

2. Wetlands map, based on the National Wetlands Inventory (NWI) maps.

3. Washington State Wetlands Identification and Delineation Manual (Washington Department of Ecology Publication No. 96-94, or as amended).

4. Washington State Wetlands Rating System for Eastern Washington (Department of Ecology Publication No. 4-06-15, or as amended).

5. Wetlands in Washington State, Volumes 1 and 2 (Department of Ecology Publications No. 05-06-006 and No. 05-06-008, or as amended).

6. Maps of the city of Chelan prepared by the Source Water Assessment Program of the Washington State Department of Health, Division of Environmental Health, Office of Drinking Water (SWAP).

7. The Chelan County Soil Survey.

8. City of Chelan land use map and records for identification of areas in which aquifer contamination potential is high.

9. Fish and wildlife habitat maps, based on the Washington Department of Fish and Wildlife's current priority habitat and species data.

10. City of Chelan open space map.

11. Maps published by the U.S. Geological Survey or the Washington State Department of Natural Resources showing areas designated as quaternary slumps, earthflows, mud flows, lahars, or landslides.

12. Seismic Design Category Map for Residential Construction in Washington, Sheet 2.

13. The Flood Insurance Study for the City of Chelan, Washington, and the accompanying flood hazard boundary maps and flood insurance rate maps.

14. City of Chelan flood hazard areas regulations.

15. City of Chelan comprehensive plan.

16. City of Chelan shoreline master program.

17. Current applicable building codes.

18. Any approved critical areas studies, hydrogeologic evaluations, channel migration zone studies, special studies, or detailed studies.

19. Monitoring data.

C. Critical Areas Review Process.

1. Reference Materials. The city shall maintain a generalized critical areas map and other reference materials, per subsection E of this section, which may be used to locate known and potential critical areas. The city shall make the reference materials available for reference in the city offices.

2. Preliminary Evaluation. Submittal of a critical areas review checklist shall be required prior to any development or other alteration in or within two hundred and fifty feet of a known or potential critical area, whether or not a permit is required for such an alteration. The application for any development

proposal for which a permit is required shall include submittal of a checklist by the applicant and completion of the checklist by city staff. Each checklist shall indicate whether any critical area(s) is located on the site. Said checklist shall be provided by the city. The first page shall be completed by the applicant and shall provide the administrator with the information necessary for the preliminary evaluation of the proposed alteration.

3. On receipt of a critical areas review checklist, the administrator shall conduct a preliminary evaluation, which shall include visiting the site and reviewing the following information:

a. Any pertinent information provided by the applicant;

b. The city's generalized critical areas map and other relevant reference materials; and

c. Any other pertinent information including but not limited to the information on the critical areas review checklist and (when required) a SEPA checklist.

Based on the preliminary evaluation, the administrator shall determine whether or not sufficient information is available to evaluate the proposal.

4. If the administrator determines that the information presented is not sufficient to adequately evaluate the impact on critical areas of a proposed alteration, he or she shall notify the applicant that a critical area study is required. In the event that multiple critical areas occur on a given site, each critical area shall be addressed independently and all critical areas shall be addressed collectively for the purpose of determining development standards and appropriate mitigating measures.

5. In the case of landslide or erosion hazard areas, should the applicant question the presence of such areas on the site, the applicant may submit a geotechnical assessment prepared by a qualified professional for geological hazards. If the geotechnical assessment demonstrates, to the satisfaction of the administrator, that the proposed site is not located in any landslide or erosion hazard area, then the requirements of this chapter shall not apply. The geotechnical assessment shall include at a minimum the following:

a. A discussion of the surface and subsurface geologic conditions of the site;

b. A site plan of the area delineating all areas of the site subject to landslide and erosion hazards based on mapping and criteria referenced in this section. A map meeting the criteria set forth for a geotechnical report shall be included.

D. Vegetation Removal.

1. Critical areas review is required prior to removal of any vegetation, including nonnative vegetation, from a critical area or its buffer, whether or not development is proposed or a development permit is being sought. This provision applies to noxious weeds and invasive plant species, with the exception of hand removal or spot-spraying. If the administrator determines,

based on a preliminary evaluation, that a critical area study is required, such removal of vegetation shall be incorporated in a mitigation plan designed to prevent erosion and facilitate establishment of a stable community of native plants. In all cases, including spot-spraying of noxious weeds and invasive plant species, any herbicide use must conform to all applicable laws, including labeling laws.

2. Unauthorized Vegetation Removal. Vegetation removal conducted without the appropriate review and approvals shall be mitigated in conformance with an approved mitigation plan meeting the standards of this chapter.

E. Critical Area Study. If the administrator determines that the site of a proposed development includes, is likely to include, or is adjacent to one or more critical areas, a critical area study may be required. When required, the expense of preparing the critical area study shall be borne by the applicant. The content, format and extent of the critical area study shall be approved by the administrator.

1. The requirement for a critical area study may be waived by the administrator if there is substantial evidence that:

a. There will be no alteration of the critical area(s) and/or the required buffer(s); and

b. The proposal will not impact the critical area(s) in a manner contrary to the purpose, intent and requirements of this chapter and the city's comprehensive plan; and

c. The minimum standards of this chapter will be met.

2. No critical area study is required for proposals that are exempt from the provisions of this chapter as set forth under subsection B of this section, General Exemptions.

3. Every critical area study shall be completed by a qualified professional who is knowledgeable about the specific critical area(s) in question, and approved by the administrator.

4. At a minimum, a required critical area study shall contain the following information:

a. Applicant's name and contact information; permits being sought; and description of the proposal;

b. A copy of the site plan for the alteration proposal, drawn to scale and showing:

i. Identified critical areas, buffers, and the proposed alteration with dimensions;

ii. Limits of any areas to be cleared; and

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

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

d. Identification and characterization of all critical areas within, or within two hundred and fifty feet of, the project area or within any proposed buffer;

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

f. An analysis of site development alternatives;

g. A description of reasonable efforts made to apply mitigation sequencing, as defined in these regulations, to avoid, minimize, and otherwise mitigate impacts to critical areas;

h. A mitigation plan as set forth in subsection (J)(3) of this section;

i. A discussion of the performance standards proposed to ensure that ecological functions of critical areas are protected and health and safety hazards associated with critical areas are precluded;

j. Financial guarantees proposed to ensure compliance with mitigation plan and performance standards; and

k. Any additional information required for specific critical areas as listed in subsequent sections of these regulations.

5. The administrator may request any other information reasonably deemed necessary to understand impacts to critical areas.

F. Development Standards.

1. Upon review of the critical area study, the administrator may require compliance with all or part of the development standards listed in this chapter. At a minimum, the administrator shall require that development mitigate any impacts that degrade the functions and values of critical areas in accordance with the mitigation provisions in subsection J of this section.

2. The administrator shall waive all or part of the development standards required by this chapter if he or she determines that the potential impact of the proposal (including impact on critical areas and impact on the public health, safety, and welfare) and the protection measures proposed have been previously reviewed pursuant to this chapter under separate application and that an adequate degree of protection has been provided.

G. Mitigation Requirements.

1. The applicant shall avoid all impacts that degrade the functions and values of critical areas. If alteration is unavoidable, all adverse impacts to critical areas and buffers resulting from the proposal shall be mitigated in accordance with an approved critical areas report and SEPA documents. The location of the mitigation site shall be consistent with best available science and may be on site or off site.

2. Mitigation Sequencing. Applicants shall use the least intrusive type of mitigation feasible, and shall demonstrate that less intrusive types of mitigation have been evaluated. The types of mitigation, from least to most intrusive, are:

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. In the case of frequently flooded areas and geologically hazardous areas, minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered methods or other methods designed by a qualified design professional;

d. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to historic conditions or the conditions existing at the time the project was initiated;

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

f. In the case of critical aquifer recharge areas, frequently flooded areas, fish and wildlife habitat conservation areas, and wetlands, compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

g. Monitoring the impact using a planned evaluation process and taking appropriate corrective measures.

3. Mitigation Plan. When mitigation is required, the applicant shall submit for approval a mitigation plan as part of the critical area study. Approval of a mitigation plan shall be a Type IB procedure, subject to Title 19. The mitigation plan shall include a written report identifying:

a. Mitigation objectives, including:

i. A description of the anticipated impacts to critical areas and their buffers, the type or types of mitigation proposed, and the purposes of the measures proposed, including site selection criteria; identification of compensation objectives; identification of critical area functions and values; and dates for beginning and completion of any on-site mitigation activities;

ii. The impacts of any proposed alteration of a critical area or buffer, including proposed mitigation activities, on the development site, other properties and the environment;

iii. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in critical areas mitigation; and

iv. An analysis of the likelihood of success of the proposed mitigation.

b. Measurable criteria for evaluating whether or not the objectives of the mitigation plan have been successfully attained and whether or not the requirements of these regulations have been met.

c. Descriptions and specifications for any on-the-ground mitigation activities, including, but not limited to:

i. Proposed construction sequence, timing, and duration;

ii. Grading and excavation details;

iii. Erosion and sediment control measures;

iv. A planting plan specifying plant species, quantities, locations, sizes, and spacing; and

v. Measures to protect and maintain plants until established.

d. Where on-the-ground mitigation activities are proposed, construction and post-construction monitoring programs.

i. The purpose of the construction monitoring program is to monitor adherence to the mitigation specifications and any other requirements of these regulations.

ii. The purpose of the post-construction monitoring program is to determine whether mitigation objectives are being achieved and, if not, prescribe corrective measures. The program shall include a schedule for monitoring the project over a period adequate to establish that mitigation objectives have been met, generally at least five years from completion of the mitigation project, and shall describe the methods to be used in monitoring.

e. A list of potential corrective measures to be taken if monitoring or evaluation indicates project objectives are not being achieved.

4. Monitoring and Reporting. The mitigation project shall be monitored as specified in the mitigation plan. A monitoring report shall be submitted by the project proponent to the administrator according to the schedule specified in the mitigation plan, to document monitoring outcomes and any contingency actions.

H. Surety/Bonding. If a development proposal is subject to mitigation, maintenance, or monitoring plans, the city may require an assurance device or surety, in a form acceptable to the city attorney.

1.040 Appeal from decisions.

A. The administrator's decision to approve, condition or deny a proposed alteration based on this chapter, unless otherwise specifically provided by ordinance, may be appealed to the city hearing examiner. Any appeal shall be in writing and submitted within ten days of the date of the city's decision. The provisions of Chelan Municipal Code Chapter 19.06 and Chapter 7.13 of this Shoreline Master Program shall govern the appeal procedure.

B. Any decision of the hearing examiner regarding a decision of the administrator, unless otherwise specifically provided by ordinance, shall be final. There shall be no further appeal to any other municipal board, officer, or the legislative authority of the city. Unless otherwise specifically provided by ordinance, any board decision shall be reviewable for unlawful, arbitrary, capricious or corrupt action or nonaction by writ of review before the Chelan County superior court; provided, that the application for writ of review shall be made to the court within ten days from any decision so to be reviewed. The costs of transcription of all records ordered certified by the court for such

review shall be borne by the applicant at the rate prescribed by the administrator of this title. Such costs shall not exceed the amount necessary to reimburse the city for its expenses actually incurred.

1.050 Designation, classification, and protection.

A. Wetlands.

1. Designation. Wetlands in Chelan shall be designated according to the definition of wetlands in RCW 36.70A.030(21). Wetlands meeting the criteria of that definition shall be subject to these critical areas regulations.

2. Classification. Wetlands shall be classified according to the *Washington State Wetlands Rating System for Eastern Washington* (Department of Ecology Publication No. 4-06-15, or as amended). Wetland rating categories shall be applied as the regulated wetland exists on the date of the adoption or revision of the rating system by the Department of Ecology. As of the date of this writing, the rating system includes the following four categories:

a. Category I. Generally, such wetlands are not common and make up a small percentage of the wetlands in Eastern Washington. Category I wetlands include alkali wetlands, bogs, Natural Heritage wetlands, mature and old-growth forested wetlands with slow-growing trees, forested wetlands with stands of aspen, and wetlands that perform many functions well, as measured by the rating system. Category I wetlands are those that:

i. Represent a unique or rare wetland type;

ii. Are sensitive to disturbance;

iii. Are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or

iv. Provide a very high level of functions.

b. Category II. Such wetlands are difficult, though not impossible, to replace. They provide high levels of some functions. Category II wetlands occur more commonly than Category I wetlands, but still need a high level of protection. Category II wetlands are:

i. Forested wetlands in the channel migration zone of rivers;

ii. Mature forested wetlands containing fast-growing trees;

iii. Vernal pools present within a mosaic of other wetlands; or

iv. Those wetlands with a moderately high level of functions.

c. Category III. Such wetlands have generally been disturbed in some manner, and are often smaller, less diverse and/or more isolated in the landscape than Category II wetlands. They may not require as much protection as Category I and II wetlands. Category III wetlands are:

i. Vernal pools that are isolated; or

ii. Wetlands with a moderate level of functions, as measured by the rating system.

d. Category IV. Category IV wetlands have the lowest levels of functions, as measured by the rating system, and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases improve. These wetlands do provide some important functions, and should be afforded some degree of protection.

3. Critical Areas Review.

a. Preliminary Evaluation.

i. A preliminary evaluation shall evaluate known or potential wetlands on or within three hundred feet of the site of a proposed alteration.

ii. At a minimum, the National Wetlands Inventory (NWI) maps, the city's generalized critical areas map, and any critical areas study that identifies wetlands in the vicinity of a development site shall be used in completing a critical areas checklist and in the city's review for the purpose of determining whether a critical areas study will be required.

b. Identification and Delineation. The methodology described in the *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication No. 96-94, or as amended) shall be used to identify, classify, and delineate any known or potential wetlands identified in a preliminary evaluation. Where federal regulations require use of the U.S. Army Corps of Engineers *Arid West Interim Regional Supplement* (or as amended) to the 1987 Wetland Delineation Manual, delineation using the *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication No. 96-94, or as amended) shall also be required.

c. In addition to the general requirements for critical area studies, the required critical area study for any wetland shall include the following:

i. An overview of the methodology used to conduct the study;

ii. As part of the identification and characterization, a written assessment and accompanying maps of the wetlands and buffers within three hundred feet of the project area, including the following information at a minimum:

(A) Wetland delineation and required buffers;

(B) Existing wetland acreage;

(C) Wetland category;

(D) Vegetative, faunal, and hydrologic characteristics;

(E) Soil and substrate conditions;

(F) Topographic elevations, at two-foot contours; and

(G) A discussion of the water sources supplying the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, evidence of recharge or

discharge, evidence of water depths throughout the year such as algal layers and sediment deposits).

iii. As part of the mitigation plan, a habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and wetland functions, including the following information at a minimum:

(A) Any proposed changes in wetland acreage;

(B) Any proposed changes in vegetation and fauna;

(C) Any proposed changes in surface and subsurface hydrologic conditions including an analysis of existing and future hydrologic regime, and proposed hydrologic regime for enhanced, created, or restored mitigation areas;

(D) Location of mitigation site or sites in the watershed and relationship to existing water bodies and to associated wetlands and related wetlands that may be greater than three hundred feet from the project site;

(E) Any proposed changes in soil and substrate conditions and topographic elevations;

(F) Existing and proposed adjacent site conditions;

(G) Required wetland buffers (including any buffer reduction and mitigation proposed to increase the plant densities, remove weedy vegetation, and replant the buffers); and

(H) Ownership of mitigation site or sites.

d. An applicant should be aware that Section 404 of the Federal Clean Water Act and other federal and state statutes may apply.

e. The information provided by the study will augment the database for the Chelan area maintained by the city.

4. Development Standards.

a. General. No land surface modifications or alteration may take place and no improvement may be located in a regulated wetland except as specifically provided in this section.

b. Mitigation.

i. If alteration of a regulated wetland is unavoidable, mitigation shall be adequate to ensure no net loss of wetland area and functions including lost time when the wetland does not perform the function.

ii. *Wetlands in Washington State, Volume 2: Managing and Protecting Wetlands* (Department of Ecology Publication No. 05-06-008, or as amended), Appendix 8D.3, shall be the preferred guidance for establishing ratios for compensatory mitigation.

iii. The requirements of this section are in addition to the provisions of Section 1.030(G).

c. Essential Public Facility or Utility. The administrator may permit the placement of an essential public facility or utility in a regulated wetland. The administrator must determine that the public improvement must traverse a regulated wetland because no feasible alternative location exists. Compliance with all provisions of this chapter, including mitigation requirements, shall be required.

d. Buffer Widths. Buffers shall be established adjacent to and outside of all regulated wetlands. The following standard buffer widths shall be applied unless a critical area study establishes, based on intensity of impacts, wetlands functions, or special characteristics as described in Appendix 8-D of *Wetlands in Washington State, Volume 2: Managing and Protecting Wetlands* (Department of Ecology Publication No. 05-06-008, or as amended), that a greater or lesser buffer width would serve to protect the functions and values of a particular wetland:

Wetland Category	Buffer Width		
	Land use with low impact	**Land use with moderate impact**	**Land use with high impact**
I	125'	190'	250'
II	100'	150'	200'
III	75;	110'	150'
IV	25'	40'	50'

Greater buffer widths or rehabilitation of an inadequate plant community may be required where necessary to ensure development does not result in adverse impacts to wetlands.

e. Buffer Reduction. Buffers may be reduced by a maximum of twenty-five percent provided:

i. The critical area study demonstrates that the reduction will not:

(A) Adversely affect water quality;

(B) Destroy, damage, or disrupt a significant fish or wildlife habitat area, including scenic vistas;

(C) Adversely affect drainage and/or storm water retention capabilities;

(D) Lead to unstable earth conditions or create erosion hazards; and

(E) Be materially detrimental to any other property in the area of the subject property or the city as a whole.

ii. The remaining buffer is enhanced with vegetation to a condition that is comparable to a comparable undisturbed plant community in the ecoregion. Enhanced buffers shall be monitored and maintained to the same standard as on-the-ground mitigation.

f. Wetlands and wetland buffers shall be retained in their natural condition, with the following exceptions:

i. The following activities may occur in wetlands or wetland buffers:

(A) Low impact recreation facilities, including unpaved walkways or trails and associated facilities (e.g., benches, trash receptacles, interpretive signs) located in the outer twenty-five percent of the buffer area; wildlife viewing structures; and fishing access areas without vehicle access; provided they are designed and approved as part of an overall site development plan;

(B) Selective pruning of trees for safety or view protection is allowed in wetland buffers. Where trees pose a significant safety hazard, they may be removed from wetland buffers. All other tree removal in wetland buffers shall be minimized through site design, and mitigated when the loss of a tree or trees results in loss of ecological function;

(C) Existing and ongoing agricultural activities (provided no expansion into undisturbed wetland areas occurs);

(D) Maintenance of existing facilities, structures, ditches, roads and utility systems; and

(E) Artificial wetland construction approved as part of an overall site development plan or restoration or enhancement plan.

ii. Where wetland or wetland buffer disturbance is unavoidable during adjacent construction, restoration and revegetation with native plant materials in accordance with an approved mitigation plan will be required.

B. Critical Aquifer Recharge Areas.

1. Designation. To date there has been no site-specific delineation of critical aquifer recharge areas (CARAs) for the city or its UGA, although general maps have been prepared by the Source Water Assessment Program of the Washington State Department of Health, Division of Environmental Health, Office of Drinking Water (SWAP).

a. Until CARAs have been delineated (based on site-specific modeling), the city of Chelan designates the following lands within the city and its urban growth area as potential CARAs:

i. Areas of hydrologic susceptibility, including water bodies, surface water intake protection areas, and wellhead protection areas shown on the map prepared for Chelan County by the SWAP; wetland areas shown on the National Wetlands Inventory

(NWI) map or on the city's generalized sensitive areas map; areas in which soils show permeability ratings of more than twenty inches per hour as shown in the Chelan County Soil Survey; and any other lands that have been specifically identified as critical aquifer recharge areas based on reliable scientific data; and

ii. Areas in which contamination potential is high, including landfills; agricultural activities that do not incorporate best management practices; industrial facilities with heavy chemical use; underground storage tanks; aboveground storage tanks; commercial facilities that use solvents; or electroplating facilities.

b. Once CARAs have been delineated, the areas identified by the delineation shall be designated as CARAs.

2. Classification. Critical aquifer recharge areas shall be classified as follows:

a. Critical potential: Water bodies, surface water intake protection areas, and wellhead protection areas.

b. High potential: Wetlands, areas in which soils show permeability ratings of more than twenty inches per hour, areas in which contamination potential is high, and any other lands that have been specifically identified as critical recharge areas based on reliable scientific data.

3. Critical Area Review.

a. Preliminary Evaluation. In determining whether or not sufficient information is available to evaluate a proposal, the administrator shall, at a minimum, consider the map of water bodies, surface water intake protection areas, and wellhead protection areas prepared for Chelan County by the SWAP; the city's wetlands and generalized sensitive areas maps; and the Chelan County Soil Survey, as well as considering the critical areas checklist and conducting a preliminary evaluation. A critical area study shall be required whenever the administrator determines that the information available is not sufficient to evaluate the proposal.

b. Identification. All development in or within two hundred and fifty feet of any known or potential CARA, including all areas of hydrologic susceptibility and high contamination potential listed above, shall be subject to these critical areas regulations, including the critical areas review process and the requirement to complete a critical areas review checklist.

c. Critical Area Study. An applicant may request that the city declassify or reclassify a specific area designated as a CARA. The application must be supported by a critical area study that includes a hydrogeologic evaluation. The application to declassify or reclassify an area shall be reviewed by the administrator and a determination made regarding amendment of the map. The hydrogeologic evaluation shall include, at a minimum:

i. Soil texture, permeability and attenuation properties including geologic setting, occurrence and movement of ground water;

ii. Characteristics of the vadose zone (the unsaturated top layer of soil and geologic material) including permeability and attenuation properties;

iii. Depth to ground water and/or impermeable soil layer;

iv. Aquifer properties such as hydraulic conductivity and gradients, attenuation of contaminants;

v. Quantities of ground water and other relevant factors; and

vi. Potential for contamination of ground water due to the proposed action.

4. Development Standards. The following standards apply in all CARAs:

a. If the critical area study or hydrogeologic evaluation identifies significant potential impacts to CARAs, the project applicant will be required to fully document those impacts and provide a discussion of alternatives by which the impacts could be avoided or prevented.

b. The applicant shall provide a detailed mitigation plan for any unavoidable potential impacts. The city may require that the mitigation plan include process control and remediation as appropriate. Best management practices shall be employed to avoid introducing pollutants into the aquifer.

c. All developments in CARAs shall be evaluated for potential to contaminate ground water resources and lake water quality. If the administrator determines that a high potential for contamination exists, he or she may require that further surface water quality controls be installed for a development prior to discharge from a site. Those controls may include wetponds, water quality swales, filtration or sedimentation ponds or other water quality measures designed to protect aquifer and lake water quality.

d. The following uses are prohibited in all CARAs:

i. Mining of any type below the water table;

ii. Processing, storage, and disposal of radioactive substances;

iii. Hydrocarbon extraction;

iv. Commercial wood treatment facilities on permeable surfaces;

v. Wrecking yards;

vi. Landfills for hazardous waste, municipal solid waste, or special waste; and

vii. On-site septic systems on lots smaller than one acre without a treatment system that results in effluent nitrate-nitrogen concentrations below ten milligrams per liter.

e. In addition, the following uses are prohibited in areas of critical potential:

i. Hazardous liquid transmission pipelines;

ii. Sand, gravel, and hard rock mining on land that is not zoned for mining as of the effective date of the ordinance codified in this chapter;

iii. Golf courses; and

iv. Cemeteries.

f. Every alteration involving hazardous substance processing or handling that is located in or within two hundred and fifty feet of a CARA shall provide containment devices adequate in size to contain on site any unauthorized release of hazardous substances from any area where those substances are stored, handled, treated, used, or produced. Containment devices shall prevent such substances from penetrating into the ground. This provision also applies to releases that may mix with storm runoff.

g. Every alteration involving hazardous substance processing or handling which is located in or within two hundred and fifty feet of a CARA shall prepare a plan containing procedures to be followed to prevent, control, collect, and dispose of any unauthorized release of a hazardous substance.

h. Storage Tanks.

i. All storage tanks proposed for location in or within two hundred and fifty feet of a CARA must comply with local building code requirements and must conform to the 2003 International Fire Code requirements for secondary containment.

ii. Underground Tanks. All new underground tanks located in or within two hundred and fifty feet of a CARA shall be designed and constructed so as to:

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

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

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

iii. Aboveground Tanks. New aboveground storage tanks located in or within two hundred and fifty feet of a CARA must be installed, used and maintained so as to prevent the release of any hazardous substance to the ground, ground waters, or surface water.

i. Agriculture. New agricultural activities in or within two hundred and fifty feet of a CARA shall use best management practices to prevent ground quality degradation from livestock waste. Existing agricultural activities in or within two hundred and fifty feet of a CARA shall be encouraged to use best management practices to prevent ground quality degradation from livestock waste.

j. Sewage Disposal. All residential, commercial or industrial alterations located in or within two hundred and fifty feet of a CARA and within one hundred and fifty feet of a public sewer system shall be connected to the sewer system.

k. Golf Courses. Golf course operations proposed in or within two hundred and fifty feet of a CARA shall be subject to a golf course maintenance plan using best management practices to protect ground water quality. The plan shall detail the proposed use of fertilizers, herbicides, pesticides, fungicides, or other maintenance agents, with projected application methods and schedules and measures to prevent pollution of ground water.

l. Commercial Vehicle Repair and Servicing. New commercial vehicle repair and servicing in or within two hundred and fifty feet of a CARA must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur. No dry wells shall be allowed in CARAs on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility development must be abandoned using techniques approved by the Washington State Department of Ecology prior to commencement of the proposed activity. Existing commercial vehicle repair and servicing facilities shall be encouraged to comply with the provisions of this subsection.

m. The uses listed in the table below shall be conditioned in accordance with the applicable state and federal regulations as necessary to protect critical aquifer recharge areas:

Statutes, Regulations, and Guidance Pertaining to Ground-Water-Impacting Activities	
Activity	**Statute-Regulation-Guidance**
Aboveground Storage Tanks	WAC 173-303-640
Animal Feedlots	Chapters 173-216 and 173-220 WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)
Chemical Treatment Storage and Disposal Facilities	WAC 173-303-182

Statutes, Regulations, and Guidance Pertaining to Ground-Water-Impacting Activities	
Activity	**Statute-Regulation-Guidance**
Hazardous Waste Generator (Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)	Chapter 173-303 WAC
Injection Wells	Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)
Oil and Gas Drilling	WAC 332-12-450, Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC
On-Site Sewage Systems (< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapters 15.54 and 17.21 RCW
Sawmills	Chapters 173-303 and 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	WAC 332-18-015
Underground Storage Tanks	Chapter 173-360 WAC
Waste Water Application to Land Surface	Chapters 173-200 and 173-216 WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture

C. Fish and Wildlife Habitat Conservation Areas.

1. Designation. The city of Chelan designates the following lands within the city and its urban growth area as fish and wildlife habitat conservation areas:

a. All priority habitat and species areas shown on the Washington Department of Fish and Wildlife's (WDFW) priority habitat and species maps, as amended;

b. All areas shown as wildlife habitat on the city's generalized critical areas map; and

c. All riparian and wildlife corridors shown on the city's open space map.

2. Classification. The city shall use the following two general classifications of fish and wildlife habitat conservation areas:

a. Priority Habitat and Species Areas. All priority habitat and species areas shown on the WDFW priority habitat and species maps (as amended) shall be classified as priority habitat and species areas.

b. Fish and Wildlife Habitat Conservation Areas of Local Importance. Designated fish and wildlife habitat conservation areas not shown on the WDFW priority habitat and species maps (i.e., any areas shown as wildlife habitat on the city's generalized critical areas map and any riparian and wildlife corridors shown on the city's open space map that are not priority habitat and species areas) shall be classified as fish and wildlife habitat conservation areas of local importance.

3. Critical Area Review.

a. Identification and Preliminary Evaluation.

i. At a minimum, the city's generalized critical areas map, the city's open space map, the PHS maps, and any critical areas study that identifies fish and wildlife habitat conservation areas in the vicinity of a development site shall be used to determine whether critical area review will be required for a proposed alteration, in completing a critical areas checklist, and in the city's review for the purpose of determining whether a critical areas study will be required.

ii. Because species populations and habitat systems are dynamic, agency consultation shall be required where activities are proposed within two hundred and fifty feet of a designated fish and wildlife habitat conservation area. The administrator shall consult with the WDFW and the U.S. Fish and Wildlife Service to determine the value of the site to federal or state identified endangered, threatened, sensitive, or candidate species; animal aggregations considered vulnerable by the WDFW; and those species of recreational, commercial, or tribal importance that are considered vulnerable by the WDFW. The administrator shall also consult with the WDFW to determine whether the proposed action may affect priority habitat.

iii. In reviewing proposed alterations, the city shall consider the fish and wildlife habitat conservation areas classification in establishing buffer widths, mitigation requirements, and permit conditions. Any decision regarding establishment of buffers, buffer widths, access restrictions, vegetation conservation and restoration requirements, mitigation requirements, or permit conditions outside of shoreline areas subject to the Shoreline Management Act shall be a Type IB procedure subject to Title 19. Lake Chelan and the Chelan River are shorelines subject to the Shoreline Management Act, and buffers have been assigned in the city's shoreline master program.

b. Critical Area Study. In addition to the general requirements for critical area studies, the required critical area study for any fish and wildlife habitat conservation areas shall include the following:

i. An evaluation of the presence or absence of regulated species. Consultation with the Washington State Department of Fish and Wildlife and review of the priority habitats and species map for the development site and the area within two hundred and fifty feet of the site shall be required in developing the evaluation.

ii. A description of the nature and extent of the association of regulated species with the habitat conservation area and any critical ecological processes (such as feeding, breeding, resting, nesting and dispersal) occurring within the study area.

iii. A description of regulated species habitat requirements, seasonal range dynamics and movement corridor requirements, and relative tolerance of human activities and the cumulative effects of the previous development or future development in the region.

iv. An analysis of habitat quality, based on relative species diversity and species richness, in the study area.

v. An evaluation of the proposed alteration for its influence on the above wildlife factors and on the measures that are recommended to mitigate the potential degradation of animal and plant populations, reproduction rates, and overall habitat quality over the long term.

vi. Mitigation and management recommendations, including the width of any buffer required to protect habitat and species and any requirements for restoration of the buffer. Any relevant WDFW priority habitat and species management recommendations shall be consulted in developing the mitigation and management recommendations and identifying habitat and species protection measures.

c. The information provided by a critical area study will augment the database for the Chelan area maintained by the city.

4. Development Standards. In addition to the general provisions of this Shoreline Master Program, this chapter, and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to the specified fish and wildlife habitat conservation areas.

a. The proposed alteration shall be evaluated for its influence on regulated fish and wildlife habitat and species and for its ability to mitigate the potential degradation of animal and plant populations, reproduction rates, and overall habitat quality over the long term.

b. The following standards shall apply in all fish and wildlife habitat conservation areas:

i. All projects shall comply with the applicable federal, state and local regulations regarding protection of species and habitats identified upon a site.

ii. , The administrator shall require the establishment of a buffer for all fish and wildlife habitat conservation areas inside and outside of shoreline jurisdiction except for Lake Chelan and the Chelan River when, based on a critical area study, such a buffer is needed to protect functions and values . Such buffers shall remain undisturbed or, where native vegetation has already been disturbed, shall be restored. Buffer widths shall reflect the classification and sensitivity of the habitat and the intensity of activity proposed, and shall be consistent with best available science.

iii. Buffer widths have been assigned to Lake Chelan and the Chelan River in the city's shoreline master program (SMP).

iv. Selective pruning of trees for safety is allowed in fish and wildlife habitat conservation area buffers. Where trees pose a significant safety hazard, they may be removed from such buffers. All other tree removal in such buffers shall be minimized through site design, and mitigated when the loss of a tree or trees results in loss of ecological function.

v. Selective pruning of trees for view protection may be allowed in fish and wildlife habitat conservation area buffers, subject to mitigation and enhancement based on an approved critical area study.

vi. Any approved alteration or development in a fish and wildlife habitat conservation area or its buffer shall be required to minimize impacts to native vegetation, including the composition and structure of the native plant community. Where disturbance is unavoidable, the applicant shall restore the area in accordance with the mitigation plan in the critical area study. New plantings shall be maintained in good growing condition and kept free of invasive weeds until well established.

vii. Subdivision of lands within fish and wildlife habitat conservation areas shall be subject to the following:

(A) All division of land shall be accomplished by planned development when a threatened or endangered species is verified to be present.

(B) All division of land shall be accomplished by planned development when twenty-five percent or more

of the site falls within one or more designated fish and wildlife conservation areas.

viii. Projects shall be encouraged to participate in habitat preservation projects, such as the WDFW's Backyard Wildlife Sanctuary Program.

c. The following additional standards shall apply in priority habitat and species areas and their buffers:

i. Any uses and activities allowed within priority habitat and species areas shall be limited to those that will not adversely affect or degrade the habitat and threaten critical ecological processes identified in the critical area study. Buildings, roads, agriculture and other uses requiring large land areas shall not be permitted within priority habitat and species areas. Where feasible, corridors of critical habitat that maintain connections between high-quality habitat units shall be preserved.

ii. No development approval shall be granted unless mitigation of adverse effects will be provided that will ensure continuation of baseline populations for all priority habitats and priority species.

iii. Retention of native vegetation shall be encouraged. Native vegetation shall not be removed except in accordance with an approved critical area study. In such cases clearing shall be limited to those areas necessary and disturbed areas shall be replanted with site-appropriate native vegetation.

iv. Access to priority habitat and species areas or their buffers may be restricted in accordance with the findings of a critical area study, mitigation plan, PHS management recommendations or other best available science. Access restrictions may include fencing and signs, as needed to ensure protection of habitat functions and values. Restrictions may be seasonal.

d. Provided that adequate regional populations are maintained, development may be allowed in fish and wildlife habitat conservation areas of local importance when only species and habitats of local importance will suffer population declines or interruption of migration routes or reproduction habits; provided, that endemic species are preserved.

D. Geologically Hazardous Areas. The GMA addresses five kinds of geologically hazardous areas: erosion hazard areas, landslide hazard areas, mine hazard areas, seismic hazard areas, and volcanic hazard areas. There are no known mine hazard areas or volcanic hazard areas in the city of Chelan or its UGA.

1. Designation and Classification. The city of Chelan designates the following lands within the city and its urban growth area as geologically hazardous areas, and classifies them as shown below:

a. Erosion hazard areas, as follows:

i. Steep slope areas, as defined in this chapter.

ii. Areas containing soils that have been identified in the Soil Survey of Chelan County, Washington, as "highly erodible land" and "potentially highly erodible land."

iii. Ravines, as defined in this chapter.

b. Landslide hazard areas, as defined in this chapter. For the purpose of determining whether a critical areas study will be required, the following areas shall be considered potential landslide hazard areas, subject to the critical areas review process in Section 1.030(C):

i. Areas designated as quaternary slumps, earthflows, mud flows, lahars, or landslides on maps published by the U.S. Geological Survey or the Washington State Department of Natural Resources.

ii. Any area with a combination of all of the following:

(A) Slopes greater than fifteen percent; and

(B) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying relatively impermeable sediment or bedrock; and

(C) Springs or ground water seepage.

iii. Any area potentially unstable as a result of rapid stream incision, stream bank erosion, channel migration, or undercutting by wave action.

iv. Slopes that are parallel or sub-parallel to planes of weakness in subsurface materials such as bedding planes, joint systems and fault planes.

v. Areas with slope gradients of forty percent or greater not composed of consolidated rock. These will be of at least ten feet of vertical relief.

c. Seismic Hazard Areas. Those areas in seismic design category D0 on the Seismic Design Category Map for Residential Construction in Washington, Sheet 2.

2. Critical Area Review.

a. Preliminary Evaluation.

i. Erosion Hazard Areas. In determining whether a critical area study is required for development in a known or potential erosion hazard area, the administrator shall, at a minimum, consider the generalized sensitive areas map and any geotechnical assessment, geotechnical report, hydrogeologic evaluation, channel migration zone study, or other special or detailed study that may identify such areas.

ii. Landslide Hazard Areas. In determining whether a critical area study is required for development in a known or potential

landslide hazard area, the administrator shall consider the generalized sensitive areas; relevant maps published by the U.S. Geological Survey or the Washington State Department of Natural Resources showing areas designated as quaternary slumps, earthflows, mud flows, lahars, or landslides; and any geotechnical assessment, geotechnical report, hydrogeologic evaluation, channel migration zone study, or other special or detailed study that may identify such areas.

iii. Seismic Hazard Areas. Until a site-specific map of seismic hazard areas has been adopted, the Seismic Design Category Map for Residential Construction in Washington, Sheet 2 shall be used to make a preliminary identification of such areas for the purposes of determining the need for a critical area study.

b. Critical Area Study. A required critical area study for geologically hazardous areas shall include a geotechnical report, prepared by a qualified professional, adequate to assess any risks of property damage, death, or injury resulting from development of the hazard area and establish mitigation measures. Said geotechnical report shall, at a minimum:

i. Provide a map at a scale of one inch equals two hundred feet showing:

(A) Contour lines at five-foot intervals; and

(B) The location of slopes between fifteen and twenty-nine percent, and slopes of thirty percent or greater; and

(C) Figures for area coverage of each slope category on the site.

ii. Describe site history, including any prior grading, soil instability, or slope failure.

iii. Determine the soil characteristics and geologic, topographic, and hydrologic conditions of the site that might be expected to create a significant hazard due to any geologic hazard and show the location of such hazardous areas. Specifically, include:

(A) Slope stability studies and opinion of slope stability;

(B) Erosion vulnerability of site;

(C) Suitability of on-site soil for fill;

(D) A summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and ground water information and an interpretation and analysis of the subsurface data; and

(E) Building limitations.

iv. Evaluate the proposed alteration's influence on the safety and stability of structures and any other risks of property damage, death, or injury resulting from development of the hazard area. Factors such as landscape irrigation, storm water generation and the effect of street conveyance and utility placement should be included in the review of potential landslide hazard areas.

v. Specify appropriate mitigation measures, including design, development, and construction measures that will be taken to eliminate or minimize identified risks. Specify any recommended setbacks and/or buffers. Include specific engineering recommendations for design and any geotechnical special provisions. Specifically, include:

(A) Proposed angles of cut and fill slopes and site grading requirements;

(B) Structural foundation requirements and estimated foundation settlements;

(C) Soil compaction criteria;

(D) Proposed surface and subsurface drainage; and

(E) Lateral earth pressures.

vi. Include a soil erosion control plan that minimizes erosion from all disturbed areas with preventive measures described in the City of Chelan Surface Water Design Manual (Chapter 5). Said measures may include silt fences, sedimentation ponds or other measures approved by the administrator. Revegetation shall include hydroseeding or other permanent revegetation measures. Permanent vegetation shall be established within one growing season.

c. If an applicant can demonstrate, through submittal of a geotechnical assessment, that no landslide or erosion hazards exist on site, the requirement for a geotechnical report may be waived by the administrator.

d. Where a geotechnical report has been prepared and approved by the city within the last five years for a specific site, and where the proposed activity and surrounding site conditions are unchanged, said report may be utilized and a new report may not be required. The applicant shall submit a geotechnical assessment detailing any changed environmental conditions associated with the site.

e. In the case of development of an individual lot within a subdivision for which a valid geotechnical report has been prepared and approved by the city within the last five years, and where the only changes in surrounding site conditions are development and mitigation as specified in the report, said report may be utilized and a new report may not be required. The applicant shall submit a geotechnical assessment detailing

any changed environmental conditions associated with the site and development affecting the site (e.g., roads, retaining walls, drainage structures, adjacent lots).

3. Development Standards.

a. Any development or other alteration that would pose a foreseeable risk to the public, public or private resources and facilities, or the natural environment is prohibited.

b. Erosion Hazard Areas.

i. In order to prevent or mitigate potential hazards to life, property or the natural environment, development in or adjacent to erosion hazard areas shall be discouraged.

ii. No public or private development will be permitted in erosion hazard areas where mitigation approved by the city and adequate to protect members of the public and public and private resources and facilities from injury, loss of life, property damage or financial losses due to erosion, landslide, seismic events or steep slope failure is not feasible.

iii. Excavation and grading shall be minimized in all erosion and steep slope areas and shall comply in full with Chelan Municipal Code Chapter 70 "Excavation and Grading" of the Uniform Building Code 1988 and as amended.

iv. Ravines and Ravine Sidewalls.

(A) Development in ravines shall be limited to erosion or sedimentation control features and roadway crossings that provide for adequate drainage and that have been approved by the public works director of the city.

(B) Proposed alterations that are adjacent to ravine sidewalls shall maintain a building setback from the top of the ravine of no less than twenty-five feet. All drainage within the setback shall be directed away from the ravine sidewall.

(C) A twenty-five-foot undisturbed buffer of native vegetation shall be established from the top, toe, and sides of all ravine sidewalls and bluffs.

(D) The administrator may approve a reduction in the width of the required buffer, to a minimum width of ten feet, when an approved critical area study demonstrates all of the following:

(1) The development proposal will result in minimal risk of soil instability; and

(2) Special mitigation measures regarding design, construction, and maintenance can reasonably be employed to minimize adverse

environmental impacts associated with the proposal; and

(3) The proposal represents minimal disruption of existing native vegetation.

(E) The administrator may require increased buffers if an approved critical area study indicates such increases are necessary to mitigate geologic hazards, or as otherwise necessary to protect the public health, safety, and welfare.

v. Development may occur in steep slope areas only after the following standards have been met:

(A) Development must be located to minimize disturbance and removal of vegetation and also to protect the most sensitive areas (including areas of erosive soils, areas at risk of erosion by wind or water, and areas of dense vegetation) and retain open space. The use of continuous greenbelt areas shall be encouraged; and

(B) Structures must be clustered where possible to reduce disturbance and maintain natural topographic character. Common access driveways shall be considered as a means of reducing construction disturbances; and

(C) Where possible, structures must conform to the natural contour of the slope and foundations must be tiered to conform to existing topography of the site.

vi. Unless a grading plan prepared by a licensed civil engineer is provided and approved by the administrator, disturbance of a development site shall generally not exceed the following for the slope categories indicated:

Maximum Amount of Slope that may be Disturbed	
Slope Category	**Factor**
Slopes 30 – 40% (60% of the site or more)	0.60
Slopes 40% + (also see landslide hazard area)	0.30

The overall amount of disturbance allowed on development sites which have any combination of the above slope categories shall be determined by the following formula:

[Square footage of the area within the slope category x slope factor] = Total amount of allowable disturbance for that slope classification.

The total amount of allowable disturbance for the site is the sum of all the allowable disturbance totals for each slope category.

c. Landslide Hazard Areas. Hillsides containing or within two hundred and fifty feet of landslide hazard areas shall be altered only

when the administrator concludes, based on environmental information provided by a qualified professional, that:

i. There will be no increase in surface water discharge or sedimentation to adjacent properties; and

ii. There will be no decrease in slope stability on adjacent properties; and

iii. Either:

(A) There is no hazard as proven by evidence of no landslide activity in the past in the vicinity of the proposed development and a quantitative analysis of slope stability indicates no significant risk to the proposed development or to the health or safety of humans or the environment of the subject property or adjacent properties; or

(B) The landslide hazard area can be modified or the proposed development can be designed so that the landslide hazard is eliminated or mitigated so that the site is as safe as a site without a landslide hazard; or

(C) The proposal is so minor as not to pose a threat.

d. Seismic Hazard Areas. All development activities in seismic hazard areas shall conform to the applicable building code.

E. Frequently Flooded Areas.

1. Designation. The city of Chelan designates the following lands within the city and its urban growth area (UGA) as frequently flooded areas:

a. All areas of special flood hazard indicated in the Flood Insurance Study for the City of Chelan, Washington, and the accompanying flood insurance rate maps, as revised or amended; and

b. Any areas of special flood hazard indicated in the Flood Insurance Study for Chelan County, Washington, and the accompanying flood insurance rate maps, as revised or amended, that are within the city or its UGA; and

c. All additional areas of special flood hazard identified by any special or detailed study.

2. Identification. Critical area review shall be required prior to development in any area that appears to be a frequently flooded area to determine whether the proposed development is within an area of special flood hazard. The critical area review shall be conducted using applicable existing flood insurance studies, flood hazard boundary maps, flood insurance rate maps, special or detailed studies, and information prepared by the Federal Emergency Management Agency.

3. Development Standards. All development must comply in full with the city's flood hazard areas provisions, Chapter 15.10, as those provisions may be amended.

1.060 Warning and disclaimer of liability.

The degree of hazard protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Catastrophic natural disasters can, and will, occur on rare occasions. This chapter does not imply that land outside the critical areas or activities permitted within such areas will be free from exposure or damage. This chapter shall not create liability on the part of the city, and officers or employees thereof, for any damages that result from the reliance on this chapter or any administrative decision lawfully made hereunder.

1.070 Administration.

The administrator is directed to administer the provisions of this chapter, including attaching such conditions to the granting of any approval under this chapter as may be deemed necessary to protect critical areas, and may appoint other employees as may be necessary to assist in its administration. The city shall adopt and revise, as required, such forms and instructions as are necessary or appropriate to serve the public and carry out the provisions of this chapter.

1.080 Civil penalties and enforcement.

The administrator shall have authority to enforce this chapter, and any rule or regulation adopted, and any permit, order or approval issued pursuant to this chapter against any violation or threatened violation thereof. The administrator is authorized to issue violation notices and administrative orders, levy fines, and/or institute legal actions in court. Recourse to any single remedy shall not preclude recourse to any of the other remedies. Each violation of this chapter, or any rule or regulation adopted, or any permit, permit condition, approval or order issued pursuant to this chapter, shall be a separate offense and in the case of a continuing violation, each day's continuance shall be deemed to be a separate and distinct offense. All costs, fees, and expenses, including reasonable attorney's fees incurred in connection with enforcement actions, may be recovered as damages against the violator.

Any person who undertakes any activity within a critical area without first obtaining an approval required by this chapter, except as specifically exempted, or any person who violates one or more conditions of any approval required by this chapter, or of any cease and desist order issued pursuant to this chapter, shall incur a civil penalty assessed for each violation. In the case of a continuing violation, each permit violation and each day of activity, without a required approval, shall be a separate and distinct violation. The civil penalty assessed shall be assessed at a rate of fifty dollars per day, per violation. The penalty provided shall be appealable to the city hearing examiner in accordance with procedures established in Section 2.15.030. Any appeal to the city hearing examiner shall be in writing and submitted within ten days of the applicant's receipt of the administrator's civil citation issued pursuant to this subsection. Any further appeal of the hearing examiner's decision shall be in accordance with the provisions of Section 1.040.

1.090 Criminal penalties.

As an alternative to any other judicial or administrative remedy provided in this chapter or by law or other ordinance, any person who willfully or knowingly violates any provision of this chapter, or any order issued pursuant to this chapter, or by each act of commission or omission procures, aids, or abets such violation is guilty of a misdemeanor and, upon conviction thereof, shall be punished as set forth in Section 1.24.010.

1.100 Critical areas review checklist.

The City's critical areas review checklist is adopted as a part of this chapter and must be submitted by an applicant and completed by the administrator in a timely manner as a part of all proposed alterations in the vicinity of known or potential critical areas.

CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION
CITY OF ENTIAT

Chapters

Chapter 1 - GENERAL PROVISIONS

Sections:

1.010 Purpose.

The purpose of this chapter is to provide for reasonable protection of the natural environment and the general public health, safety and welfare, and satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221.

1.020 Applicability.

(1) When a chapter reference is used, it shall be inclusive of all of Appendix B.
(2) The provisions of this chapter shall apply to all development activities within the shoreline jurisdiction of the city's incorporated limits. Any development authorized to alter the condition of any land, water or vegetation; or to alter or construct any building, structure or improvement shall be in compliance with the requirements of this chapter.
(3) When the provisions of this chapter or any other provisions of the city's municipal codes are in direct conflict with each other or with other federal or state regulations, the

provision that is the most protective of shoreline resources shall prevail, when consistent with SMA policy.

1.030 Reference maps and inventories.

The distribution of critical areas within the city are described and displayed in reference materials and on maps maintained by the city. These reference materials, in the most current form, are intended for general information only and do not depict site-specific designations. They are intended to advise the city, applicants and other participants in the development permit review process that a critical area may exist and that further study, review and consideration may be necessary. These reference materials shall include but are not limited to the following:

(1) Maps.

(a) City of Entiat Critical Area Reference Map: Wetland Areas;

(b) City of Entiat Critical Area Reference Map: Fish and Wildlife Habitat Areas;

(c) City of Entiat Critical Area Reference Map: Geologically Hazardous Areas;

(d) City of Entiat Critical Area Reference Map: Frequently Flooded Areas;

(e) Flood Insurance Rate Map Community Panel No. 530015 0400 B (1989);

(f) U.S. Fish and Wildlife Service National Wetlands Inventory;

(g) Washington State Department of Fish and Wildlife Priority Habitats and Species Maps;

(h) U.S.G.S. 7.5 Minute Series Topographic Quadrangle Maps; and

(i) Aerial photos.

(2) Documents.

(a) Approved special reports previously completed for a subject property;

(b) City of Entiat comprehensive plan;

(c) City of Entiat shoreline master program;

(d) NRCS Soil Survey Maps for Chelan County Area;

(e) Federal Wetlands Delineation Manual (1987);

(f) Washington State Wetlands Identification and Delineation Manual (DOE, most recent publication);

(g) Washington State Wetlands Rating System for Eastern Washington (DOE, most recent publication).

1.040 Disclosure.

The presence of any known or suspected critical areas on or within 100 feet of property that is the subject of a development permit shall be identified by the applicant in the application materials submitted to the city.

1.050 Review process.

Provisions of this chapter shall be considered and applied appropriately during development permit application reviews within shoreline jurisdiction initiated under applicable city ordinances and regulations governing land use and building activities, including without limitation EMC Title 14, Permit Review Procedures; EMC Title 16,

Subdivisions; EMC Title 18, Zoning; Chapter 17.04 EMC, State Environmental Policy Act Implementation, and the city's shoreline master program. Review of development within frequently flooded areas, aquifer recharge areas, geologically hazardous areas, fish and wildlife habitat conservation areas, and wetlands and any associated buffers within shoreline jurisdiction that do not require a development permit application shall be subject to the provisions of Section 1.080.3 of Appendix B.

1.060 Mitigation, maintenance, monitoring and contingency.

(1) Mitigation, maintenance, monitoring and contingency plans shall be implemented by the developer to protect critical areas and their buffers prior to the commencement of any development activities.

(2) The property owner shall be responsible for reporting to the city and undertaking appropriate corrective action when monitoring reveals a significant deviation from predicted impacts or a failure of mitigation or maintenance measures.

1.070 Surety.

If a development proposal is subject to mitigation, maintenance or monitoring plans, an assurance device or surety may be required by the city in accordance with the Entiat Municipal Code.

1.080 Special reports.

(1) In order to maintain and protect critical areas, as well as to assist in classifying and designating such areas, site-specific environmental information will be required when evaluating a development proposal.

(2) Special reports shall be submitted for review and approval in conjunction with development applications when required by the city. Each chapter that deals with a specific critical area also contains a description of when special reports may be required. The city shall establish and maintain a list of qualified consultants for the different types of reports, plans, studies, etc.

(3) When no other application review process is required, final special reports shall be reviewed and approved by the city according to the provisions governing limited administrative reviews.

(4) The preparations of special reports or tests required by this chapter are the responsibility of the applicant for a development permit. Costs incurred by the city to engage technical consultants or for staff review and interpretation of data and findings submitted by or on behalf of the developer or applicant shall be reimbursed by the applicant in accordance with a schedule adopted by the city.

(5) The city, in conjunction with the city engineer, where applicable, may waive the requirement for a special report(s) in the following instances:

(a) If the proposed development is a minor development that will not cause adverse impacts;

(b) There is adequate, existing information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigation measures; or

(c) If the city determines, after a site visit, that the proposal is not located within a critical area, even though it may appear on the reference maps identified in Chapter 1.030.

1.090 Drainage and erosion control plan.

(1) Upon the city's review and approval of the drainage and erosion control plans, the identified measures to prevent contaminated stormwater from being discharged off the construction site must be in place prior to any clearing, grading or construction.

(2) All drainage and erosion control plans shall address methods to minimize and contain soil within the project boundaries during construction and to provide for stormwater drainage from the site and its surroundings during and after construction. Best management practices (BMPs) must be used to prevent any sediment, oil, gas, pesticide-contaminated soil or other pollutants from entering surface or groundwater.

(3) All drainage and erosion control plans shall be prepared using the Type 2 SCS model, taking into account a storm event equal to or exceeding two inches of rainfall in 90 minutes.

1.100 Grading and excavation plan.

All grading and excavation plans shall meet the standards and requirements set forth in Appendix Chapter 33 of the Uniform Building Code, and shall contain the following information:

(1) A cover sheet showing the location of work, the name and address of the owner and the engineer who prepared the plans;

(2) General vicinity of the proposed site;

(3) Property limits and accurate contours of existing ground and details of terrain and area drainage. Contour intervals for slopes 10 percent or less shall be no more than two feet, and intervals for slopes exceeding 10 percent shall be no more than five feet;

(4) Limits of proposed excavation and fill sites, finished contours to be achieved by the grading, and proposed drainage channels to offset stormwater impacts during grading and excavation (and related construction);

(5) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as part of the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains;

(6) Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners which are within 15 feet of the property;

(7) Recommendations included in a soils engineering report and the engineering geology report shall be incorporated in the grading plans or specifications. When approved by the building official, specific recommendations contained in the soils

engineering report and the engineering geology report, which are applicable to grading, may be included by reference;

(8) The dates of the soils engineering and engineering geology reports together with the names, seals, license numbers, addresses and phone numbers of the firms and/or individuals who prepared the reports.

1.110 Definitions.

(1) Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions of this Program and supplemented herein. Except where specifically defined in this chapter or Chapter 8 of the SMP, all words used in this division shall carry their customary meanings. Words used in the present tense include the future; the plural includes the singular; the word "shall" is always mandatory; the word "may" denotes a use of discretion in making a decision; the words "used" or "occupied" shall be considered as though followed by the words "or intended, arranged or designed to be used or occupied." The definition of any word or phrase not listed in the definitions that is in question when administering this chapter shall be defined from one of the following sources, which shall be utilized by finding the desired definition from source (a), but if it is not available there, then source (b) may be used and so on. The sources are as follows:

(a) This Shoreline Master Program

(b) The Shoreline Management Act or the Shoreline Master Program Guidelines;

(c) Any other city resolution, ordinance, code, regulation or formally adopted comprehensive plan, or other formally adopted land use plan;

(d) Legal definitions from Washington common law or a law dictionary;

(e) The common dictionary.

(2) The following definitions shall apply:

(a) "Buffer" means an area contiguous with a critical area that is required for the integrity, maintenance, function and structural stability of the critical area.

(b) "Classification" means defining value and hazard categories to which critical areas will be assigned.

(c) "Critical areas" means and includes the following areas and ecosystems:

(i) "Erosion hazard areas" means areas with soils, as identified by the NRCS Soil Survey of Chelan Area, Washington, that may experience "severe" to "very severe" erosion hazard.

(ii) "Fish and wildlife habitat areas" means those areas identified as being of critical importance to maintenance of fish, wildlife and plant species, including: areas with which endangered, threatened and sensitive species have a primary association; habitats and species of local importance; naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat; lakes, ponds, streams and rivers planted with game fish by a governmental or a tribal entity; state natural area preserves and natural resource conservation areas.

(iii) "Frequently flooded areas" means lands in the floodplain subject to a one percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and the like.

(iv) "Geologically hazardous areas" means areas that because of their susceptibility to erosion, sliding, earthquake or other geological events, are not suited to siting commercial, residential or industrial development consistent with public health or safety concerns.

(v) "Landslide hazard areas" means:

(A) Any area with a combination of: slopes greater than 15 percent; impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominately sand and gravel); springs or groundwater seepage;

(B) Any area that has shown movement during the Holocene epoch (10,000 years ago to the present), or that is underlain by mass wastage debris of that epoch;

(C) Any area potentially unstable as a result of rapid stream incision or stream bank erosion.

(vi) "Seismic hazard areas" are areas subject to severe risk of earthquake damage as a result of seismically induced settlement or soil liquefaction. These conditions occur in areas underlain by cohesionless soils of low density, usually in association with a shallow groundwater table.

(vii) "Wetland" or "wetlands" means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands.

(d) "Major development" means an activity that is required to obtain a permit from the city that is classified by EMC Title 14, Permit Review Procedures, as a Type II or Type III review process.

(e) "Minor development" means an activity that is required to obtain a permit from the city that is classified by EMC Title 14, Permit Review Procedures, as a Type I review process.

1.120 Enforcement.

The provisions of the Shoreline Management Permit and Enforcement Procedures (WAC 173-27) shall be applied and interpreted for the enforcement of violations of the provisions contained within these chapters.

Chapter 2 - WETLANDS

Sections:

2.010 Permitted uses and activities.

Uses and activities allowed within designated wetlands or associated wetland buffers are those uses permitted by this Shoreline Master Program, subject to the provisions of this chapter.

2.020 Wetland boundary survey and ranking evaluation.

(1) A wetland boundary survey to identify and delineate a wetland, and a wetland ranking evaluation shall be conducted by a biologist who is knowledgeable of wetland conditions within north central Washington and who derives his/her livelihood from employment in this occupation. The wetland boundary shall be field staked by the biologist and surveyed by a land surveyor for disclosure on all final plats, maps, etc.

(2) The *Washington State Wetlands Identification and Delineation Manual* (Ecology Publication #96-94, or as revised and approved by Ecology) and the *Washington State Wetlands Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology) shall be used as the basis for identifying and delineating the wetland boundary, and rating the wetland.

(3) The city may waive the requirement for the survey for minor development as defined in this chapter, if:

(a) The proposed development is no closer to the wetland area(s) than the largest required buffer, as determined through a site assessment conducted by a qualified individual;

(b) There is adequate information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigating measures; and

(c) The applicant provides voluntary deed restrictions that are approved by the city.

(4) The wetland boundary and wetland buffer area shall be identified on all plats, maps, plans and specifications submitted for the project.

(5) An evaluation of any unranked wetland is necessary when there is a proposed development or activity to be located adjacent to, or within an area containing a wetland.

(6) The wetland ranking evaluation shall be used to determine if the wetland is a Level 1 Critical or a Level 2 Awareness wetland. It shall evaluate those factors identified in Chapter 2.020 that are used to distinguish between these categories, and it shall take into consideration historical information on the area in question, the dynamic nature of wetlands and an evaluation of entire wetland complexes, as opposed to isolated wetlands on individual parcels.

2.030 Classification.

(1) The city may use the following information sources as guidance in identifying the presence of potential wetlands and the subsequent need for a wetland delineation study:

(a) All sources identified in EMC 1.030;

(b) Hydric soils, soils with significant soil inclusions, and "wet spots" identified within the Chelan County area soil survey;

(c) Previous wetland ranking evaluation; and

(d) On-site inspection.

(2) Wetlands shall be classified according to the following system:

(a) Level 1: Critical Wetlands. These wetlands include those determined to be Category I or Category II wetlands according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology) .

(b) Level 2: Awareness Wetlands. These wetlands will include those determined to be Category III or Category IV wetlands according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology).

2.040 Wetland Buffers

(1) Buffer Requirements. The standard buffer widths in Table 2.1 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for eastern Washington.

(a) The use of the standard buffer widths requires the implementation of the measures in Table 2, where applicable, to minimize the impacts of the adjacent land uses.

(b) If an applicant chooses not to apply the mitigation measures in Table 2.2, then a 25% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 99.75 foot buffer without them (eg.75ft X 1.25% =93.75).

(c) 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.

(d) Additional buffer widths are added to the standard buffer widths. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 150 feet (75 + 75).

Table 2.1 Wetland Buffer Requirements Eastern Washington

Wetland Category	Standard Buffer Width	Additional buffer width if wetland scores 21-25 habitat points	Additional buffer width if wetland scores 26-29 habitat points	Additional buffer width if wetland scores 30-36 habitat points
Category I: Based on total score	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I: Forested	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I: Bogs	190 ft	NA	NA	NA
Category I: Alkali	150 ft	N/A	NA	NA
Category I: Natural Heritage Wetlands	190 ft	N/A	NA	NA
Category II: Based on total score	75 ft	Add 15 ft	Add 45 ft	Add 75ft
Category II: Vernal pool	150	NA	NA	NA
Category II: Forested	75 ft	Add 15 ft	Add 45 ft	Add 75ft
Category III (all)	60 ft	Add 30 ft	Add 60 ft	NA
Category IV (all)	40 ft	NA	NA	NA

Table 2.2 Required measures to minimize impacts to wetlands
(Measures are required, where applicable to a specific proposal)

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

Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per PSAT publication on LID techniques)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

(e) Increased Wetland Buffer Area Width. Buffer widths shall be increased on a case-by-case basis as determined by the Administrator 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:

(i) 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; or

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

(iii) The adjacent land has minimal vegetative cover or slopes greater than 30 percent.

(f) Buffer averaging to *improve wetland protection* may be permitted when **all** of the following conditions are met:

(i) The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded

emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower-rated area.

(ii) 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 areas report from a qualified wetland professional.

(iii) The total area of the buffer after averaging is equal to the area required without averaging.

(iv) The buffer at its narrowest point is never less than either ¾ 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.

(2) To facilitate long-range planning using a landscape approach, the Administrator may identify and pre-assess wetlands using the rating system and establish appropriate wetland buffer widths for such wetlands. The Administrator will prepare maps of wetlands that have been pre-assessed in this manner.

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

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

(5) Buffer Maintenance. Except as otherwise specified or allowed in accordance with this chapter, 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 (Section 1.070).

(6) Impacts to Buffers. Requirements for the compensation for impacts to buffers are outlined in Section 2.080 of this chapter.

(7) Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

(8) Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

(a) Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.

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

(i) Walkways and trails, provided that those pathways 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 twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable.

(ii) Wildlife-viewing structures.

(c) Educational and scientific research activities.

(d) Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.

(e) 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.

(f) Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary, provided that the drilling does not interrupt the ground water 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 ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

(g) Enhancement of a wetland buffer through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal. 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. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

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

(i) No other location is feasible; and

(ii) The location of such facilities will not degrade the functions or values of the wetland; and

(iii) Stormwater management facilities are not allowed in buffers of Category I or II wetlands.

(i) Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

(9) Signs and Fencing of Wetlands and Buffers.

(a) Temporary markers. The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary “clearing limits” fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the

Administrator prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

(b) Permanent signs. As a condition of any permit or authorization issued pursuant to this chapter, the Administrator 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 (1) per lot or every fifty (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 Administrator:

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

(ii) The provisions of Subsection (i) may be modified as necessary to assure protection of sensitive features or wildlife.

(c) 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 so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

2.050 Designation.

All existing lands, shorelands and waters of the city classified according to the provisions contained in this chapter, as determined by the city in accordance with the provisions of Section 2.020 and 2.030, are designated as wetlands.

2.060 Application requirements.

Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures to wetlands may be required if deemed necessary.

(1) Minor Development. Projects processed by the city according to the provisions governing Type I permits within a wetland or wetland buffer shall disclose, at a minimum, the following information on a site plan drawn to scale:

(a) The location and boundaries of the wetland;

(b) The location and dimensions of all existing and proposed buildings, roads and other improvements, and their physical relationship to the wetland and associated buffers; and

(c) The location and type of any proposed buffers, including the identification of any other protective measures.

(2) Major Development. Projects processed by the city according to the provisions governing Type II and Type III permits within a wetland or its buffer shall provide the following information, in addition to the information described in subsection (1) of this section:

(a) Wetland boundary survey and ranking evaluation as defined within this chapter;

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

(c) Wetland management and mitigation plan as defined within this chapter;

(d) A drainage and erosion control plan as defined within this chapter; and

(e) A grading and excavation plan as defined within this chapter.

2.070 Wetland management and mitigation plan.

(1) A wetland management and mitigation plan shall be prepared by a biologist who is knowledgeable of wetland conditions within north central Washington and who derives his/her livelihood from employment in this occupation.

(2) The wetland management and mitigation plan shall demonstrate, when implemented, that there shall be no net loss of wetland area or the ecological functions and values of the wetland, including lost time when the wetland does not perform impacted functions.

(3) The wetland management and mitigation plan shall identify the existing functions and values of the wetland areas, provide an assessment of the impacts from the project and how impacts from the proposed project shall be mitigated, as well as identifying the necessary monitoring and contingency actions for the continued maintenance of the classified wetland and its associated buffer.

(4) Wetland and Buffer Mitigation Ratios: Where wetlands are altered, the applicant shall meet the minimum requirements of this section. When it is proposed to alter or eliminate a wetland, the applicant shall be required to replace the affected wetland. A reduction in overall wetland area is allowed if approved by the city. If off-site mitigation measures are determined to be appropriate, off-site mitigation shall be located in the same watershed as the development, within Entiat or Chelan County. The recommended ratios for replacement and/or compensation for Category I, II, III, and IV wetlands are as follows:

Table 2.3 Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement	Preservation
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Case-by-case	10:1

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement	Preservation
Category I: Mature Forested	6:1	12:1	24:1	24:1
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II:	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

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

(5) The wetland management and mitigation plan shall contain a report that includes, but is not limited to, the following information:

(a) Vicinity maps, regional 1:24,000 and local 1:4,800;

(b) Location maps at a scale sufficient to depict all features of the site;

(c) A map or maps indicating the boundary of the identified wetland; the width and length of all existing and proposed structures, utilities, roads, easements; wastewater and stormwater facilities; adjacent land uses, zoning districts and comprehensive plan designations;

(d) A description of the proposed project including the nature, density and intensity of the proposed development and the associated grading, structures, utilities, etc., in sufficient detail to allow analysis of such land use change upon the identified wetland;

(e) A detailed discussion of surface and subsurface hydrologic features both on and adjacent to the site where the city determines appropriate;

(f) A description of the vegetation in the classified wetland, on the overall project site and adjacent to the site;

(g) A detailed description of the proposed project's effect on the classified wetland, and a discussion of any federal, state or local management recommendations which have been developed for the area;

(h) A discussion of the following mitigation alternatives as they relate to the proposal. Actions are listed in the order of preference:

(i) Avoid the impact altogether by not taking a certain action or parts of an action,

(ii) Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts,

(iii) Rectify the impact by repairing, rehabilitating or restoring the affected environment,

(iv) Reduce or eliminate the impact over time by preservation and maintenance operations,

(v) Compensate for the impact by replacing, enhancing or providing substitute resources or environments,

(vi) Monitor the required compensation and take remedial or corrective measures when necessary.

(i) A plan by the applicant that explains how any adverse impacts created by the proposed development will be mitigated, including without limitation the following techniques:

(i) Establishment of buffer zones,

(ii) Preservation of critically important plants and trees,

(iii) Limitation of access to the classified wetland area,

(iv) Seasonal restriction of construction activities,

(v) Establishment of a timetable for periodic review of the plan;

(vi) A detailed discussion of on-going management practices which will protect the classified wetland after the project site has been fully developed, including proposed monitoring, performance standards, contingency, maintenance and surety programs.

2.080 General standards.

The following minimum standards shall apply to all development activities occurring within designated wetlands and/or their buffers.

(1) Level 1 Critical wetlands will be left undisturbed, unless the development proposal involves appropriate mitigation and enhancement measures as determined on a site-specific basis.

(2) Level 2 Awareness wetlands will be afforded the maximum amount of protection possible through appropriate development techniques such as establishing critical area buffers, access limitations, enhancement of the wetland, etc. To ensure long-term success of a project containing a wetland, a comprehensive wetland mitigation plan will be submitted to the city for its approval. Such plans will provide for sufficient monitoring and contingencies to ensure natural wetland persistence.

(3) Compensatory mitigation shall address the functions affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions.

(4) Proposals for restoration, creation or enhancement of wetlands will be coordinated with appropriate resource agencies providing recommendations to promote adequate design.

(5) Preference of Mitigation Actions. Methods to achieve compensation for wetland functions shall be approached in the following order of preference:

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

(b) Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. 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.

(c) Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is

less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

(d) Preservation. 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. 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) Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species.

(ii) There is no net loss of habitat functions within the watershed or basin.

(iii) 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.

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

All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

(6) Activities or uses that would strip the shoreline of vegetative cover, cause substantial erosion or sedimentation, or significantly, adversely affect aquatic life will be prohibited.

(7) Type and Location of Compensatory Mitigation. Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the same stream reach or sub-basin. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

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

(c) 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; or

(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 bank's certification.

(d) 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.

(8) Timing of Compensatory Mitigation.

(a) 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.

(b) The Administrator 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. The justification must be verified and approved by the City.

2.090 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in 2.080 and other provisions of this Master Program.

(1) Road Repair and Construction. When no other practical alternative exists, public or private road repair, maintenance, expansion or construction may be authorized within a wetland buffer, subject to the following minimum standards:

(a) The road shall serve multiple properties;

(b) No unmitigated impacts to the designated wetland or buffer area shall result from the repair, maintenance, expansion or construction of any public or private road;

(c) The road shall provide for the location of public utilities, pedestrian or bicycle easements, viewing points, etc.; and

(d) Road repair and construction shall be the minimum necessary to provide safe traveling surfaces.

(2) Major Developments. All major developments processed by the city according to the provisions governing a Type II or Type III permit review authorized within a wetland buffer shall comply with the following minimum standards:

(a) Inundated and/or submerged lands shall not be used in calculating minimum lot area for proposed lots;

(b) Only 50 percent of the total wetlands on the property, other than inundated and/or submerged lands, shall be used in calculating minimum lot area for proposed lots. All wetland buffers may be included in the calculation of minimum lot area for proposed lots;

(c) All land divisions shall disclose the presence on each residential lot one building site, including access, that is suitable for development and which is not within the designated wetland or its associated buffer;

(d) All designated wetland areas and their proposed buffers shall be clearly identified on all final plats, maps, documents, etc.;

(e) Designated wetlands and their associated wetland buffers shall be designated and disclosed on the final plats, maps, documents, etc., as open space tracts, nonbuildable lots and buffer areas or common areas, with ownership and control transferred to a homeowner's association. Associated wetland buffers may alternatively be designated and disclosed on the final plats, maps, documents, etc., as an easement or covenant encumbering the property.

(3) Surface Water Management. When no other practical alternative exists, surface water management activities may be authorized within a wetland, subject to the following minimum standards:

(a) Wetlands may not be used for retention/detention facilities.

(b) New surface water discharges to wetlands from detention facilities, pre-settlement ponds, or other surface water management structures may be authorized, subject to all of the following criteria:

(i) The discharge does not increase the rate of flow into or the hydro-period of the wetland above the natural rates;

(ii) All surface water discharged from impervious surfaces shall be treated prior to entering a wetland or buffer; and

(iii) The water quality of the wetland is not decreased.

(4) Trails and Trail-Related Facilities. Construction of public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, viewing platforms and campsites, may be authorized within a designated wetland buffer, subject to the following minimum standards:

(a) Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;

(b) Trail facilities shall minimize the removal of trees, shrubs, snags and important forest and wildlife habitat;

(c) Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of wildlife habitat and/or critical characteristics of the designated wetland and wetland buffer;

(d) When trails within wetland buffers cannot be located as described in (a) above, trail facilities shall be located in the outer 25 percent of the wetland buffer away from the wetland edge, as established by the approved wetland boundary survey; and

(e) All facilities shall be constructed with materials complimentary to the surrounding environment.

(5) Utilities. When no other practical alternative exists, construction of utilities within a wetland buffer may be authorized, subject to the following minimum standards:

(a) Utility corridors shall be jointly used;

(b) Corridor construction and maintenance shall protect the designated wetland buffer, and shall be aligned to avoid cutting trees greater than six inches in diameter at breast height when possible;

(c) No pesticides, herbicides or other hazardous or toxic substances shall be used;

(d) Utility corridors, including maintenance roads authorized by the city, shall be located at least a distance equal to the width of the utility corridor away from the wetland edge;

(e) Corridors shall be revegetated to pre-construction densities with appropriate native vegetation immediately upon completion of construction, or as soon thereafter as possible given seasonal growing constraints. The utility purveyor shall provide an assurance device or surety in accordance with the Entiat Municipal Code that ensures such vegetation survives;

(f) Any additional corridor access for maintenance shall be provided as much as possible at specific points rather than by parallel roads. If parallel roads are necessary they shall be no greater than 15 feet in width, and shall be contiguous to the location of the utility corridor on the side opposite the wetland;

(g) Construction of sewer lines within a designated wetland buffer that are necessary to meet state and/or local health code requirements shall not adversely impact the function and quality of the designated wetland buffer.

Chapter 3 - FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Sections:

3.010 Permitted uses and activities.

Uses and activities allowed within designated fish and wildlife habitat conservation areas are those uses permitted by this Shoreline Master Program, subject to the provisions of this chapter.

3.020 Classification.

(1) All fish and wildlife habitat conservation areas shall be classified by the city to reflect the relative function, value and uniqueness of the habitat area as established through an approved habitat ranking evaluation submitted by the applicant for any development permit. The city may use the following information sources as guidance in identifying the presence of potential fish and wildlife habitat conservation areas and the subsequent need for a habitat boundary survey:

(a) All sources identified in Section 1.030;

(b) The city shoreline master program;

(c) Washington Department of Fish and Wildlife priority habitat and species maps;

(d) Previous habitat boundary surveys; and

(e) On-site inspection.

(2) Fish and wildlife habitat conservation areas shall be classified according to the following system:

(a) Level 1 Critical. These habitat areas that may be significantly disrupted by development in the immediate vicinity. Critical habitat may include winter ranges, migration routes, nesting sites, perches and wetlands, riparian, aquatic and upland habitat areas. These habitats are designated as critical habitat on the City of Entiat Critical Area Reference Map: Fish and Wildlife Habitat Areas. Aquatic habitats and their associated riparian or upland habitat areas that are designated as Shorelines are regulated under previous chapters of this Master Program, not this chapter of Appendix B. Only non-shoreline aquatic habitats located in shoreline jurisdiction are regulated under this chapter.

(b) Level 2 Awareness. These are habitat areas are those surrounding or adjacent to designated Level 1 Critical areas that, if disturbed, could impact the Level 1 area. These habitats are designated as awareness habitat on the City of Entiat Critical Area Reference Map: Fish and Wildlife Habitat Areas.

3.030 Designation.

All existing areas of the city classified according to the provisions contained in this chapter, as determined by the city, are designated as fish and wildlife habitat

conservation areas. Only those fish and wildlife habitat conservation areas located in shoreline jurisdiction are subject to this chapter and this Shoreline Master Program.

3.040 Application requirements.

Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures to fish and wildlife habitat conservation areas may be required if deemed necessary.

(1) Minor Development. Projects processed by the city according the provisions governing Type I permits within a fish or wildlife habitat conservation area or its buffer shall disclose, at a minimum, the following information on a site plan drawn to scale:

(a) The location and boundaries of the habitat conservation area;

(b) The location and dimensions of all existing and proposed buildings, roads and other improvements, and their physical relationship to the habitat conservation area;

(c) The location and type of any proposed buffers, including the identification of any other protective measures.

(2) Major Development. Projects processed by the city according to the provisions governing Type II or Type III permits within a fish or wildlife habitat conservation area or its buffer shall provide the following information, in addition to the information described in subsection (1) of this section:

(a) Habitat boundary survey and ranking evaluation as defined in this division;

(b) Habitat management and mitigation plan as defined in this division;

(c) A drainage and erosion control plan as defined in this division; and

(d) A grading and excavation plan as defined in this division.

3.050 Habitat boundary survey and ranking evaluation.

(1) A wildlife habitat boundary survey and ranking evaluation shall be conducted by a wildlife biologist who is knowledgeable of wildlife habitat within north central Washington and who derives his/her livelihood from employment in this occupation. The wildlife habitat boundary shall be field staked by the biologist and surveyed by a land surveyor for disclosure on all final plats, maps, etc.

(2) The Management Recommendations for Washington's Priority Habitats and Species may be used as a tool for identifying and delineating the habitat boundary.

(3) The city may waive the requirement for the survey for minor development as defined in this chapter, if:

(a) The proposed development is not within the extended proximity of the associated habitat;

(b) There is adequate information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigating measures; and

(c) The applicant provides voluntary deed restrictions that are approved by the city.

(4) An evaluation of any unranked fish and wildlife habitat is necessary when there is a proposed development or activity to be located adjacent to, or within an area containing a wetland.

(5) The evaluation shall be used to determine if the fish and wildlife habitat is a Level 1 Critical or a Level 2 Awareness fish and wildlife habitat conservation area. It shall evaluate those factors identified in Chapter 3 that are used to distinguish between these categories, and it shall take into consideration historical information on the area in question, the dynamic nature of habitat conservation areas and an evaluation of the entire habitat conservation area, as opposed to isolated indicators on individual parcels.

(6) The wildlife habitat boundary and associated buffer shall be identified on all plats, maps, plans and specifications submitted for the project.

3.060 Fish/wildlife habitat management and mitigation plan.

(1) A fish/wildlife habitat management and mitigation plan shall be prepared by a wildlife biologist who is knowledgeable of wildlife habitat within north central Washington and who derives his/her livelihood from employment in this field.

(2) The fish/wildlife habitat management and mitigation plan shall demonstrate, when implemented, that there shall be no net loss of ecological function of habitat.

(3) The fish/wildlife habitat management and mitigation plan shall identify how impacts from the proposed project shall be mitigated, as well as the necessary monitoring and contingency actions for the continued maintenance of the classified habitat conservation area and its associated buffer.

(4) The fish/wildlife habitat management and mitigation plan shall contain a report containing, but not limited to, the following information:

(a) Vicinity maps, regional 1:24,000 and local 1:4,800;

(b) Location maps at a scale sufficient to depict all features of the site;

(c) A map or maps indicating the boundary of the habitat conservation areas; the width and length of all existing and proposed structures, utilities, roads, easements; wastewater and stormwater facilities; adjacent land uses, zoning districts and comprehensive plan designations;

(d) A description of the proposed project including the nature, density and intensity of the proposed development and the associated grading, structures, roads, easements, wastewater facilities, stormwater facilities, utilities, etc., in sufficient detail to allow analysis of such land use change upon the habitat conservation area;

(e) A detailed discussion of surface and subsurface hydrologic features both on and adjacent to the site where the city determines appropriate;

(f) A description of the vegetation in the habitat conservation area, on the overall project site and adjacent to the site;

(g) A detailed description of the proposed project's effect on the habitat conservation area, and a discussion of any federal, state or local management recommendations which have been developed for the species or habitats in the area;

(h) A discussion of the following mitigation alternatives as they relate to the proposal:

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

(ii) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts,

(iii) Rectifying the impact by repairing, rehabilitating or restoring the affected environment,

(iv) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;

(i) A plan by the applicant that explains how any adverse impacts created by the proposed development will be mitigated, including without limitation the following techniques:

(i) Establishment of buffer zones,

(ii) Preservation of critically important plants and trees,

(iii) Limitation of access to the habitat conservation area,

(iv) Seasonal restriction of construction activities,

(v) Establishment of a timetable for periodic review of the plan;

(j) A detailed discussion of on-going management practices which will protect the habitat conservation area after the project site has been fully developed, including proposed monitoring, contingency, maintenance and surety programs.

3.070 General standards.

The following minimum standards shall apply to all development activities occurring within designated habitat conservation areas and/or their associated buffers. For minor developments within a Level 2 Awareness area, as defined herein, the city may waive the requirements for management and mitigation plans where it is determined by the city that there will be little or no impact to the habitat conservation area.

(1) Level 1 Critical habitat conservation areas will be left undisturbed, unless the development proposal involves appropriate mitigation and enhancement measures, as determined on a site-specific basis.

(2) Level 2 Awareness habitat conservation areas will be afforded the maximum amount of protection possible through appropriate development techniques such as establishing critical area buffers, access limitations, enhancement of the habitat conservation areas, etc. To ensure long-term success of a project containing a habitat conservation area, a comprehensive habitat management and mitigation plan will be submitted to the city for its approval. Such plans will provide for sufficient monitoring and contingencies to ensure natural habitat conservation area persistence.

(3) Whenever possible, the maximum amount of vegetation will be maintained in its natural state and will be disturbed only as minimally necessary for the development.

(4) Riparian vegetation will not be removed unless there are no other alternatives available. When it is necessary, only those areas of vegetation that are absolutely

unavoidable may be cleared, and shall be revegetated with natural riparian vegetation as soon as possible.

(5) Revegetation of disturbed areas which re-establishes desirable native plants adapted to the site that enhance applicable fish and wildlife populations will be, at a minimum, encouraged, as specified in the conditions for approval of the development. Said revegetation will be maintained in good growing condition, as well as being kept free of noxious weeds.

(6) When appropriate, fencing standards that protect wildlife, as well as providing for the operation and protection of a particular land use, may be part of the conditions placed on approval of a development application.

(7) Access restrictions may be necessary which protect fish and wildlife habitat conservation areas, particularly during critical times of the year.

(8) Particularly in instances where a development proposal involves more intense uses, all or part of the required open space (common and/or private) will be dedicated to fish and wildlife habitat conservation, based on the extent and importance of the habitat.

(9) In certain instances it may be necessary to provide vegetation screenings and to provide controls on domestic animals to protect the function of critical habitat areas by reducing the potential for harassment from people and/or domesticated animals.

(10) Appropriate buffer areas shall be maintained between all permitted uses and activities and designated habitat conservation areas.

(a) All buffers shall be measured on a horizontal plane from the habitat edge, as established by the approved habitat boundary survey. For buffers adjacent to aquatic habitat, distances shall be measured from the ordinary high water mark (OHWM), or from the top of the bank where the OHWM cannot be identified. The distance of the buffer shall be increased to include stream-side wetlands that provide overflow storage for storm waters, feed water back to the water body during low flows or provide shelter and food for fish. In braided channels, the OHWM or top of bank shall be defined so as to include the entire stream feature.

(b) All buffer areas shall be temporarily fenced between the construction activity and the buffer with a highly visible and durable protective barrier during construction to prevent access and protect the designated habitat conservation area and associated buffer. This requirement may be waived by the city if an alterative to fencing which achieves the same objective is proposed and approved.

(c) Except as otherwise allowed, buffers shall be retained in their natural condition. Any habitat created, restored or enhanced as compensation for approved habitat alterations shall have the standard buffer required for the category of the created, restored or enhanced habitat.

(d) The width of the buffer may be increased by the city for a development project on a case-by-case basis when a larger buffer is necessary to protect the designated habitat conservation area function and value. The determination shall be based on site-specific and project-related conditions which include without limitation:

(i) The designated habitat conservation area is used for feeding, nesting and resting by species proposed or listed by the federal or state government as endangered,

threatened, sensitive, candidate, monitor or critical; or if it is an outstanding potential habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees;

(ii) The adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse habitat impacts;

(iii) The proposed development adjacent to the designated habitat conservation area would be a high intensity land use.

(e) Standard buffer widths may be modified by the city for a development proposal by averaging buffer widths based on a report submitted by the applicant and prepared by a qualified professional approved by the city (e.g., wildlife biologist), and shall only be allowed where the applicant demonstrates all of the following:

(i) Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property;

(ii) The designated habitat conservation area contains variations in sensitivity due to existing physical characteristics;

(iii) The width averaging will not adversely impact the designated habitat conservation area's functional value;

(iv) The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging; and

(v) The buffer width shall not be reduced, at any location, by more than 25 percent of the required buffer described below, and in no case may the buffer be less than 25 feet in width.

(11) Aquatic Habitat Conservation Areas. Aquatic habitat conservation areas are those riparian and waterward areas that may support both fish and wildlife species. All development within designated aquatic habitat conservation areas other than the Columbia River and the Entiat River (see SMP Section 12.4.5, Vegetation Conservation and Shoreline Buffers) shall comply with the following minimum standards:

(a) Level 1 Critical buffer areas:

(i) Minor development: 50 feet.

(ii) Major development: 75 feet.

(b) Level 2 Awareness buffer areas:

(i) Minor development: 25 feet.

(ii) Major development: 50 feet.

(c) Land divisions within designated aquatic habitat conservation areas shall require a minimum lot frontage along the protective buffer or shoreline of 100 feet, measured in a straight line, and required buffer areas shall be dedicated as open space tracts, nonbuildable lot(s), buffer areas and/or common areas, with ownership and control transferred to a homeowner's association.

(12) Wildlife Conservation Areas. The width of a designated wildlife habitat conservation area buffer shall be as follows:

(a) Level 1 Critical: 75 feet.

(b) Level 2 Awareness: 50 feet.

3.080 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 3.070.

(1) Road Repair and Construction. When no other practical alternative exists, public or private road or repair, maintenance, expansion or construction may be authorized within a designated habitat conservation area, subject to the following minimum standards:

(a) The road shall serve multiple properties;

(b) No significant adverse impacts to the designated habitat conservation area shall result from the repair, maintenance, expansion or construction of any public or private road;

(c) The road shall provide for the location of public utilities, pedestrian or bicycle easements, viewing points, etc.; and

(d) Road repair and construction is the minimum necessary to provide safe traveling surfaces.

(2) Major Developments. All major developments processed by the city according the provisions governing Type II or Type III permits authorized within a designated habitat conservation area shall comply with the following minimum standards:

(a) Inundated and/or submerged lands shall not be used in calculating minimum lot area for proposed lots;

(b) A habitat management and mitigation plan shall be required for major developments containing Level 1 Critical habitat conservation areas, and may be required for major developments containing Level 2 Awareness habitat conservation areas;

(c) All plats shall disclose the presence on each residential lot one building site, including access, that is suitable for development and which is not within the designated habitat conservation area or its associated buffer;

(d) All designated habitat conservation areas and their associated buffers shall be clearly identified on all final plats, maps, documents, etc.;

(e) Designated habitat conservation areas and their associated buffers shall be designated and disclosed on the final plats, maps, documents, etc., as open space tracts, nonbuildable lots, buffer areas or common areas, with ownership and control transferred to a homeowner's association. Associated habitat conservation area buffers may alternatively be designated and disclosed on the final plats, maps, documents, etc., as an easement or covenant encumbering the property.

(3) Surface Water Management. When no other practical alternative exists, surface water management activities may be authorized within an aquatic habitat area, subject to the following minimum standard:

(a) Aquatic habitat areas may be used for retention/detention facilities, subject to all of the following criteria:

(i) The functions and water quality of the aquatic habitat area or buffer shall not be adversely impacted;

(ii) The rate of flow into or the hydro-period of the aquatic habitat area shall not increase above natural flow rates;

(iii) All surface water discharged from impervious surfaces shall be treated prior to entering an aquatic habitat area or buffer; and

(iv) The temperature of the aquatic habitat area shall not be increased above natural temperatures.

(b) New surface water discharges to wetlands from detention facilities, pre-settlement ponds, or other surface water management structures may be authorized, subject to all of the following criteria:

(i) The discharge does not increase the rate of flow into or the hydro-period of the wetland above the natural rates;

(ii) All surface water discharged from impervious surfaces shall be treated prior to entering a wetland or buffer; and

(iii) The water quality of the wetland is not decreased.

(4) Stream Crossings. Expansion or construction of stream crossings may be authorized within a designated habitat conservation area, subject to the following minimum standards:

(a) Bridges are required for streams that support salmonids, unless culvert design and construction ensures proper passage opportunities;

(b) All crossings using culverts shall use superspan or oversized culverts;

(c) Crossings shall not occur in salmonid spawning areas unless no other feasible crossing site exists;

(d) Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists;

(e) Crossings shall not diminish flood carrying capacity; and

(f) Crossings shall serve multiple properties whenever possible.

(5) Trails and Trail-Related Facilities. Construction of public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, viewing platforms and campsites, may be authorized within a habitat conservation area, subject to the following minimum standards:

(a) Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;

(b) Trail facilities shall minimize the removal of trees, shrubs, snags and important habitat features;

(c) Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of wildlife and/or critical characteristics of the designated habitat conservation area;

(d) Trail facilities shall be located at least a distance equal to the width of the trail corridor away from the habitat conservation area, as established by the approved habitat boundary survey; and

(e) All facilities shall be constructed with materials complimentary to the surrounding environment.

(6) Utilities. When no other practical alternative exists, construction of utilities within a designated habitat conservation area may be authorized, subject to the following minimum standards:

(a) Utility corridors shall be jointly used;

(b) Corridor construction and maintenance shall protect the designated habitat conservation area, and shall be aligned to avoid cutting trees greater than six inches in diameter at breast height when possible;

(c) No pesticides, herbicides or other hazardous or toxic substances shall be used;

(d) Utility corridors, including maintenance roads, authorized by the city, shall be located at least a distance equal to the width of the utility corridor away from the habitat area edge;

(e) Corridors shall be revegetated to pre-construction densities with appropriate native vegetation immediately upon completion of construction, or as soon thereafter as possible given seasonal growing constraints. The utility purveyor shall provide an assurance device or surety in accordance with the Entiat Municipal Code which ensures that such vegetation survives;

(f) Any additional corridor access for maintenance shall be provided as much as possible at specific points rather than by parallel roads. If parallel roads are necessary they shall be no greater than 15 feet in width, and shall be contiguous to the location of the utility corridor on the side opposite the designated habitat conservation area;

(g) Construction of sewer lines within a designated habitat conservation area that are necessary to meet state and/or local health code requirements shall not adversely impact the function and quality of the designated habitat conservation area.

Chapter 4 - AQUIFER RECHARGE AREAS

Sections:

4.010 Permitted uses and activities.

Uses and activities allowed within designated aquifer recharge areas in shoreline jurisdiction are those uses permitted by this Shoreline Master Program, subject to the provisions of this chapter.

4.020 Classification.

(1) Aquifer recharge areas will be rated according to the vulnerability of the aquifer, with vulnerability being the combined effect of susceptibility to contamination and the contamination loading potential. The categories of vulnerability shall be high, medium and low, with high vulnerability being characterized by a combination of land uses that contribute to contamination that may degrade groundwater, and hydrogeologic conditions that facilitate that degradation.

(a) Hydrogeologic susceptibility will be characterized by looking at the following attributes:

(i) Depth to groundwater;

(ii) Aquifer properties such as hydraulic conductivity and gradients;

(iii) Soil (texture, permeability, and contaminant attenuation properties);

(iv) Characteristics of the vadose zone including permeability and attenuation properties; and

(v) Other relevant factors.

(b) Contamination loading potential can be evaluated by considering the following:

(i) General land use;

(ii) Waste disposal sites;

(iii) Agriculture activities;

(iv) Well logs and water quality test results;

(v) Density of septic systems in use in the area; and

(vi) Other information about the potential for contamination.

(2) Aquifer recharge areas shall be classified according to the following system:

(a) Level 1: Critical Aquifer Recharge Areas shall be those areas found to have a high vulnerability rating.

(b) Level 2: Awareness Aquifer Recharge Areas shall be those areas found to have a medium vulnerability rating.

4.030 Designation.

All existing areas of the city in shoreline jurisdiction classified according to the provisions contained in this chapter, as determined by the city, are designated as aquifer recharge areas. As areas are determined to be either a Level 1: Critical or Level 2: Awareness Aquifer Recharge Area, they will be included on the map or maps that are maintained by the city. Additionally, if any of the following areas are established within the city's urban growth area, they shall be included on these maps:

(1) Sole source aquifer recharge areas designated pursuant to the Federal Safe Drinking Water Act;

(2) Areas established for special protection pursuant to the Washington State groundwater management program;

(3) Areas designated for wellhead protection pursuant to the Federal Safe Drinking Water Act; and,

(4) Aquifer recharge areas mapped and identified by a qualified groundwater scientist.

4.040 Application requirements – Vulnerability determination system – Procedures, criteria.

(1) Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described in this section. Additional reports or information to identify potential impacts and mitigation measures to aquifer recharge areas may be required if deemed necessary.

(2) The procedure for determining if a development proposal must complete a vulnerability rating shall be as follows:

(a) The applicant shall submit a certified statement with the application materials indicating which of the criteria identified in subsection (3) of this section apply to the development proposal, if any. The application will not be considered complete until this certified statement is submitted.

(b) If the applicant's statement asserts that the criteria do not apply, as identified in subsection (2)(c) of this section, to the development proposal, the city will accept the statement and proceed with the development permit review. However, if the city has or obtains information prior to the permit or approval being finalized that clearly establishes the applicant's statement is incorrect, the applicant will be advised in writing of the inconsistent information and must either:

(i) Provide an amended statement adding the evaluation criteria as being applicable and determine the vulnerability rating of the development pursuant to Section 4.050; or

(ii) Present sufficient countering information clearly establishing that the basis for the city's concern is incorrect.

If the applicant selects to proceed under subsection (2)(b)(ii) of this section, after receiving the applicant's information, the city shall review the information and obtain whatever additional assistance may be required to resolve the issue. The final determination as to whether a determination of vulnerability is required shall be made by the city.

(c) If a development proposal meets the criteria in subsections (3)(a), (b), (c) or (d) of this section, or if the site or development proposal meets any two of the remaining criteria, the application shall determine the vulnerability rating for the development proposal according to Section 4.050.

(d) If the development has a high or medium vulnerability rating, the development shall be subject to the development standards contained within this chapter.

(3) The applicant shall be required to determine the vulnerability rating for any development permit, not otherwise exempted from this chapter, if the site or development meets the criteria in subsections (3)(a), (b), (c) or (d) of this section or meets two or more of the remaining criteria below:

(a) The development proposal is within a wellhead protection area designated under Chapter 246-290 WAC, Public Water Supplies;

(b) The development proposal is within an aquifer recharge area mapped and identified by a qualified groundwater scientist;

(c) The site will be utilized for processing, storing, or handling hazardous substance (as now or hereafter defined in Chapter 70.105D RCW, Hazardous Waste Cleanup – Model Toxics Control Act), in applications or quantities larger than is typical of household use;

(d) The site will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended;

(e) The site contains highly permeable soils as designated in the NRCS Soil Survey for the Chelan Area;

(f) The development proposal is within a sole source aquifer recharge area designated pursuant to the Federal Safe Drinking Water Act;

(g) The development proposal is within an area established for special protection pursuant to a groundwater management program, Chapter 90.44 RCW, Regulations of Public Ground Waters; Chapter 90.48 RCW, Water Pollution Control; and Chapter 90.54 RCW, Water Resources Act of 1971; and Chapter 173-100 WAC, Ground Water Management Areas; and Chapter 173-200 WAC, Water Quality Standards for Ground Waters of the State of Washington;

(h) The development proposal involves a major or short subdivision and includes present or future plans to construct three or more dwelling units where the dwelling units will not be connected to a public sewer system and any of the lots are less than one net acre in size;

(i) The development proposal involves a commercial and/or industrial site that is not on a public sewer system and the main structure exceeds 4,000 square feet;

(j) The development is within 200 feet of the ordinary high water mark of a perennial river, stream, lake or pond.

4.050 Determining vulnerability rating.

(1) General. The vulnerability matrix is used to determine the vulnerability of the development and to rate it as a high, medium or low rating. This can be done by determining the "contaminant loading potential" of a proposed land use and the natural "susceptibility" of the site as outlined in this chapter and creating a numerical vulnerability value for a proposed land use. When a proposed use is determined to have a medium or high vulnerability rating, the protection measures described in this chapter shall be implemented that protect the potable water supply.

(2) Determining Susceptibility. There are three basic components to determine a site's susceptibility, as follows:

(a) Permeability of the Vadose Zone. The vadose zone is composed of both the soil and the geologic materials underlying the soil. To adequately determine the overall ease with which water will travel from land surface to the aquifer, it is necessary to determine the overall permeability of both soil and geologic media. Soil permeability can be determined through use of the NRCS Soil Survey for the Chelan Area,

particularly Table 6. The values shown on these pages are given in the inches per hour that water moves downward through a saturated soil. A determination of the permeability of the geologic material underlying the soil is more problematic.

(i) Incrementally, the permeability of local soils (upper vadose zone) is grouped into four ranges that are assigned a relative value to be used for determining susceptibility on the matrix. Where conclusive information does not exist for permeability of the soil, a relative value of three will be assigned.

Soil Permeability Table Based on Soil Survey

Condensed Description	Soil Survey Description	Permeability (in./hr.)	Permeability (cm./sec.)	Rating
Very Slow	Very Slow	<0.06	<0.00453	0
Slow	Slow	0.06-0.20	0.004530-0.0141	1
	Moderately Slow	0.20-0.60	0.0141-0.0423	
Moderate	Moderate	0.60-2.0	0.0423-0.1411	2
	Moderately Rapid	2.0-6.0	0.1411-0.4233	
Rapid	Rapid	6.0-20	0.4233-1.411	3
	Very Rapid	>20	>1.411	

(ii) Permeability of the lower vadose zone can be estimated using the Geologic Matrix Table in this section by determining the material type and assigning the appropriate permeability range for the material(s) overlying the uppermost aquifer. In cases where heterogeneous materials are encountered, the least permeable layer with a thickness of not less than five feet shall determine the overall permeability to be applied to the entire vadose zone, excluding the soil layer. Where conclusive information does not exist for permeability of the geologic matrix, a relative value of three will be assigned.

Geologic Matrix Table

Condensed Description	Geologic Matrix	Permeability (cm./sec.)	Rating
Very Slow	Unfractured igneous or metamorphic bedrock, shale	10-13 – 10-9	0
	Marine clay, clay, dense sandstone, hardpan	10-9 – 10-7	
Slow	Loess, glacial till, fractured igneous or metamorphic bedrock	10-8 – 10-5	1
	Silt, clayey sands, weathered basalt	10-7 – 10-3	
Moderate	Silty sands, fine sands, permeable basalt	10-4 – 10-1 (0.001 – 0.1)	2
	Clean sands, karst limestone	> 0.1 – 1.0	
Rapid	Sand and gravel	> 1.0 – 10	3
	Gravel	> 10 - 100+	

(b) Depth to Groundwater. Depth to groundwater can be determined by utilizing local well log information or specific well information for the site. Depth to groundwater is also assigned a relative value used for determining susceptibility on the matrix. Where conclusive information does not exist for depth to groundwater, a relative value of three will be assigned.

Depth to Groundwater Table

Condensed Description	Depth to Water (feet)	Rating
Very Low	Confined aquifer > 50	0
Low	25 – 50	1
Moderate	10 – 25	2
High	0 – 10	3

(c) Slope. Slope, or gradient, is related to the infiltration characteristics of an area. The steeper the slope, the less infiltration of surface waters occur. Slope is assigned a relative value used for determining susceptibility on the matrix. Where conclusive information does not exist for slope, a relative value of three will be assigned.

Slope – As a Percent	Slope Relative Value
> 45%	0
> 30% - 45%	1
15% - 30%	2
< 15%	3

(3) Determining the Susceptibility Rating. A susceptibility rating is determined by adding the relative values of permeability of the soils and geologic matrix of the vadose zone, depth to groundwater and slope. This is a baseline determination for susceptibility. The range of values are as follows:

(a) High susceptibility rating equals total range from eight to 12.

(b) Medium susceptibility rating equals total range from four to seven.

(c) Low susceptibility rating equals total range from zero to three.

(4) Determining the Contaminant Loading Rating. Contaminant loading potential is dependent on the presence of critical materials on the site. A critical material is a substance present in sufficient quantity that its accidental or intentional release would result in the impairment of the aquifer water to be used as potable drinking water.

(a) For the purpose of administration of this section, the city will maintain a critical materials use activity list, which is a list of commercial and industrial activities known to use critical materials, coupled with the names of critical materials normally associated with the activity. The following situations will be considered as having a high contaminant loading rating, unless the project proponent provides assurances otherwise:

(i) Proposed activities fitting one of the general business descriptions provided or having one of the specified Standard Industrial Classification (SIC) codes identified on the city's critical materials use activity list;

(ii) Sites or uses that the city believes would be utilized for processing, storing or handling hazardous substance(s) (as now or hereafter defined in Chapter 70.105D RCW, Hazardous Waste Cleanup – Model Toxics Control Act) in applications or quantities larger than is typical of household use;

(iii) Sites that the city believes will be utilized for hazardous waste treatment and storage as set forth in Chapter 70.105 RCW, Hazardous Waste Management, as now or hereafter amended, but may not be covered in the critical materials use activity list;

(iv) Other contaminants and/or SIC codes that are not currently found on the critical materials use activity list that are subsequently determined by the city to have a high contaminant loading rating.

Those uses or activities determined not to have a high contaminant loading rating are considered to have a low contaminant loading potential and rating.

(b) The following process shall be used to determine whether or not critical materials are involved:

(i) An initial screening will be performed by the city by comparing the proposed use and any other pertinent information provided by the proponent at his/her expense, with the critical materials use activity list. The city will exercise any discretion in judgment in the favor of aquifer protection.

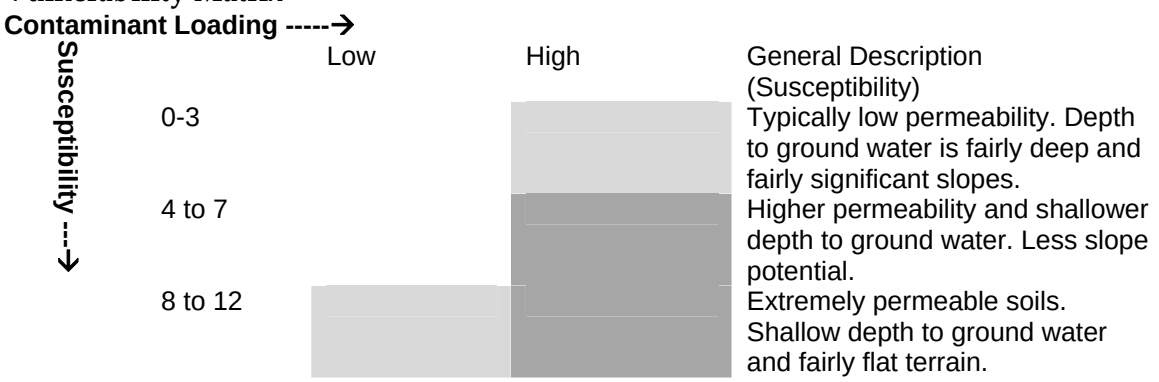
(ii) If the proposed use is determined to meet one of the criteria under subsection (4)(a) of this section, the city shall require the applicant to provide a list of materials, including quantities to be used, stored or transported in conjunction with the proposed activity. Additional information may be required by the city to be provided by the proponent at his or her expense.

(iii) After the review of the information supplied by the applicant, the city will either confirm the designation as a critical materials use activity or nullify the tentative designation.

(iv) If the designation as a critical materials use activity is confirmed, the applicant may respond by accepting the designation as a critical materials use activity or he/she may appeal the designation through the procedures governing appeals of administrative decisions, according to EMC Title 14. Where an appeal is filed, the Washington Department of Ecology, the Washington Department of Health and the Chelan-Douglas Health District shall be notified of all appeal proceedings.

(5) Vulnerability Matrix. A determination of a high, medium, or low vulnerability rating is made by the city from the vulnerability matrix by identifying susceptibility and contaminant loading ratings, as identified in subsections (3) and (4) of this section (susceptibility equals high [eight to 12], medium [four to seven] or low [zero to three]; contaminant loading equals high or low). After determining the susceptibility and contaminant loading ratings for the proposed use and site, the appropriate box on each axis of the vulnerability matrix below will be checked to determine the vulnerability rating. The vulnerability of the site is then determined by the intersection of the susceptibility rating and the contaminant loading rating to be low, medium, or high.

Vulnerability Matrix



4.060 General standards.

The following minimum standards shall apply to all development activities determined to have a high or medium vulnerability rating, as determined by this chapter:

(1) Development activities within an aquifer recharge area shall be designed, developed and operated in a manner that will not potentially degrade groundwater resources.

(2) Alternative site designs, phased development and/or groundwater quality monitoring may be required to reduce contaminant loading where site conditions indicate that the proposed action will potentially degrade groundwater quality.

(3) Open space may be required on development proposals overlying areas that are highly susceptible to contamination of groundwater resources.

(4) When wells are required to be abandoned, the applicant shall ensure that they are abandoned according to the state Department of Ecology requirements.

(5) Known contaminants shall be removed from stormwater runoff prior to their point of entry into surface or groundwater resources using available and reasonable best management practices.

(6) Changes in occupancy and/or use of an existing site, and/or expansions of existing activities are subject to complete evaluation by the city under the provisions of this chapter.

4.070 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 4.060.

(1) Any agricultural activities shall incorporate best management practices concerning waste disposal, fertilizer use, pesticide use, and stream corridor management. If necessary, farmers shall seek technical assistance from the Chelan County Conservation District, WSU Cooperative Extension Agent and local field agents.

(2) Where otherwise permitted by applicable zoning regulations, landfills, junkyards, salvage yards and auto wrecking yards are prohibited within designated critical aquifer recharge areas. Landfills, junkyards, salvage yards and auto wrecking yards that are proposed to be located outside of designated critical aquifer recharge areas and that

have a high or medium vulnerability rating must satisfactorily demonstrate that potential negative impacts to the groundwater would be overcome in such a manner as to prevent adverse impacts to groundwater

(3) Fertilizer, herbicide and pesticide management practices of schools, parks, golf courses and other nonresidential facilities that maintain large landscaped areas shall be evaluated in relation to best management practices as recommended by the Cooperative Extension Service.

(4) Commercial, industrial and/or mining uses shall comply with the following minimum provisions:

(a) For the purposes of this section, all forms of mining activities shall be considered an industrial use.

(b) All commercial and industrial uses that are rated as having a medium or high vulnerability, shall submit a contingency plan that identifies the following:

(i) Types of hazardous wastes that would be used for the proposed land use.

(ii) On-site containment facilities designed to handle accidental releases of critical materials.

(iii) Spill response and notification procedures.

(c) All activities designated as critical materials use activities shall only be approved so that:

(i) Facilities will be designed and built so that any spilled or leaked materials are contained on site; and

(ii) Facilities will be designed and built so that any spilled or leaked materials cannot infiltrate into the ground; and

(iii) No permanent disposal of any waste containing critical materials shall be allowed on site.

(d) Commercial or industrial activities designated as critical materials use activities shall have specially designed and installed storm runoff drainage facilities in areas where spills might occur. Such facilities shall be designed and installed to:

(i) Prevent the commingling of storm runoff and critical materials spills; and

(ii) Enhance spill cleanup procedures.

(e) Mining activities in areas determined to have a medium or high vulnerability shall comply with the following conditions:

(i) Six-foot fencing shall be provided and maintained in good condition at all times in the following locations:

(A) Exterior boundary of any portion of any site on which active operations exist; and

(B) Exterior boundary of any portion of the site that has been mined and not yet rehabilitated;

(ii) No excavation within 100 feet of a well or surface water used for potable drinking water;

(iii) No excavation into an aquifer used for potable drinking water is allowed;

(iv) The operators shall comply with all existing water quality monitoring regulations of WSDOE and the Chelan-Douglas Health District;

(v) A drainage channel shall be constructed around active gravel pit areas to keep surface runoff from outside the pit excavation from entering the pit areas;

(vi) Fuel storage areas and service facilities shall incorporate provisions to prevent lubricants and petroleum products from contaminating either pit areas or drainage channels;

(vii) No liquid, asphalt, cement, or water used in a mining operation shall be disposed of in the bottom of a pit;

(viii) A protective eight-foot high berm or retaining wall shall be required adjacent to property lines where the edge of a pit is within 100 feet of a street or railroad right-of-way;

(ix) The use of fertilizers, pesticides, herbicides, and critical materials shall not be allowed within 50 feet of an active pit;

(x) A sufficient amount of topsoil or suitable material shall be retained on site for revegetation/rehabilitation purposes;

(xi) Reclamation plans for these sites shall include:

(A) A specification of the amount of materials to be left between the aquifer high-water mark (or elevation) and the final grade of the reclaimed site;

(B) Physical barriers, as required in subsection (4)(e)(viii) of this section, shall remain unless they are specifically permitted to be removed in a subsequent land use decision by the hearing body; and

(C) Provisions shall be made for limitations of access to, and activities within, the rehabilitated site until the use of the land is changed;

(xii) In rehabilitated gravel pits over an aquifer used for a potable water source, new uses requested for the property may be limited or specifically conditioned as determined by the appropriate hearing body; and

(xiii) All mining activities shall be reclaimed per a reclamation plan approved by the Washington State Department of Natural Resources.

(5) Utility facilities shall be reviewed and approved consistent with the requirements of subsection (4) of this section.

(6) Underground storage tanks and on-site sewage disposal systems are prohibited within designated critical aquifer recharge areas. Underground storage tanks and on-site sewage disposal systems that are proposed to be located outside of designated critical aquifer recharge areas and that have a high or medium vulnerability rating must satisfactorily demonstrate that potential negative impacts to the groundwater would be overcome in such a manner as to prevent adverse impacts to groundwater.

(7) All residential land divisions within the city of Entiat urban growth area shall be connected to the city's sanitary sewage collection and treatment facilities. Where an area subject to a land division process occurs within a designated aquifer recharge area, as describe by this chapter, a notation shall appear on the face of the final plat indicating the aquifer recharge area designation, and referencing the requirements of this chapter.

(8) Wood treatment facilities shall conform to the provisions of subsection (4) of this section. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces, both natural and manmade, are prohibited.

(9) As defined and regulated in Chapter 173-218 WAC, Underground Injection Control Program, Class I, III and IV underground injection wells are prohibited. Class II injection wells are permitted under Chapter 173-218 WAC by the Washington State Department of Ecology in conjunction with the Washington State Department of Natural Resources. Class V injection wells, involving the injection of critical materials, may be prohibited by the Washington State Department of Ecology or a permit may be required by said agency. In addition, commercial or industrial uses proposing the injection of critical materials are subject to the provisions of this chapter.

Chapter 5 - FREQUENTLY FLOODED AREAS

Sections:

5.010 Statutory authorization.

The Legislature of the state has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council ordains as set forth in this chapter.

5.020 Findings of fact.

(1) The flood hazard areas identified by the FEMA maps and study adopted in this chapter are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services,

extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards that increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

5.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

(1) To protect human life and health;

(2) To minimize expenditure of public money and costly flood control projects;

(3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) To minimize prolonged business interruptions;

(5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;

(6) To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

(7) To ensure that potential buyers are notified that property is in an area of special flood hazard; and

(8) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

5.040 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

(4) Controlling filling, grading, and other development which may increase flood damage; and

(5) Preventing or regulating the construction of flood barriers that will unnaturally divert floodwaters or may increase flood hazards in other areas.

5.050 Definitions.

Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions, of this Program and supplemented herein. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

(1) "Appeal" means a request for a review of the city's interpretation of any provision of this chapter or a request for a variance.

(2) "Area of shallow flooding" means designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

(3) "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

(4) "Critical facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, installations which produce, use, or store hazardous materials or hazardous waste.

(5) "Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.

(6) "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

(a) The overflow of inland or tidal waters; and/or

(b) The unusual and rapid accumulation of runoff of surface waters from any source.

(7) "Flood insurance rate map (FIRM)" means the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

(8) "Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter found at Section 5.180(1)(b).

(9) "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes, the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers, or other similar vehicles.

(10) "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

(11) "New construction" means a structure for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.

(12) "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

(13) "Structure" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

(14) "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

(a) Before the improvement or repair is started; or

(b) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

(c) The term does not, however, include either:

(i) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or

(ii) Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.

5.060 Lands to which this chapter applies.

This chapter shall apply to all areas of special flood hazards within shoreline jurisdiction of the city.

5.070 Basis for establishing the areas of special flood hazard.

Within shoreline jurisdiction, the areas of special flood hazard identified by the Federal Insurance Administration as shown on the flood insurance rate map, community panel No. 530015 0400 B, are adopted by reference and declared to be a part of this chapter.

The flood insurance rate map is on file at City Hall, 14070 Kinzel Street, Entiat, Washington.

5.100 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the governing body; and

(3) Deemed neither to limit nor repeal any other powers granted under state statutes.

Potential impacts to wetlands, fish and wildlife habitat and other critical areas shall be addressed in accordance with the applicable sections of this chapter.

5.110 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

5.120 Establishment of development permit.

(1) Development Permit Required. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in this section. The permit shall be for all structures including manufactured homes, as set forth in Chapter 8 of this Master Program and Section 5.050 of Appendix B, and for all development including fill and other activities, also as set forth in Chapter 8 of this Master Program and Section 5.050 of Appendix B. Depending upon the nature of the development, the proposal may also require review and approval of shoreline permits as specified by this Master Program.

(2) Application for Development Permit. Application for a development permit shall be made on forms furnished by the city and may include but not be limited to: plans in duplicate drawn to scale showing the nature, locations, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(a) Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;

(b) Elevation in relation to mean sea level to which any structure has been floodproofed;

(c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 5.180(2); and

(d) Description of the extent to which a watercourse will be altered or relocated as a result of the proposed development.

5.130 Designation of the community development director.

The community development director is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

5.140 Duties and responsibilities of the community development director.

Duties of the community development director shall include but not be limited to:

(1) Review all development permits to determine:

(a) That the permit requirements of this chapter have been satisfied;

(b) That all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required;

(c) If the proposed development is located in the floodway. If located in the floodway, assure that the provisions of Section 5.190 are met.

(2) When base flood elevation data has not been provided in accordance with Section 5.070, the community development director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Sections 5.180 and 5.190.

(3) Obtain and maintain the following information:

(a) Where base flood elevation data is provided through the flood insurance study or required as in subsection (2) of this section, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures, and whether or not the structure contains a basement.

(b) For all new or substantially improved floodproofed structures:

(i) Verify and record the actual elevation (in relation to mean sea level), and

(ii) Maintain the floodproofing certifications required in Section 5.120(2)(c), and

(iii) Maintain for public inspection all records pertaining to the provisions of this chapter.

(4) Where there are proposed alteration(s) of watercourses, accomplish the following:

(a) Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

(b) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

(5) Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). A person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as

provided in EMC Title 14 for administrative appeals. In passing upon such applications, the hearing officer shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

(a) The danger that materials may be swept onto other lands to the injury of others;

(b) The danger to life and property due to flooding or erosion damage;

(c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(d) The importance of the services provided by the proposed facility to the community;

(e) The necessity to the facility of a waterfront location, where applicable;

(f) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

(g) The compatibility of the proposed use with existing and anticipated development;

(h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

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

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

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

(6) The community development director shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

5.160 Variances.

Variances of the requirements of Chapter 5 of Appendix B may be granted as outlined below and as outlined in Chapter 7.8 of this Master Program.

(1) Variances, as interpreted in the National Flood Insurance Program, are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

(2) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

(3) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

(4) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a

lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing Section 5.140(5)(a) through (k) have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.

(5) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(6) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (1) of this section, and otherwise complies with Sections 5.170(1) and (2).

(7) Variances shall only be issued upon:

(a) A showing of good and sufficient cause;

(b) A determination that failure to grant the variance would result in exceptional hardship to the applicant;

(c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 5.140, or conflict with existing local laws or ordinances.

(8) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

5.170 General standards.

In all areas of special flood hazards, the following standards are required:

(1) Anchoring.

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;

(b) All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

(2) Construction Materials and Methods.

(a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage;

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

(3) Utilities.

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and

(c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(4) Subdivision Proposals.

(a) All subdivision proposals shall be consistent with the need to minimize flood damage;

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage;

(d) All subdivisions shall disclose the presence on each residential lot of one building site, including access, that is suitable for development and is not within the area of special flood hazard; and

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

5.180 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Sections 5.070 or 5.140(2), the following provisions are required:

(1) Residential Construction.

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

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

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

(ii) The bottom of all openings shall be no higher than one foot above grade.

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

(2) Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest

floor, including basement, elevated one foot or more above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

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

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

(c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 5.140(3)(b);

(d) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 5.180(1)(b);

(e) Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to one foot above the base flood level will be rated as at the base flood level).

(3) Manufactured Homes. All manufactured homes to be placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot or more above the base flood elevation; and be securely anchored to an adequately anchored foundation system in accordance with the provisions of Section 5.170(1)(b). This subsection applies to manufactured homes to be placed or substantially improved in an expansion to an existing manufactured home park or subdivision. This subsection does not apply to manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision except where the repair, reconstruction, or improvement of the streets, utilities and pads equals or exceed 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced.

5.190 Floodways.

Located within areas of special flood hazard established in Section 5.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles, and erosion potential, the following provisions apply:

(1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood damage.

(2) Construction or reconstruction of residential structures is prohibited within designated floodways, except for (a) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (b) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market

value of the structure, either (i) before the repair, reconstruction, or repair is started, or (ii) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes or to structures identified as historic places shall not be included in the 50 percent.

(3) If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this chapter.

5.200 Encroachments.

The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point.

5.210 Standards for shallow flooding areas (AO zones).

Shallow flooding areas appear on FIRMs as AO zones with depth designations. The base flood depths in these zones range from one to three feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

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

(2) New construction and substantial improvements of nonresidential structures within AO zones shall either:

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

(b) Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in EMC 5.180(2)(c).

(3) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

Chapter 6
GEOLOGICALLY HAZARDOUS AREAS

Sections:

6.010 Permitted uses and activities.

Uses and activities allowed within designated geologically hazardous areas within shoreline jurisdiction are those uses permitted by this Shoreline Master Program, subject to the provisions of this chapter.

6.020 Classification.

(1) Geologically hazardous areas in the city consist of erosion hazard areas (wind and water) and steep slopes. Classification and rating of geologically hazardous areas will be based upon the risk to development. The categories of risk shall be (a) known or suspected risk; (b) no risk; and (c) risk unknown, meaning data is not available to determine the presence or absence of a geological hazard. The classification system for geologically hazardous areas shall be as described below.

(a) Level 1: Critical Hazard Area shall be those areas with a known or suspected risk.

(b) Level 2: Awareness Hazard Areas shall be those areas that have an unknown risk.

(2) The determination of the level of risk will be established through an approved geotechnical report submitted by the applicant for any development permit. The city may use on-site inspections and the information sources identified within this title as guidance in identifying the presence of potential geologically hazardous areas.

(3) Any land containing soils, geology or slopes that meet any of the following criteria shall be classified as having a known or suspected risk of being geologically hazardous areas:

(a) Soils classified in the soil survey of Chelan County area as having a moderate or high hazard for wind and/or water erosion;

(b) Soil complexes containing at least one soil type classified as a moderate to severe erosion hazard when occurring on slopes of 15 percent or greater;

(c) Any areas with slopes 30 percent and greater;

(d) Areas of historic failures or potentially unstable slopes designated on the Natural Resource Conservation Service slide hazard area studies; and those areas mapped as slumps, earthflows, mudflows, lahars or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources;

(e) Any area with a combination of:

(i) Slopes 15 percent or steeper, and

(ii) Impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel), and

(iii) Springs or groundwater seepage;

(f) Any area which has shown geologically significant movement during the past 10,000 years or which is underlain by mass wastage debris from that period of time;

(g) Any area potentially unstable as a result of rapid stream incision or stream bank erosion;

(h) Areas located in a canyon or ravine, or on a bluff;

(i) Any area located on an alluvial fan, presently or potentially subject to inundation by debris flows or deposition of stream-transported sediments.

6.030 Designation.

All existing areas of the city in shoreline jurisdiction classified according to the provisions contained in this chapter, as determined by the city, are designated as geologically hazardous areas.

6.040 Application requirements.

Development permit applications shall provide appropriate information on forms provided by the city, including without limitation the information described below. Additional reports or information to identify potential impacts and mitigation measures to geologically hazardous areas may be required if deemed necessary. Generally, within Level 1 Critical Hazard Areas, detailed studies and reports will be required to determine whether or not development will be allowed, and if so, what mitigation measures will be required. Within Level 2 Awareness Hazard Areas, detailed studies and reports may be necessary to determine the existence of a geologically hazardous area, and, if so, whether or not development will be allowed and what mitigation measures might be necessary where development may occur.

(1) A site plan which discloses the following:

(a) The location and boundaries of the geologically hazardous area;

(b) The location and dimensions of all existing and proposed buildings, roads and other improvements, and their physical relationship to the geologically hazardous area;

(c) The location and type of any proposed buffers, including the identification of any other protective measures; and

(d) Locations and results of any test holes, excavations, etc., used in evaluating the existence and extent of the geologic hazard.

(2) A geotechnical report prepared as described within this title; and

(3) A certification from the geotechnical engineer and/or geologist preparing the study and report stating all of the following:

(a) The risk of damage from the project, both on- and off-site, is minimal;

(b) The project will not materially increase the risk of occurrence of the hazard; and

(c) The specific measures incorporated into the design and operational plan of the project to eliminate or reduce the risk of damage due to the hazard.

6.050 Geotechnical report.

(1) All geotechnical reports shall be prepared by a consultant team including a geologist and/or a geotechnical engineer, or an engineer or an engineering geologist, who is knowledgeable of regional geologic conditions and who derives his/her livelihood from employment in one of these specialized fields.

(2) A geotechnical report shall include a description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations on the suitability of the site to be developed. More specifically, the report shall evaluate the actual presence of geologic conditions giving rise to the geologic hazard, including without limitation the following:

(a) Documentation of site history, evidence of past geologically hazardous activities in the vicinity, quantitative analysis of slope stability and available geologic information;

(b) Surface reconnaissance of the site and adjacent areas;

(c) Subsurface exploration of the site to assess potential geologic impacts of the proposal;

(d) Hydrologic analysis of slope and/or soil stability;

(e) Approximate depth to groundwater;

(f) Evaluation of the safety of the proposed project, and identification of construction practices, monitoring programs and other mitigation measures necessary; and

(g) Demonstration of the following:

(i) There will be no increase in surface water discharge or sedimentation to adjacent properties;

(ii) There will be no decrease in slope stability on the site nor on adjacent properties;

(iii) There is no hazard as proven by evidence of no past geologically hazardous activity in the vicinity of the proposed development and a quantitative analysis of slope stability indicates no significant risk to the development proposal and adjacent properties; and

(iv) The geologically hazardous area can be modified or the development proposal can be designed such that the hazard is eliminated or mitigated, making the site as safe as one without a hazard.

(3) The recommendations from a soils engineering report and the engineering geology report shall be incorporated in a geotechnical report and in the grading plan specifications.

(a) The soils engineering report, prepared according to Appendix, Chapter and Section 3309.5 of the Uniform Building Code (U.B.C.), shall include data regarding the

nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures if necessary.

(b) The engineering geology report, prepared according to Appendix, Chapter and Section 3309.6 of the U.B.C., shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinion on the adequacy for the intended use of sites to be developed by the proposed grading.

6.060 General standards.

The following minimum standards shall apply to all development activities occurring within designated geologically hazardous areas and their buffers:

(1) All projects shall be evaluated to determine whether the project is proposed to be located in a geologically hazardous area, the project's potential impact on the geologically hazardous area, and the potential impact of the geologic hazard on the proposed project.

(2) Appropriate buffer areas shall be maintained between all permitted uses and activities and designated geologically hazardous areas.

(a) A minimum buffer of 50 feet shall be established from the top, toe and all edges of geological hazardous areas;

(b) Existing native vegetation within the buffer area shall be maintained;

(c) The buffer may be reduced to a minimum of 30 feet when an applicant demonstrates, to the satisfaction of the city, that the reduction will adequately protect the proposed development and the designated geologically hazardous area;

(d) Normal nondestructive pruning and trimming of vegetation for maintenance purposes, or thinning of limbs of individual trees to provide for a view corridor is allowed within the buffer area.

(3) Appropriate drainage and erosion control measures, as determined by the city, shall be implemented in designated geologically hazardous areas.

(a) All development shall submit for review and approval a drainage and erosion control plan pursuant to the provisions of this title, unless waived by the city.

(b) All disturbed areas shall be revegetated in accordance with an approved plan, and completed within six months.

(c) Surface drainage shall not be directed across the face of a bluff or into a ravine. If drainage must be discharged from the bluff into adjacent waters, it shall be collected above the face of the bluff and directed to the water by a sealed drain line, and provided with an energy-dissipating device.

(4) Appropriate grading and excavation measures, as determined by the city, shall be implemented in designated geologically hazardous areas.

(a) All development shall submit for review and approval a grading and excavation plan as specified in Chapter 1, unless waived by the city. There shall be minimum disturbance of trees and vegetation on steep slopes and in ravines to minimize erosion and instability.

(b) All disturbed areas shall be revegetated in accordance with an approved plan, and completed within six months.

(c) All clearing shall be marked in the field for inspection and approval prior to alteration of the site.

(d) The face of any cuts and/or fills on slopes will be prepared, maintained and revegetated to control against erosion.

(5) Construction methods shall be utilized which minimize risks to structures and which do not increase the risk to the site, or to adjacent properties and their structures, from the geologic hazard.

(6) Site planning shall minimize disruption of existing topography and natural vegetation, and shall incorporate opportunities for phased clearing.

(7) Impervious surface coverage shall be minimized.

(8) Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval shall be marked in the field and approved by the city prior to undertaking the project.

(9) A monitoring program shall be prepared for construction activities occurring in critical geologic hazard areas.

(10) Development shall not increase instability or create a hazard to the site or adjacent properties, or result in a significant increase in sedimentation or erosion.

6.070 Specific standards.

The following standards shall apply to the activity identified below, in addition to the general standards outlined in Section 6.050.

(1) Road Repair and Construction. Construction of any new public or private road is prohibited in a designated geologically hazardous area. Any existing private or public road repair or maintenance may be authorized, subject to the following minimum standards:

(a) The repair and maintenance shall not create additional significant adverse impacts to the geologically hazardous area; and

(b) Road repair and maintenance is the minimum necessary to provide safe traveling surfaces.

(2) Major Developments. All major developments processed by the city according to the provisions governing Type II or Type III permits authorized within a designated geologically hazardous area shall comply with the following minimum standards:

(a) All plats shall disclose the presence on each residential lot one building site, including sufficient building area, sewage system, setbacks, and access, that is suitable for development and which is not within the designated geologically hazardous area or its associated buffer;

(b) All geologically hazardous areas and their buffers shall be clearly identified on all plats, maps, documents, etc.;

(c) Designated geologically hazardous areas and their associated buffers shall be designated and disclosed on the final plats, maps, documents, etc., as open space tracts, nonbuildable lot and buffer areas, or as common areas, with ownership and control

transferred to a homeowner's association. Associated geologically hazardous area buffers may alternatively be designated and disclosed on the final plats, maps, documents, etc., as an easement or covenant encumbering the property; and

(d) Areas that pose an immediate, significant threat to public safety shall be appropriately fenced and identified, as determined by the city.

(3) Surface Water Management. Stormwater retention and detention systems, including percolation systems utilizing buried pipe or french drain, are prohibited within designated geologically hazardous areas and their buffers, unless a geotechnical report indicates such a system shall not affect slope stability and the systems are designed by an engineer. The engineer shall also certify that the systems were installed as designed.

(4) Trails and Trail-Related Facilities. Construction of public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, viewing platforms and campsites, may be authorized within a designated geologically hazardous area, subject to the following minimum standards:

(a) Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;

(b) Trail facilities shall minimize the removal of trees, shrubs, snags and other important features;

(c) Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of the geologically hazardous area; and

(d) All structures shall be constructed with materials complimentary to the surrounding environment.

(5) Utilities. When no other practical alternative exists, construction of utilities within a designated geologically hazardous area may be authorized, subject to the following minimum standards:

(a) Utility corridor shall be jointly used;

(b) Corridors shall be revegetated to pre-construction densities with appropriate native vegetation immediately upon completion of construction, or as soon thereafter as possible given seasonal growing constraints. The utility purveyor shall provide an assurance device or surety in accordance with city of Entiat provisions which ensures that such vegetation survives;

(c) Any additional corridor access for maintenance shall be provided as much as possible at specific points rather than by parallel roads. If parallel roads are necessary, they shall be no greater than 15 feet in width, and shall be contiguous to the location of the utility corridor on the side opposite the designated geologically hazardous area;

(d) Construction of sewer lines within a designated geologically hazardous area which are necessary to meet state and/or local health code requirements may be authorized, provided the severity of the designated geologically hazardous area is not increased.

CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION CITY OF LEAVENWORTH

[*PLACEHOLDER LANGUAGE ONLY. NOT REVIEWED BY CITY STAFF. THE CITY IS CURRENTLY ENGAGED IN A CRITICAL AREAS REGULATIONS UPDATE*]

CHAPTER I. GENERAL PROVISIONS

1.010 Purpose. The purpose of this chapter is to identify and protect critical areas and satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221.

1.020 Definitions. Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions of this Program and supplemented herein.

(1) The definition of any word or phrase not listed in the definitions that is in question when administering this chapter shall be defined from one of the following sources, which shall be utilized by finding the desired definition from source (a), but if it is not available there, then source (b) may be used and so on. The sources are as follows:

(a) This Shoreline Master Program

(b) The Shoreline Management Act or the Shoreline Master Program Guidelines;

(c) Any other city resolution, ordinance, code, regulation or formally adopted comprehensive plan, or other formally adopted land use plan;

(d) Legal definitions from Washington common law or a law dictionary;

(e) The common dictionary.

(2) The following definitions shall apply:

"Active recreation" means recreational development which may include, but is not limited to, golf courses, campgrounds, R.V. parks, developed swimming beach or similar types of uses.

"Alteration" means activity which includes clearing, grading, draining, filling or other designated wetland system disturbance which results in a decrease or loss of function or value.

"Applicant" means the person, party, firm, corporation or other entity that proposes any use that could affect a critical area, as defined in this resolution.

"Aquifer" means a water-bearing stratum of permeable rock, sand or gravel.

"Aquifer recharge" means movement or percolation (usually downward) of the surface water through an unsaturated zone of soil or rock into a groundwater body.

"Aquifer recharge area" means with a recharging effect on aquifers used for potable water.

"Best management practices" means traditionally recognized conservation practices or systems of practices and management measures that;

1. Control soil loss and reduce water quality degradation caused by nutrients, animal waste, toxins and sediment; and

2. Minimize adverse impacts to surface water and groundwater flow, circulation patterns, and to the chemical, physical and biological characteristics of critical areas.

"Buffer" means an area that surrounds a wetland or parallels a river or stream and protects the wetland or river/stream from adverse impacts to the functions and values.

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

"Essential habitat" means habitat necessary for the survival of federally listed threatened, endangered and sensitive species and state listed priority species.

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

"Existing and ongoing forestry activities" means those activities conducted on lands defined in RCW 84.34.020(3) and occurring under regulation of the Forest Practices Act, on lands capable of supporting a merchantable stand of timber and not being actively used for a use which is incompatible with timber growing .

"Filling" means the act of placing (by any manner or mechanism) fill material from, to or on any soil surface, sediment surface or other fill material.

"Fish and wildlife habitat conservation area (FWHCA)" means land managed for maintaining species in suitable habitats.

"Grading" means any excavating, filling, clearing, leveling or contouring of the ground surface by human or mechanical means.

"Geologically hazardous areas" includes areas susceptible to erosion, sliding, earthquake or snow avalanche.

"Hydrophyte" means an aquatic plant growing in water or on substrata (hydric soil) that is at least periodically deficient in oxygen where the saturated soil is too wet for most plants to survive. Examples of these plants are cattails, sedges and bulrush.

"Hydric soil" means soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

"Isolated wetland" means those designated wetlands which:

1. Are outside of and not contiguous to any one-hundred-year floodplain of a lake, river or stream; and

2. Have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

“Mitigation sequencing” is detailed in Section 5.090 of this chapter.

"Monitoring" means the collection and analysis of data by various methods for the purposes of understanding and documenting changes in natural ecosystems and features. Monitoring includes gathering baseline data, evaluating the impacts of use proposals and assessing the performance of mitigation measures.

"Native vegetation" means plant species which are indigenous to the areas or location in question.

"Passive recreation" means recreational development which may include nature trails and similar types of uses generally associated with a low level of human activity and limited construction related impacts.

"Permanent erosion control" means continuous on-site and off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity or pollutants after development, construction or restoration.

"Qualified consultant" means a person who has attained a degree from an accredited college or university in the subject matter necessary to evaluate the critical area in question (e.g., biology or ecology for wetlands, water and wildlife habitat), and/or who is professionally trained and/or certified or licensed in the scientific disciplines necessary to identify, evaluate, manage and mitigate impacts to the critical area in question.

"Restoration" means the return of a critical area to a state in which its functions, values and size approach or meet its original, predevelopment state.

"Slope" means an inclined ground surface, the inclination of which is expressed as a ratio (percentage) of vertical distance to horizontal distance by the following formula:

(vertical distance / horizontal distance) X 100 = % slope

"Temporary erosion control" means the on-site or off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity or pollutants during development, construction or restoration.

"Wetland or wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

1.030 Chapter applicability.

A. When a chapter reference is used, it shall be inclusive of all of Appendix B.

B. This chapter classifies and designates critical areas in the city and establishes protection measures for critical areas within the shoreline jurisdiction of the city's incorporated limits. Any development authorized to alter the condition of any land, water or vegetation; or to alter or construct any building, structure or improvement shall be in compliance with the requirements of this chapter.

1.040 Administrator appointed. The city administrator, or his/her designee, is appointed to administer and implement this chapter.

1.050 Abrogation and greater restrictions. Unless otherwise stated, this chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another resolution, easement, covenant or deed restriction conflict or overlap, whichever is more protective of shoreline resources shall prevail, when consistent with the Shoreline Management Act.

CHAPTER 2. AQUIFER RECHARGE AREAS

2.010 Purpose and intent. The availability of good quality, potable water is essential to the citizens of the city in order to maintain a high quality of life. Identification and protection of aquifer recharge areas that are highly susceptible to potential contamination risks is essential in maintaining the quality of available potable water supplies. It is the intent of this chapter to identify and protect areas vulnerable and susceptible to contamination and protect potable groundwater supplies by reducing the possibility of groundwater contamination and risk of contamination.

2.020 Definitions. As used in this chapter:

"Aquifer" means a water-bearing stratum of permeable rock, sand or gravel.

"Aquifer recharge" means the movement or percolation (usually downward) of surface water through an unsaturated zone of soil or rock into a groundwater body.

"Aquifer recharge area" means areas with a recharging effect on aquifers used for potable water.

"Slope" means an inclined ground surface, the inclination of which is expressed as a ratio (percentage) of vertical distance to horizontal distance by the following formula:

(vertical distance / horizontal distance) X 100 = % slope.

2.030 Classification.

A. Classification is based on an evaluation of the potential for contaminant loading of a proposed land use, and the susceptibility of the proposed site. These factors identify a range which shall be used to determine the relative vulnerability to contamination of an area.

B. Aquifer recharge areas having a medium or high vulnerability rating shall be subject to the protection measures of this chapter.

2.040 Designation.

A. All wellhead protection areas which may be identified as part of local efforts to implement the 1986 Safe Drinking Water Act amendments, including sole source aquifer recharge areas, shall be designated as aquifer recharge areas.

B. Any groundwater management areas identified for the city pursuant to a groundwater management program (RCW Chapter 90.44.400 and 90.54.140 and Chapter 173-100030 WAC) I shall be designated as an aquifer recharge area(s).

C. All remaining areas in the city with a recharging effect on aquifers used for potable water that have a medium or high degree of susceptibility, as determined in Section 2.060 shall be designated as an aquifer recharge area.

2.050 Vulnerability rating--General. The vulnerability matrix is used to determine the vulnerability of an aquifer recharge area and to rate it as high, medium or low. This can be done by determining the contaminant loading potential of a proposed land use and the natural susceptibility of the proposed site. A vulnerability rating is determined by numerical value for a proposed use based on contaminant loading potential and susceptibility factors. When a proposed use is determined to have a high or medium vulnerability rating, protection measures shall be implemented that protect the potable water supply..

2.060 Determining susceptibility.

A. The three basic components to determine a site's susceptibility are:

1. Permeability;
2. Depth to groundwater;
3. Slope.

B. Permeability of the Soil. Movement of water through the soil (permeability) can be measured in inches per hour. Permeability of soils in Chelan County has been identified in the published soil survey developed by the USDA Soil Conservation Service, Table 6, pp. 66-73. Incrementally, the permeability of local soils is grouped into six ranges, and can be assigned a relative value to be used for determining susceptibility on the matrix. These are:

Permeability -Inches/Hour	Susceptibility Rating Number
.06--.20	1
.20--.63	2
.63--2.0	3
2.0--6.3	4
6.3--20.	5
>20.00 6	6

C. Depth to Groundwater. Depth to groundwater can be determined by utilizing local well log information or specific well information for the site. Depth to groundwater is also assigned a relative value used for determining susceptibility on the matrix. These are:

Depth to Groundwater -Feet	Depth to G.W. Relative Value
>100'	0
75'--100'	1
50'--75'	2
25'--50'	3
<25'	4

D. Slope. Slope is assigned a relative value used for determining susceptibility on the matrix. These are:

Slope (percent)	Slope Relative Value
>4.5%	1
30%--45%	2
15%--30%	3
>15%	4

E. Determining Susceptibility Rating. A susceptibility rating is determined by adding the relative values of permeability, depth to groundwater and slope. This is a baseline determination for susceptibility. 'The range of values is as follows:

High susceptibility = Total range from 11--14 High
Medium susceptibility = Total range from 7--10 Medium
Low susceptibility = Total range from 3--6 Low

2.070 Determining contaminant loading.

A. Different types of land use proposals often pose potential impacts to potable groundwater supplies associated with aquifer recharge areas. These potential impacts are directly related to the human factor which accompanies a change in the land use.

B. The following types of land uses have been assembled from the description of waste sources compiled by Standard Industrial Code number (SIC). These land use types have been assigned a potential contaminant loading rating. The different categories and initial ratings are as follows:

GENERAL CONTAMINANT LOADING POTENTIAL RATING

Proposed land use	Contaminant loading
Agricultural Production	
Crops	1-2
Livestock	3
Feedlots	5
Mining	
Metal	4-6
Sand and gravel	2
Commercial/Industrial	2-9

Forestry	2
Sawmills	2
Pulp mills	6
Public Utility Services	
Electric	3-5
Gas	3
Water supply	2
Sewerage	2-5
Garbage transfer	2-9
Construction	
Residential	2-4
low density	2
high density	3-4
Commercial	3-6
Industrial	3-9
High contaminant loading potential =	7-9 High
Medium contaminant loading potential =	4-6 Medium
Low contaminant loading potential =	1-3 Low

2.080 Vulnerability matrix.

A. A determination of high, medium or low vulnerability is determined from the matrix by identifying susceptibility and contaminant loading:

	Susceptibility
High susceptibility = Total range from	11-14 High
Medium susceptibility = Total range from	7-10 Medium
Low susceptibility = Total range from	3-6 Low

	Contaminant Loading
High contaminant loading potential =	7-9 High
Medium contaminant loading potential =	4-6 Medium
Low contaminant loading potential =	1-3 Low

B. After determining a susceptibility and contaminant loading potential for the proposed use and site, check the appropriate box on each axis of the following matrix and determine the vulnerability.

VULNERABILITY MATRIX

CONTAMINANT LOADING →

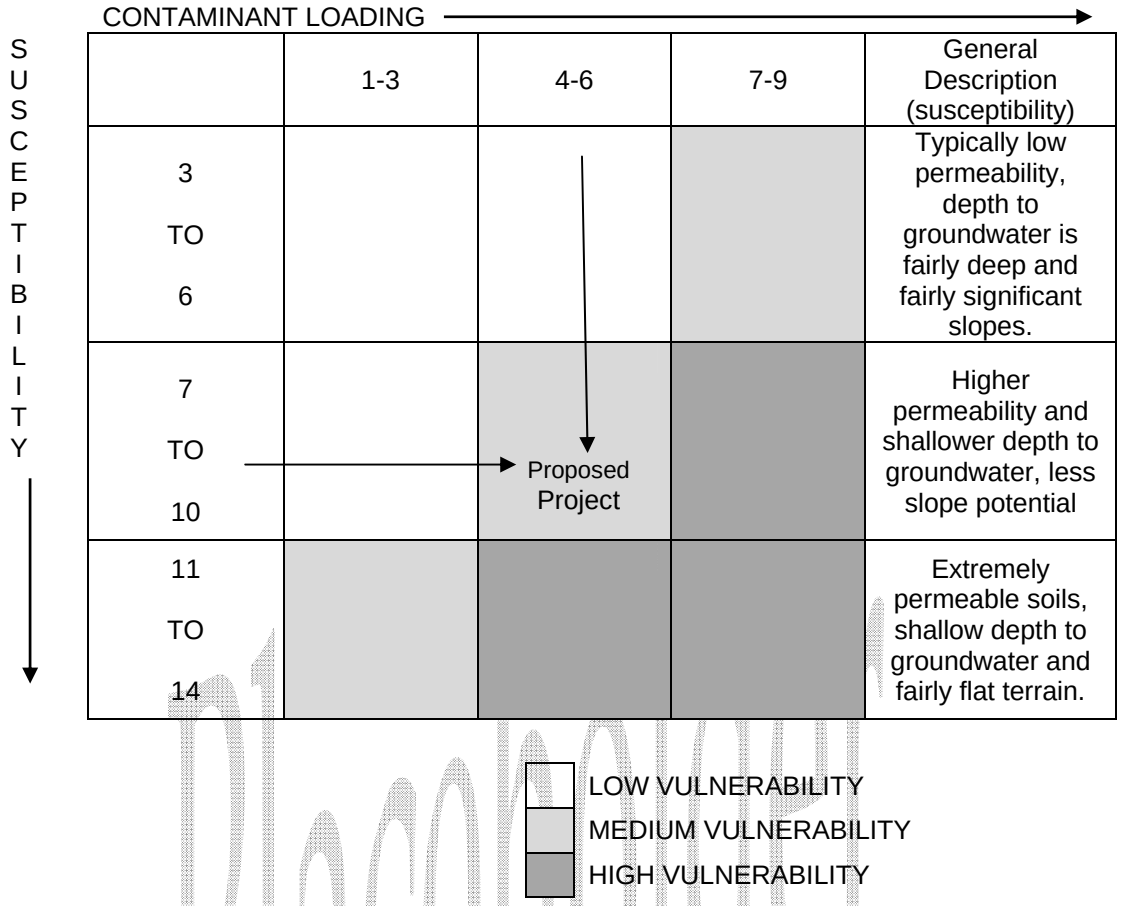
SUSCEPTIBILITY ↓

	1-3	4-6	7-9	General Description (susceptibility)
3 TO 6				Typically low permeability, depth to groundwater is fairly deep and fairly significant slopes.
7 TO 10				Higher permeability and shallower depth to groundwater, less slope potential
11 TO 14				Extremely permeable soils, shallow depth to groundwater and fairly flat terrain.

LOW VULNERABILITY
MEDIUM VULNERABILITY
HIGH VULNERABILITY

C. The susceptibility and contaminant loading potential for the proposed use and site should be marked at each axis. The vulnerability of the site is then determined by the intersection of the susceptibility rating and the contaminant loading rating to be either low, medium, or high. For example: the project site has a susceptibility rating of 9 and the proposed use has a contaminant loading potential of 5. The intersection of those two numbers shows that the proposed project would have a medium vulnerability potential. See the following table for a graphic display of the example.

VULNERABILITY MATRIX EXAMPLE



2.090 Agricultural activities--Purpose. Agricultural activities are encouraged to incorporate best management practices concerning waste disposal, fertilizer use, pesticide use and stream corridor management and seek the technical assistance of the Chelan County conservation district, cooperative extension agent and local fieldmen.

2.100 Land divisions protection measures. If subdivisions, short subdivisions, planned developments, binding site plans and related developments are determined to have a medium or high vulnerability the following protection measures may be required:

A. An analysis of the potential nitrate loading to the groundwater may be required to assess the impact to groundwater quality;

B. Alternative site designs, phased development and/or groundwater quality monitoring may be required;

C. Open spaces may be required;

D. Stormwater drainage and containment facilities may be required to incorporate biofiltration.

2.110 Solid waste disposal facilities. Landfills, junk yards, salvage yards, auto wrecking yards and other solid waste disposal facilities, except those for the disposal of brush, stumps or other vegetative waste, shall demonstrate that negative impacts would be overcome in such a manner as to prevent impacts to aquifer recharge areas.

2.120 Parks, schools and recreation facilities. Fertilizer, herbicide and pesticide management practices of schools, parks, golf courses and other nonresidential facilities that maintain large landscaped areas shall be evaluated in relation to best management practices as recommended by the cooperative extension service.

2.130 Commercial and industrial uses.

A. Stormwater Standards. All new commercial and industrial land uses which either:

1. Have greater than five thousand square feet of impervious area; or,
2. Handle, store, dispose, transport or generate hazardous substances/wastes defined as dangerous or extremely hazardous wastes under WAC 173-303-070 through 103, which may come in contact with stormwater runoff including, but not limited to, gas stations and distributors, car washes, trucking companies and paint shops, shall remove, contaminants prior to their entry into surface or groundwater resources using available and reasonable best management practices. (Maintenance of stormwater infiltration systems must be assured as a permit condition of the review authority.)

B. Contingency Plans. All commercial and industrial uses that are rated as having a medium or high vulnerability, shall submit a contingency plan that identifies:

1. Types of hazardous wastes that would be used for the proposed land use;
2. On-site containment facilities designed to handle accidental releases of hazardous wastes;
3. Spill response and notification procedures.

2.140 Utilities--Emergency spill management. Utility facilities which carry any hazardous substance as defined in WAC 173-303 may be required to provide hydrologic information, and prepare and have approved by the Chelan County fire marshal, Chelan County department of emergency services, the local fire district and/or environmental health department, measures to provide notification of spill response, spill prevention measures and an emergency spill management plan.

2.150 Aboveground application of sewage or sludge. Projects which involve application of sewage or sludge in areas determined to have a medium or high susceptibility to groundwater contamination shall provide hydrologic information and a management plan that identifies measures that significantly reduce or eliminate the threat to contamination and shall conform to all other applicable state regulations. .

CHAPTER 3. FISH AND WILDLIFE HABITAT CONSERVATION AREAS

3.010 Purpose. It is the purpose of this article to reasonably insure the protection of fish and wildlife and their habitats. The desired goal is to preserve, enhance, protect and promote fish and wildlife habitat within the city and those species listed on the Federal and State Endangered Species List as well as those identified on the Priority Habitats and Species (PHS) map. It .is also the intent of this section to insure that development and fish and wildlife are provided the opportunity to coexist.

3.020 Definitions. As used in this article:

"Buffer(s)" means an area that surrounds a wetland or parallels a river or stream and protects the wetland or river/stream from adverse impacts to the functions and values.

"Essential habitat" means habitat necessary for the survival of federally listed threatened, endangered and sensitive species and state listed priority species.

3.030 Policy statements.

A. The city recognizes that the Federal Endangered Species Act (ESA) applies to all lands within the city.

B. The city recognizes the current WDFW Priority Habitat Species (PHS) map which identifies riparian areas and winter range.

C. The City of Leavenworth recognizes the habitat importance of naturally occurring wetlands.

D. The City of Leavenworth recognizes all bodies of water in City of Leavenworth as waters of the state.

E. It is the policy of the City of Leavenworth to support the natural and human assisted propagation of fish in lakes and streams in Chelan County by encouraging development that would enhance or mitigate impacts to fish habitat.

F. The City of Leavenworth recognizes and supports the Adopt A Stream program.

G. The City of Leavenworth recognizes the importance of natural area preserves and natural resource conservation areas. Furthermore, it is the policy of the City of Leavenworth to promote the establishment of man made preserves and conservation areas and to prohibit development within a preserve or a conservation area.

H. The City of Leavenworth recognizes the publication *Management Recommendations for Priority Habitats and Species* as a useful guide to conservation and management of wildlife resources. It is the policy of the City of Leavenworth to consider the management recommendations found within the aforementioned publication as a guide in reviewing development applications.

3.040 Classification and designation. Nesting and roosting sites, winter range areas, and riparian zones as designated on the PHS map are classified and designated as fish and wildlife habitat conservation areas.

3.050 Riparian buffers.

A. Buffers shall consist of an undisturbed area of native vegetation. The function of the buffer is to provide canopy cover for fish; to provide soil stability to minimize soil erosion and sedimentation of streams; and to provide habitat for small species that are part of the ecosystem of the stream and the riparian zone.

B. Required buffers in riparian zones on streams classified by the Washington State Department of Natural Resources (DNR) in WAC 222-16-030 "Water Typing System," as Type F, Np, or Ns shall be 75, 50, and 25 feet from the ordinary high water mark, respectively, landward from the ordinary high water mark on each side of the body of water. The required buffer shall be measured as a slope distance, not a horizontal distance.

3.060 Nests and roost buffers.

A. The buffer is intended to reduce the area of disturbance around a nest or a roost which, if disturbed by development, may cause the birds to abandon their nest or roost site.

B. When proposed activities which require development permits are within five hundred feet of active Golden Eagle, Great Blue Heron or communal eagle roost; or, within one hundred feet of active Osprey, or Common Loon nests, a site management plan shall be cooperatively developed by the proponent, the city and the Washington Department of Wildlife. Each site management plan will be based upon unique characteristics of individual birds, surrounding land uses, physiography and land owner goals in relation to proposed activities.

3.070 Wildlife habitat conservation plan. A wildlife habitat conservation plan may be required for any subdivision, short subdivision, cluster development or conditional use within a fish and wildlife habitat conservation area. A wildlife habitat management plan may be waived if the administrator determines that the proposed project will not have an impact on the wildlife habitat.

3.080 Performance standards. Some or all of the following protection elements may be required of proposed development projects within fish and wildlife habitat conservation area.

A. Site planning shall minimize disruption of existing topography and vegetation, and shall incorporate opportunities for phased clearing.

B. Disturbed areas shall be revegetated within one growing season of project completion, in accordance with an approved revegetation plan, where appropriate.

C. Excavation and grading shall be prohibited within identified riparian zones and buffer areas along Type F, Ns and Np streams.

D. Temporary erosion and sedimentation controls may be utilized during construction until a permanent control measure is achieved.

E. A drainage plan shall be prepared for projects affecting areas of winter range and critical winter range lands.

F. Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval shall be marked in the field and approved by the city prior to undertaking the project.

3.090 Residential performance standards. Short subdivisions and subdivisions within fish and wildlife habitat conservation areas may be required to prepare a wildlife habitat conservation plan. These divisions of land may require the provision of open space for wildlife habitat as a part of the wildlife habitat conservation plan.

CHAPTER 4. GEOLOGICALLY HAZARDOUS AREAS

4.010 Purpose and intent. A. The city finds that certain portions of the city are characterized by geologic hazards that may pose a risk to public and private property, human life and safety and the natural systems that make up the environment of the city. These lands are affected by natural processes that make them susceptible to landslides, erosion or earthquake.

B. The intent of this chapter is to reduce the threat posed to the public health, safety and general welfare of city residents when residential, commercial or industrial development is located in areas susceptible to geologic hazard events. Some geological hazards can be reduced or mitigated by engineering, design or modified construction so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided.

4.020 Definitions. As used in this article:

"Clearing" means the destruction and removal of vegetation by burning, mechanical or chemical methods.

"Grading" means excavating, filling, clearing, leveling or contouring of the ground surface by human or mechanical means.

"Geologically hazardous areas" includes areas susceptible to erosion, sliding, earthquake or snow avalanche.

"Permanent erosion control" means the continuous onsite and off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity or pollutants after development, construction or restoration.

"Temporary erosion control" means the on-site or off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity or pollutants during development, construction or restoration.

4.030 Classification.

A. Classification of each geologically hazardous area will be based upon the risk to development. The following categories shall be used:

1. Known risk:
    a. High;
    b. Moderate;
    c. Low.
2. Risk unknown.

B. Areas that are susceptible to one or more of the following types of hazards shall be classified as a geologically hazardous area.

1. "Erosion hazard areas" are those areas identified by the U.S. Department of Agriculture Soil Conservation Service Chelan County Soil Survey Manual as having a high erosion hazard.

2. "Landslide hazard areas" includes areas potentially subject to landslides based on a combination of geologic, topographic and hydrologic factors. They include any areas susceptible to mass movement because of any combination of bedrock soil, slope (gradient), slope aspect, structure, hydrology, damage or removal of vegetative cover or other factors. Examples of these may include, but are not limited to the following:

a. Areas of historic failures, such as:

i. Those areas delineated by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development,

ii. Areas designated as quaternary slumps, earthflows, mudflows or landslides on maps published as the United States Geological Surveyor department of natural resources division of geology and earth resources,

iii. Areas located on a landslide feature which has shown movement during the past ten thousand years or which is underlain or covered by mass wastage debris of that period,

iv. Slopes that are adjacent to existing fault planes or similar geologic formations;

b. Areas with all three of the following characteristics:

i. Slopes steeper than fifteen 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. Areas potentially unstable as a result of rapid stream incision, stream bank erosion and undercutting by wave action;

d. Areas located on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding;

e. Any area with a slope of forty-five percent or steeper and with a vertical relief of ten or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

3. Seismic hazard areas: Chelan County is located in a 2B Seismic Zone. The Uniform Building Code contains provisions for construction.

4.040 Designation. Designation of geologic hazard areas shall be based on the classifications defined and established in Section 4.030.

4.050 Performance standards. The following protection elements should be applied during city review of proposed development projects within geologically hazardous areas:

A. Construction methods should be utilized which minimize risks to structures and which do not increase the risk to the site, or to adjacent properties and their structures, from the geologic hazard. Development shall not increase instability or create a hazard to the site or adjacent properties, or result in a significant increase in sedimentation or erosion.

B. Site planning should minimize disruption of existing topography and natural vegetation, and should incorporate opportunities for phased clearing.

C. Disturbed areas shall be replanted within one year of project completion, in accordance with an approved revegetation plan, where appropriate.

D. Impervious surface coverage shall be minimized.

E. Excavation and grading shall be minimized. The clearing and grading schedule shall consider limitations based upon seasonal weather conditions.

F. Detailed drainage plans may be required for projects affecting areas of geologic hazard, These plans should indicate the affect the project may have on the hazard area and adjacent properties and mitigating measures, with stormwater detention standards based upon the technical studies required under this document.

G. Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval should be marked in the field and approved by the county prior to undertaking the project.

H. A monitoring program should be prepared for construction activities occurring in geologic hazard areas and be marked on the face of the building permit.

I. All authorized clearing for roads, utilities, etc, should be limited to the minimum necessary to accomplish engineering design. Alterations should meet the following requirements:

1. Clearing, grading or filling of sloped sites containing erosion hazard areas should be limited by weather conditions and an approved erosion control plan;

2. All clearing shall be marked in the field for inspection and approval prior to alteration of the site;

3. The face of cut and filI on slopes shall be prepared and maintained to control against erosion.

J. An erosion control plan should be submitted by the applicant for a development, prior to approval of the proposal. Temporary erosion and sedimentation controls should be utilized during construction and until a permanent control measure is achieved. Further, to minimize blowing soil during development, appropriate water and/or mulch material should be applied to any areas without a vegetative cover.

K. To maintain the natural integrity of landslide hazard areas and to protect the environment, and the public health and safety, adequate vegetation should be maintained around all sides of the landslide hazard area.

L. Development proposals that involve altering land upon areas identified as Landslide Hazard Areas must demonstrate the following for approval:

1. There is no evidence of recent landslides in the vicinity of the proposed development and quantitative analysis of slope stability indicates no significant risk to the proposed development or other properties;

2. The landslide hazard areas can be modified or the project can be designed so that the landslide hazard to the project is eliminated;

3. The development proposal would cause no increase in surface water discharge or sedimentation to other properties, and would not decrease slope stability on other properties;

4. Disturbance of trees and vegetation would be minimal in order to prevent erosion, stabilize slopes, and preserve the natural character of the area;

5. Structures and improvements would be located to preserve the most sensitive portion of the site and its natural landforms and vegetation.

CHAPTER 5. WETLANDS

5.010 Purpose and intent.

A. Wetlands and their buffer areas are valuable natural systems with significant natural constraints. In their natural state wetlands provide many ecological functions and values that insure the general health, safety and welfare of the citizens of Leavenworth. Physical functions of wetlands include: water quality values (pollution filtration, sediment removal, oxygen production, nutrient recycling and chemical and nutrient absorption), aquatic productivity, microclimate regulation, and fish and wildlife habitat. Values of wetlands include: flood control, wave damage protection, erosion control, groundwater recharge, domestic/irrigation water supply, timber/natural resources, energy resources (peat), livestock grazing, fishing/hunting, recreation, aesthetics, education/scientific research and migratory waterfowl. This chapter is intended to prevent adverse environmental impacts to designated wetlands and associated buffers. These protection measures are designed to protect designated wetlands based on overall uniqueness and value of the wetland and intensity of proposed land use.

B. This chapter is designed to reflect the following priority issues as a part of the overall goal:

1. There shall be no net loss of wetland area or the ecological functions and values of the wetland, including lost time when the wetland does not perform impacted functions;

2. Protect property rights;

3. Encourage voluntary creation of wetland areas;

4. Compensation for loss of value of lands designated as wetlands and to include their required buffers.

These specific goal components should be sought without infringement on the health and welfare of the citizens of Leavenworth.

5.020 Definitions. As used in this chapter:

"Active recreation" means recreational development which may include, but is not limited to, golf courses, campgrounds, R.V. parks, developed swimming beach or similar types of uses.

"Alteration" means activity which includes clearing, grading, draining, filling or other designated wetland system disturbance which results in a decrease or loss of function or value.

"Hydrophyte" means an aquatic plant growing in water or on a substrata (hydric soil) that is at least periodically deficient in oxygen where the saturated soil is too wet for most plants to survive. Examples of these plants are cattails, sedges and bulrush.

"Hydric soil" means soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

"Passive recreation" means recreational development which may include nature trails and similar types of uses generally associated with a low level of human activity and limited construction related impacts.

"Wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway.. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

"Wetland edge" means the boundary between a wetland and the upland area.

5.030 Identification and Delineation. Wetlands shall be identified and delineated by a qualified wetland professional in accordance with the *Washington State Wetlands Identification and Delineation Manual* (Ecology Publication #96-94, or as revised and approved by Ecology).

5.040 Classification--Wetland rating system. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology), which contains the definitions and methods for determining whether the criteria below are met.

A. Category I wetlands are: 1) alkali wetlands; 2) wetlands that are identified by scientists of the Washington Natural Heritage Program/DNR as high quality wetlands; 3) bogs; 4) mature and old-growth forested wetlands over ¼ acre with slow-growing trees; 5) forests with stands of aspen; and 6) wetlands that perform many functions very well (scores of 70 points or more). These wetlands are those that 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; or 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of function.

B. Category II wetlands are: 1) forested wetlands in the floodplains of rivers; 2) mature and old-growth forested wetlands over ¼ acre with fast-growing trees; 3) vernal pools; and 4) wetlands that perform functions well (scores between 51-69 points).

C. Category III wetlands are 1) vernal pools that are isolated and 2) wetlands with a moderate level of functions (scores between 30-50 points). Wetlands scoring between 30 and 50 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

D. Category IV wetlands have the lowest level of functions (scores fewer than 30 points) and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected.

5.050 Wetland Buffers

A. Buffer Requirements. The standard buffer widths in Table 5.1 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for eastern Washington.

1. The use of the standard buffer widths requires the implementation of the measures in Table 5.2, where applicable, to minimize the impacts of the adjacent land uses.

2. If an applicant chooses not to apply the mitigation measures in Table 5.2, then a 25% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 93.75-foot buffer without them.

3. 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.

4. Additional buffer widths are added to the standard buffer widths. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 150 feet (75 + 75).

Table 5.1 Wetland Buffer Requirements Eastern Washington

Wetland Category	Standard Buffer Width	Additional buffer width if wetland scores 21-25 habitat points	Additional buffer width if wetland scores 26-29 habitat points	Additional buffer width if wetland scores 30-36 habitat points
Category I: Based on total score	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I: Forested	75ft	Add 15 ft	Add 45 ft	Add 75 ft
Category I: Bogs	190 ft	NA	NA	NA
Category I: Alkali	150 ft	N/A	NA	NA
Category I: Natural Heritage Wetlands	190 ft	N/A	NA	NA
Category II: Based on total score	75 ft	Add 15 ft	Add 45 ft	Add 75 ft
Category II: Vernal pool	150	NA	NA	NA
Category II: Forested	75 ft	Add 15 ft	Add 45 ft	Add 75 ft
Category III (all)	60 ft	Add 30 ft	Add 60 ft	NA
Category IV (all)	40 ft	NA	NA	NA

Table 5.2 Required measures to minimize impacts to wetlands

(Measures are required, where applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per PSAT publication on LID techniques)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns

Disturbance	Required Measures to Minimize Impacts
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

B. Increased Wetland Buffer Area Width. Buffer widths shall be increased on a case-by-case basis as determined by the Administrator 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:

1. 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; or

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

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

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

1. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower-rated area.

2. The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.

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

4. The buffer at its narrowest point is never less than either ¾ 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.

D. To facilitate long-range planning using a landscape approach, the Administrator may identify and pre-assess wetlands using the rating system and establish appropriate wetland buffer widths for such wetlands. The Administrator will prepare maps of wetlands that have been pre-assessed in this manner.

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

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

G. Buffer Maintenance. Except as otherwise specified or allowed in accordance with this chapter, 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 monitoring period.

H. Impacts to Buffers. Compensation for impacts to buffers must be implemented at a minimum 1:1 ratio.

I. Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

J. Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

1. Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.

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

3. Walkways and trails, provided that those 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 twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable.

4. Wildlife-viewing structures.

5. Educational and scientific research activities.

6. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.

7. 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.

8. Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary, provided that the

drilling does not interrupt the ground water 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 ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

9. Enhancement of a wetland buffer through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal. 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. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

10. Stormwater management facilities. Stormwater management facilities are limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer twenty-five percent (25%) 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; and

c. Stormwater management facilities are not allowed in buffers of Category I or II wetlands.

11. Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

12. Signs and Fencing of Wetlands and Buffers.

a. Temporary markers. The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary "clearing limits" fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the Administrator prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

b. Permanent signs. As a condition of any permit or authorization issued pursuant to this chapter, the Administrator 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 (1) per lot or every fifty (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 Administrator:

"Protected Wetland Area; Do Not Disturb; Contact [Local Jurisdiction] Regarding Uses, Restrictions, and Opportunities for Stewardship"

ii. The provisions of Subsection (i) may be modified as necessary to assure protection of sensitive features or wildlife.

c. 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 so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

5.060 Road/street construction. Any private or public road or street construction which is allowed within a designated wetlands or buffer shall comply with the following minimum development standards:

A. No other practicable alternative exists;

B. Construction and/or expansion of any road within a designated wetland or buffer shall be allowed when there are no significant adverse impacts to the designated wetland(s), that cannot be mitigated;

C. The road or street crossing should provide for other purposes, such as utility crossings, pedestrian easements, where appropriate;

D. Stormwater runoff facilities associated with road and street construction shall be consistent with Section 16.08.510.

5.070 Subdivisions, short subdivisions and binding site plans. All proposed divisions of land which include designated wetlands shall comply with the following procedures and development standards:

A. Up to fifty percent of the proposed development area may be wetland and used in establishing the maximum density. Any land that is usually submerged shall not be used in the density calculation.

B. Wetland buffers may be included in the calculation of minimum area for proposed lots.

C. New lots shall contain at least one site, including access, that is suitable for development and is not within the designated wetland or its buffer area.

D. In order to implement the goals and policies of this section, to accommodate innovation, creativity, design flexibility and the potential for density bonuses to achieve a level of environmental protection that would not be possible by typical lot-by-lot development, the use of the planned development process as described in the city Zoning Code is strongly encouraged for projects within a designated wetland..

5.080 Erosion control.

A. Work performed in designated wetlands and their associated buffers that involves filling, grading or disturbance should be minimized. A detailed grading plan

shall be prepared that identifies the project and work to be performed, and that is consistent with the protection measures of this section.

B. Protection measures required and identified in the grading plan may include temporary measures applied during construction. Typically this may include the use of filter fabrics in the construction area, revegetation plans and/or revegetation of areas adjacent to the construction area and identification of any filling or cutting as part of the overall site preparation or final grade.

5.090 Compensatory Mitigation

A. Mitigation Sequencing. Before impacting any wetland or its buffer, an applicant shall demonstrate that the following actions have been taken. Actions are listed in the order of preference.

1. Avoid the impact altogether by not taking a certain action or parts of an action.

2. Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.

4. Reduce or eliminate the impact over time by preservation and maintenance operations.

5. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.

6. Monitor the required compensation and take remedial or corrective measures when necessary.

B. Requirements for Compensatory Mitigation

1. 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.

2. Mitigation ratios shall be consistent with Table 5.3 of this Chapter.

C. 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:

1. 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

2. 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.

D. Preference of Mitigation Actions. Methods to achieve compensation for wetland functions shall be approached in the following order of preference:

1. Restoration (re-establishment and rehabilitation) of wetlands.

2. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. 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.

3. Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

4. Preservation. 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. 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:

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

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

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

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

All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

E. Type and Location of Compensatory Mitigation. Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

1. 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);

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

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

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

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

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

F. 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.

1. The Administrator 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. The justification must be verified and approved by the City.

Table 5.3. Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation	Enhancement	Preservation
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Case-by-case	10:1
Category I: Mature Forested	6:1	12:1	24:1	24:1
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II:	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

G. 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:

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

2. 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).

3. 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 impacted. 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, based on Section 5.040, Classification – Wetland rating system of this Chapter.

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

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

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

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

iii. Surface and subsurface hydrologic conditions including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions.

iv. 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.

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

vi. A plant schedule for the 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.

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

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

CHAPTER 6. FREQUENTLY FLOODED AREAS

6.010 Statement of purpose. It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas within shoreline jurisdiction by provisions designed:

A. To protect human life and health;

B. To minimize expenditure of public money and costly flood control projects;

C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. To minimize prolonged business interruptions;

E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;

F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;

G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

This chapter was created to meet the requirements of participation in the National Flood Insurance Program and is not intended to offer environmental protections to floodplain areas other than those protections which are provided de facto as a result of adoption and implementation of the ordinance codified in this chapter. Environmental protection of floodplains is currently regulated under the city's critical areas ordinance.

6.020 Frequently flooded areas--Classification. Those areas located within the one hundred-year floodplain as defined by the Federal Emergency Management Agency shall be classified as frequently flooded areas. The one-hundred-year floodplain represents lands which are subject to a one percent or greater chance of flooding in any given year.

6.030 Frequently flooded areas--Designation. The Flood Insurance Rate Maps (FIRM) and floodway maps along with the "Flood Insurance Study--City of Leavenworth"

prepared by the National Flood Insurance Program (NFIP) are adopted as the formal designation for frequently flooded areas.

6.040 Methods of reducing flood losses. In order to accomplish its purposes, this chapter includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or may increase flood hazards in other areas.

6.050 Definitions. Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions, of this Program and Chapter 21.90 LMC. Unless specifically defined, words or phrases used shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

6.060 Lands to which this chapter applies. This chapter shall apply to all areas of special flood hazards within that portion of shoreline jurisdiction located in the jurisdiction of the city of Leavenworth.

6.070 Basis for establishing the areas of special flood hazard. The 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 Leavenworth" dated July 2, 2002, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM), and any revisions thereto, are adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and the FIRM are on file at Leavenworth City Hall. The best available information for flood hazard area identification as outlined in 6.140(B), Use of Other Base Flood Data, shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under LMC 6.140(B).

6.080 Abrogation and greater restrictions. This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

6.090 Interpretation. In the interpretation and application of this chapter, all provisions shall be:

A. Considered as minimum requirements;

B. Liberally construed in favor of the governing body; and

C. Deemed neither to limit nor repeal any other powers granted under state statutes.

6.100 Warning and disclaimer of liability. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

6.110 Development permit required. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 6.070, Basis for establishing the areas of special flood hazard. The permit shall be for all structures including manufactured homes, as set forth in the definitions found in Chapter 21.90 LMC, and for all development including fill and other activities, also as defined in Chapter 21.90 LMC.

6.120 Application for development permit. Application for a development permit shall be made on forms furnished by the city and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures; fill; storage of materials; drainage facilities; and the location of the foregoing. Specifically, the following information is required:

A. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;

B. Elevation in relation to mean sea level to which any structure has been floodproofed;

C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in 6.160(B), Nonresidential Construction; and

D. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

6.130 Designation of the local administrator. The community development director is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

6.140 Duties and responsibilities of the local administrator. Duties of the community development director, and his or her designee, shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.

2. Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.

3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 6.180(A), Floodways, are met.

B. Use of Other Base Flood Data (In A and V Zones). When base flood elevation data has not been provided (A and V Zones) in accordance with Section 6.070, Basis for establishing the areas of special flood hazard, the community development director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Section 6.160, Specific standards, and Section 6.180, Floodways.

C. Information to Be Obtained and Maintained.

1. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in subsection (B) of this section, Use of Other Base Flood Data (In A and V Zones), obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

2. For all new or substantially improved floodproofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in subsection (B) of this section, Use of Other Base Flood Data (In A and V Zones):

a. Obtain and record the elevation (in relation to mean sea level) to which the structure was floodproofed; and

b. Maintain the floodproofing certifications required in Section 6.120(C), Application for development permit.

3. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the department of ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

2. Require that maintenance is provided within the altered or relocated portion of the watercourse so that the flood carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions).

The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 6.200, Appeal/variance procedure.

6.150 General standards for flood hazard reduction. In all areas of special flood hazards, the following standards are required:

A. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

2. All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

B. AH Zone Drainage. Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

C. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

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

D. Utilities.

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems;

2. The proposed water well shall be located on high ground that is not in the floodway (WAC 173-160-171);

3. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters; and

4. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

E. Subdivision Proposals.

1. All subdivision proposals shall be consistent with the need to minimize flood damage;

2. All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;

3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and

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

F. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 6.140(B), Use of Other Base Flood Data (In A and V Zones)), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

6.160 Specific standards. In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) as set forth in Section 6.070, Basis for establishing areas of special flood hazard, or Section 6.140(B), Use of Other Base Flood Data (In A and V Zones), the following provisions are required:

A. Residential Construction.

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

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

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

b. The bottom of all openings shall be no higher than one foot above grade.

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

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

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

2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 6.140(C)(2), Information to Be Obtained and Maintained;

4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (A)(2) of this section, Residential Construction.

5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below).

C. Manufactured Homes.

1. All manufactured homes to be placed or substantially improved on sites:

a. Outside of a manufactured home park or subdivision;

b. In a new manufactured home park or subdivision;

c. In an expansion to an existing manufactured home park or subdivision; or

d. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

2. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the above manufactured home provisions shall be elevated so that either:

a. The lowest floor of the manufactured home is elevated one foot or more above the base flood elevation; or

b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

D. Recreational Vehicles. Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 180 consecutive days;

2. Be fully licensed and ready for highway use, on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

3. Meet the requirements of subsection (C) of this section, Manufactured Homes, and the elevation and anchoring requirements for manufactured homes.

6.170 Before regulatory floodway. In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

6.180 Floodways. Located within areas of special flood hazard established in Section 6.070, Basis for establishing the areas of special flood hazard, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

2. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either:

a. Before the repair, or reconstruction is started; or

b. If the structure has been damaged, and is being restored, before the damage occurred.

Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or to structures identified as historic places shall not be included in the 50 percent.

C. If subsection (A) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 6.150, General standards for flood hazard reduction; Section 6.160, Specific standards; Section 6.170, Before regulatory floodway; and this section.

6.190 Critical facility. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year

floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

6.200 Appeal/variance procedure. The hearing examiner, as established by LMC Title 21, shall hear and decide appeals and requests for variances from the requirements of this chapter considering the Shoreline Variance criteria contained in Section 7.8.2 of this Shoreline Master Program.

A. Appeals.

1. The hearing examiner shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the community development director in the enforcement or administration of this chapter.

2. Those aggrieved by the decision of the community development director may appeal such decision to the hearing examiner, as provided in LMC Title 21.

3. In passing upon such applications, the hearing examiner shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

a. The danger that materials may be swept onto other lands to the injury of others;

b. The danger to life and property due to flooding or erosion damage;

c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

d. The importance of the services provided by the proposed facility to the community;

e. The necessity to the facility of a waterfront location, where applicable;

f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

g. The compatibility of the proposed use with existing and anticipated development;

h. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

i. The safety of access to the property in times of flood for ordinary and emergency vehicles;

j. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and

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

4. Upon consideration of the factors of subsection (A)(3) of this section, and the purposes of this chapter, the hearing examiner may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

5. The city of Leavenworth shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

B. Conditions for Variances.

1. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing subsections (A)(3)(a) through (k) of this section have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.

2. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

3. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

5. Variances shall only be issued upon:

a. A showing of good and sufficient cause;

b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

6. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

7. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except subsection (B)(1) of this section, and otherwise complies with Section 6.150(A), Anchoring, Section 6.150(C), Construction Materials and Methods, and Section 6.150(D), Utilities, of the general standards.

8. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

6.210 Penalties for noncompliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violations of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall be subject to enforcement action pursuant to Chapter 21.13 LMC. Nothing herein contained shall prevent the city from taking such other lawful action as is necessary to prevent or remedy any violation.

CHAPTER 7. TECHNICAL STUDY AND REPORTING

7.010 Requirements.

A. Preapplication Conference. All applicants are encouraged to meet with the city prior to submitting an application subject to this chapter. The purpose of this meeting shall be to discuss the city's critical areas requirements, processes and procedures; to review any conceptual site plans prepared by the applicant: to discuss appropriate investigative techniques and methodology; to identify potential impacts and mitigation measures and to schedule a site visit. Such conference shall be for the convenience of the applicant and any recommendations shall not be binding on the applicant or the city.

B. Technical Study Requirements. Applicants for activities within critical areas may be required to conduct technical studies to:

1. Evaluate the actual presence of wetlands, areas with a critical recharging effect on aquifers used for drinking water, fish and wildlife habitat conservation areas, frequently flooded areas or geologically hazardous areas. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information;

2. Determine the appropriate hazard category, according to the classification of potential hazards in these regulations;

3. Evaluate safety issues related to proposed activities.

C. Reporting. Any new residential subdivision or short plat that is determined to be in a critical area shall have a note placed on the face of the plat and on the title report stating that the site is located in a critical area, and what hazard or critical area element is present. Said note may include the language listed below:

1. Documentation from the applicant stating their understanding and acceptance of any risk of injury or damage associated with the development of the site and agreeing to notify future purchasers of the site, portions of the site, or structures located on the site of the presence of the hazard or critical area and the potential risk of injury or damage;

2. A legally enforceable agreement, which shall be recorded as a covenant and noted on the face of the deed or plat, acknowledging the site is located in a geologic hazard area and the risks associated with development of the site, and including a waiver and release of any and all claims of the owners, their directors, employees, successors or assigns against the city for any loss, damage or injury, whether direct or indirect, arising out of the issuance of development permits for the proposal.

CRITICAL AREAS REGULATIONS IN SHORELINE JURISDICTION CITY OF WENATCHEE

SECTION 1.0
PURPOSE AND OBJECTIVES

The regulations of this chapter are intended to protect critical areas, and satisfy the requirements of the Shoreline Management Act for critical areas protection as provided in WAC 173-26-221, in accordance with the Growth Management Act and through the application of the best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals.

This chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property or to prevent the provision of public facilities and services necessary to support existing development and planned for by the community without decreasing current service levels below minimum standards.[1]

The City's enactment or enforcement of this chapter shall not be construed for the benefit of any individual person or group of persons other than the general public.

[1] See RCW 36.70A.020(12).

SECTION 2
DEFINITIONS

2.1 Definitions

Words, terms and phrases used in this chapter are defined in Chapter 8 Definitions of this Shoreline Master Program and supplemented herein. Where there are conflicts, the definition found in the Master Program, the Shoreline Management Act, or the Shoreline Master Program Guidelines prevails.

(1) Adjacent – means, for the purpose of critical areas, within 150 feet of a critical area.

(2) Administrative Authority – means those public officials authorized by this chapter to administer the provisions and employ the procedures set forth in this chapter.

(3) Administrator - means the Director of Community Development or his/her assigned representative.

(4) Alteration – means any human-induced action which adversely impacts the existing condition of a critical area. Alterations include, but are not limited to: grading; filling; dredging; draining; channeling; cutting, pruning, limbing or topping, clearing, relocating or removing vegetation; applying herbicides or pesticides or any hazardous or toxic substance; discharging pollutants excepting stormwater; grazing domestic animals; paving, construction, application of gravel; modifying for surface water management purposes; development; or any other human activity that adversely impacts the existing vegetation, hydrology, wildlife or wildlife habitat. Alteration does not include walking, passive recreation, fishing and other similar activities.

(5) Appeal – A request for a review of the interpretation by the Administrator of any provision of this chapter or a request for a variance.

(6) Applicant – Any person or business entity which applies for a development proposal, permit or approval subject to review under the critical areas code.

(7) Aquifer – A geological formation, group of formations or part of a formation that is capable of yielding a significant amount of water to a well or spring.

(8) Aquifer susceptibility – The ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area.

(9) Agricultural Lands – lands that are not already characterized by urban growth and are of long term significance for the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to excise tax, or livestock.

a. Prime Farmland Soil is land with the best combination of physical and chemical characteristics for production and is available for these uses as determined by the Soil Conservation Service, USDA.

b. Unique Farmland Soil is land other than prime farmland that is used for the production of specific high value food and fiber crops as determined by the Soil Conservation Service, USDA.

(10) Best available science.

a. Critical area site analysis, reports and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical areas and must give special consideration to conservation and protection measures necessary to preserve or enhance their functions and values.

b. The best available science is that scientific information applicable to the critical area. These data must be prepared by local, state, or federal natural resource agencies, a qualified scientific professional or team of qualified scientific professionals that is consistent with criteria established in WAC 365-195-900 through WAC 365-195-925.

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

1. Peer Review. The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The proponents of the information have addressed the criticism of the peer reviewers. Publication in a referred scientific journal usually indicates that the information has been appropriately peer reviewed.
2. Methods. The methods used to obtain the information are clearly stated and reproducible. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer reviewed to assure their reliability and validity.
3. Logical Conclusions and Reasonable Inferences. The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained.
4. Quantitative Analysis. The data has been analyzed using appropriate statistical or quantitative methods.

5. Context. The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent existing information.
6. References. The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

(11) Buffer – A designated area adjacent to a stream or wetland that mitigates adverse impacts and protects the integrity, functions and values of a wetland and/or habitat; a designated area adjacent to a steep slope or landslide hazard area which protects slope stability.

(12) City – means the City of Wenatchee, Washington, a municipal corporation.

(13) Clearing – The cutting or removal of vegetation or other organic plant material by physical, mechanical, chemical, or any other means.

(14) Conservation easement – means a reservation or encumbrance on a particular piece of real property that precludes building improvement(s) intended for human habitation or other structures or activities that would frustrate the primary purpose of the easement as a buffer.

(15) Critical Areas – means one or a combination of wetlands, critical aquifer recharge areas, frequently flooded areas or geologically hazardous areas, and fish and wildlife habitat conservation area.

(16) Commercial Significance, Long Term – means the growing capacity, productivity, and soil composition of the land for long term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of land.

(17) Critical Aquifer Recharge Area – those areas that have been identified as having a critical recharging effect on aquifer use for potable water in community water systems.

(18) Data Maps – means that series of maps maintained by the Wenatchee Department of Community Development for the purpose of graphically depicting the boundaries of critical areas.

(19) Development Application – means an application tendered under the provision of Wenatchee Zoning Ordinance No. 2007-34 for a conditional use permit, rezone or planned development, or an application submitted pursuant to the Wenatchee Subdivision Ordinance No. 3080 for a preliminary major subdivision, or short subdivision.

(20) Fish and Wildlife Habitat Conservation Areas

a. Areas with which state or federally designated endangered, threatened and sensitive species have a primary association.
b. Habitats and species of local importance which include a seasonal range or habitat element with which a given species has a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. These might include areas of

high relative density or species richness, breeding habitat, winter range and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration such as cliffs, talus and wetlands. Species of local importance are those species that are of local concern due to their population status or their sensitivity to habitat manipulation or that are game species.

c. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat. These do not include ponds deliberately designed and created from dry sites such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than three years duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.

d. Lakes, ponds, streams and rivers planted with game fish, including fish planted under the auspices of federal, state, local or tribal program or which supports priority fish species as identified by the Department of Wildlife.

(22) Frequently Flooded Areas – means flood plains and other areas subject to a one percent or greater chance of flooding in any given year.

(23) Geologically Hazardous Areas – all lands within the Wenatchee Urban Area Comprehensive Plan study area will be classified as either: (1) known or suspected risk, (2) no risk or, (3) risk unknown – data are not available to determine the presence or absence of a geological hazard. Geological hazards include:

a. Erosion Hazard – areas identified as having high or very high water erosion hazard by the U. S. Department of Agriculture Soil Conservation Service as supplied by the SCS area office.

b. Landslide Hazard – areas potentially subject to landslides based upon the following combination of geologic, topographic and hydrologic factors.

1. Areas of historic failure including:
   (i) Those areas delineated by the U. S. Department of Agriculture, Soil Conservation Service, as having "severe" limitation for building site development.
   (ii) Those areas mapped as quaternary slumps, earth flows, mud flows, lahars, or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources.
2. Areas with all three of the following characteristics:
   (i) Slopes of fifteen percent gradient or greater; and
   (ii) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

(iii) Springs or groundwater seepage;

3. Areas that have shown movement during the Holocene Epoch or which are underlain or covered by mass wastage debris of that epoch;
4. Slopes that are parallel or sub-parallel to planes of weakness in subsurface materials;
5. Privately owned areas with slopes that have gradients greater than eighty percent subject to rock fall during seismic shaking;
6. Areas potentially unstable as a result of rapid stream incision, stream bank erosion and undercutting by wave action;
7. Areas located in a canyon or an active alluvial fan presently or potentially subject to a one percent or greater chance of inundation by debris flows or catastrophic flooding;
8. Areas with slope gradients of forty percent or greater not composed of consolidated rock. These will be of at least ten feet of vertical relief.

c. Seismic Hazard – areas include areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction or surface faulting.

d. Other Geologic Events:

1. Volcanic hazard including areas subject to pyroclastic, lava debris, mud flows or related flooding resulting from volcanic activity. Not applicable to the study area.
2. Mine hazards; areas underlain by, adjacent to, or affected by, mine workings such as adits, gangways, tunnels, drifts or air shafts.

(21) Hearing Examiner- The hearing examiner shall interpret, review and implement land use regulations, hear appeals from orders, recommendations, permits, decisions or determinations made by a city official as set forth in Chapter 1.09 WCC, and review and hear other matters as provided for in WCC and other adopted ordinances.

(22) Lot of Record – a lot as designated on a plat which has been approved and filed for record with the Auditor of Chelan County, Washington. Also, any parcel having a metes and bounds description lying outside of any plat as the same existed pursuant to the records of the Chelan County Assessor's Office as of the effective date of this ordinance.

(23) Mine Hazard Area – areas underlain by, adjacent to, or affected by, mine workings such as adits, gangways, tunnels, drifts or air shafts.

(24) Mineral Lands – lands that are not already characterized by urban growth and are of long term commercial significance for the extraction of aggregate and mine resources, including: sand, gravel and valuable metallic substances.

(25) Mitigation – The use of any or all of the following actions that are listed in

descending order of preference:

a. Avoiding the impact altogether by not taking a certain action or parts of an action;
b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
d. Reducing or eliminating the impact over time by preservation or maintenance operations during the life of the development proposal;
e. Compensating for the impact by replacing, enhancing or providing substitute sensitive areas and environment;
f. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;
g. Monitoring the impact and taking appropriate corrective measures.

(26) Monitoring –Evaluating the impacts of development proposals on the biological, hydrologic and geologic elements of such systems and assessing the performance of required mitigation measures. This may be done through the collection and analysis of data by various methods for the purposes of understanding and documenting changes in natural ecosystems and features, including gathering baseline data.

(27) Resource Lands – means agricultural and mineral lands.

(28) Responsible party – means anyone, including the landowner, who requests any authorization to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement.

(29) Qualified Professional – means an accredited or licensed professional with a combination of education and experience in the discipline appropriate for the subject matter that is being commented on; someone who would qualify as an expert in their field. . For wetlands, the qualified professional should be a professional wetland scientist with at least two years of full-time experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetland reports, conducting function assessments, and developing and implementing mitigation plans. No site analysis/report required by Section 7 of this chapter will be considered complete without a detailed resume of the principal author(s) which disclose(s) their technical training and experience and demonstrate their stature as a qualified professional(s). The analysis required by this subsection shall be done by qualified professional and technical scientists, the Washington Department of Ecology, or others who can demonstrate through a combination of formal training and field experience the ability to function professionally in this capacity.

(30) Site Analysis/Report- a review by a qualified professional of the applicable critical area and the impacts from the proposed development using best

available science to determine necessary measures to avoid, reduce, and/or mitigate critical area impacts. The site analysis shall include at minimum:

a. A site plan depicting the boundaries of the critical area and associated property(s) to a discernable scale
b. A detailed description of the critical area.
c. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information
d. Analysis of any likely impacts to the critical area
e. Available measures to avoid, reduce, and/or mitigate impacts
f. Recommendations

(31) Species of Local Importance – means those species that are of local concern due to their population status or their sensitivity to habitat manipulation or that are game species.

(32) Urban Growth – means activities that make intensive use of land for the location of building, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources.

(33) Urban Growth, characterized by – means land having urban growth on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth; or any and all incorporated areas.

(34) Variance – means a modification of the minimum measures necessary to avoid impacts to critical areas because of the unusual nature, shape, exceptional topographic conditions, or extraordinary situation or conditions connected with a specific piece of property, where the literal enforcement of this ordinance would pose undue hardship unnecessary in carrying out the spirit of this ordinance.

(35) *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology) – This rating system is designed to differentiate between wetlands in eastern Washington based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the functions they provide. Wetlands are grouped into four categories that are used to determine regulatory criteria for avoidance, width of buffers, and mitigation ratios.

(36) Washington State Delineation Manual – This document is Washington State's official manual for delineating wetlands. Delineation manuals are used to determine the edge of a wetland based on three "parameters:" water, plants, and soil (see WAC 173-22-080).

(37) Wetlands, Regulated – means areas that are inundated or saturated by surface or ground-water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include

those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-line swales, canals, swimming pools, detention facilities, waste water treatment facilities, farm ponds and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

(38) *Wetlands in Washington State – Volume 1: A Synthesis of the Science* (Washington State Department of Ecology Publication #05-06-006, Olympia, WA, March 2005). Under the Growth Management Act, local governments are required to use the best available science when reviewing and revising their policies and regulations on wetlands. The state departments of Ecology and Fish and Wildlife developed this comprehensive synthesis of the science regarding freshwater wetlands to assist local governments, as amended.

(39) *Wetlands in Washington State – Volume 2: Guidance for Protecting and Managing Wetlands* (Washington State Department of Ecology Publication # 05-06-008, Olympia, WA, April 2005). This volume translates the science synthesized in Volume 1 into guidance on protecting and managing wetlands for local governments. An advisory team of wetland scientists and planning staff from local governments provided feedback on the guidance. Ecology also met with members of various organizations from the business and environmental communities to gather comments, as amended.

(40) *Guidance on Wetland Mitigation in Washington—Parts 1 and 2* (Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised). This document compiles existing information on wetland mitigation, including current agency policies on mitigation. Part 1 provides an overview of the role the agencies play in regulating wetlands and explains some of the factors that go into the agencies' wetland permitting decisions in regards to mitigation. Part 2 provides technical information for developing wetland mitigation plans and proposals, as amended.

SECTION 3.0
ESTABLISHMENT OF CRITICAL AREAS: PROVISION FOR DATA MAPS

3.1 List of Critical Areas

The incorporated area of the City of Wenatchee is hereby divided into the following critical areas, where appropriate, consistent with the best available science and the provisions herein:

A. Wetlands
B. Critical aquifer recharge areas
C. Fish and wildlife conservation areas
D. Frequently flooded areas
E. Geologically hazardous areas

All areas within the City of Wenatchee's shoreline jurisdiction meeting the definition of one or more critical areas, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.

3.2 Data Maps

Critical areas are hereby designated on a series of data maps maintained at the business office of the Community Development Department. These maps contain the best available graphic depiction of resource lands and critical areas and will be continuously updated as reliable data becomes available. These maps are for information and illustrative purposes only and are not regulatory in nature.

The critical areas data maps are intended to alert the development community, appraisers, and current or prospective property owners of a potential encounter with a use or development limiting factor based on the natural systems. The presence of a critical area designation on the data maps is sufficient foundation for the Administrator to order an analysis for the factor(s) identified prior to acceptance of a development application as being complete and ready for processing under Ordinance No. 2007-034 Zoning, Ordinance No.3080 Subdivision of the Wenatchee City Code (WCC), or the City's Shoreline Master Program, as amended.

SECTION 4
INTERPRETATION OF DATA MAPS

4.1 Interpretation of Data Maps

The official charged with the administration of the City's Shoreline Master Program as amended is hereby declared the Administrator of these regulations for the purpose of interpreting data maps. An affected property owner or other party with standing has a right to appeal the administrative determination to the Hearing Examiner using the procedure for appeals found in Section 7.13 of this Shoreline Master Program and WCC Title 13 Development Code Administration.

The data maps are to be used as a general guide to the location and extent of resource lands and critical areas. Resource lands and critical areas indicated on the data maps are presumed to exist in the locations shown and are protected under all the provisions of this chapter. The exact location of resource lands and critical areas

shall be determined by the applicant as a result of field investigations performed by qualified professionals using the definitions found in this chapter. All development applications are required to show the boundary(s) of all resource lands and critical areas on a scaled drawing prior to the development application being considered "complete" for processing purposes.

SECTION 5
EFFECT OF DATA MAPS: APPLICABILITY

5.1 Effect of Data Maps

The conclusion by the administrative authority that a parcel of land or a part of parcel of land that is the subject of a proposed development application is within the boundary(s) of one or more critical areas or resource lands, as shown on the data maps, shall serve as cause for additional investigation and analysis to be conducted by the applicant. The site specific analysis may be limited to those resource lands and critical areas indicated on the data maps. In the event of multiple designations, each subject matter will be addressed independently and collectively for the purpose of determining development limitations and appropriate mitigating measures.

5.2 Applicability

A. When a chapter reference is used, it shall be inclusive of all of Appendix B.

B. This chapter classifies and designates critical areas in the city and establishes protection measures for critical areas within the shoreline jurisdiction of the city's incorporated limits. Any development authorized to alter the condition of any land, water or vegetation; or to alter or construct any building, structure or improvement shall be in compliance with the requirements of this chapter.

(1) This chapter applies to all real property, all land uses and development activity, and all structures and facilities within the corporate limits of the City of Wenatchee, Washington, as it is now configured or may, from time to time, be altered, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the City of Wenatchee. No person, company, agency, or applicant shall alter a critical area or buffer except as consistent with the purposes and requirements of these regulations.

(2) These critical areas regulations shall apply in addition to zoning and other regulations adopted by the City of Wenatchee. Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection of shoreline resources, when

consistent with SMA policy.

(3) When any other chapter of the Wenatchee City Code (WCC) conflicts with these regulations, whichever is more protective of shoreline resources shall prevail, when consistent with SMA policy.

(4) These critical areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as locally adopted. Any conditions required pursuant to this chapter shall be included in the SEPA review and threshold determination.

(5) Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Shoreline Substantial Development Permits, Hydraulic Permit Act (HPA) permits, Section 106 of the National Historic Preservation Act, U.S. Army Corps of Engineers Section 404 permits, National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter.

SECTION 6
GENERAL PROVISIONS

6.1 From the effective date of this chapter, the city shall not approve any permit or issue any authorization to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer, without first ensuring compliance with the requirements of this chapter, including but not limited to the following:

(1) Building permit, commercial or residential, binding site plan, conditional use permit, Right-of-way construction permit, planned development, right-of-way use permit, shoreline conditional use permit, shoreline substantial development permit, shoreline variance, short subdivision, subdivision, utility and other use permit, rezone, zoning variance, or any other adopted permit or required approval not expressly exempted by this chapter.

(2) The requirements set forth in Section 7 of these regulations shall be considered as minimum requirements in the processing of development applications and represent standards in addition to the requirements set forth in the City's Shoreline Master Program, Wenatchee City Code, and associated ordinances.

(3) No site analysis/report required by Section 7 of this chapter will be considered complete without a detailed resume of the principal author(s) which disclose(s) their technical training and experience and demonstrate their stature as a qualified professional(s).

(4) Critical area site analysis/reports and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical

areas and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish, such as salmon and bull trout, and their habitat.[2]

(5) Any action taken pursuant to this chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science. Applicants must first demonstrate an inability to avoid or reduce impacts, before restoration and compensation of impacts will be allowed. No activity or use shall be allowed that results in a net loss of the ecological functions or values of critical areas, including lost time when the critical area does not perform impacted functions.

6.2 Prior to accepting any application or issuing any authorization to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement, the data maps shall be consulted for the purposes of determining whether or not the property subject to the application is within any area shown as a resource land or critical area. When such areas are encountered, the applicant or responsible party will immediately be notified and the type(s) of resource or critical areas disclosed. Instructions shall be provided to the applicant on the type of evaluation and site-specific analysis that will be required as a supplement to the application materials necessary to bring the application up to a standard that can be characterized as "complete" and eligible for processing.

If the subject property does not lie within or partly within the critical areas as depicted on the data maps, the application will be considered complete, provided the application requirements of the Shoreline Master Program or other ordinances governing the process at issue are satisfied.

6.3 Fees. The City of Wenatchee shall establish fees for filing of a critical area review processing, and other services provided by the City of Wenatchee as required by this chapter. These fees shall be based on the anticipated sum of direct costs incurred by the city for any individual development or action and may be established as a sliding scale that will recover all of the costs including the enforcement of these code provisions. Basis for these fees shall include, but not be limited to, the cost of engineering and planning review time, cost of inspection time, costs for administration, and any other special costs attributable to the critical area review process.

6.4 Administrative Procedures. The administrative procedures followed during the critical area review process shall conform to the standards and requirements of the associated application type in the Shoreline Master Program and Title 13 WCC. This shall include, but not be limited to, timing, appeals, and fees associated with applications covered by this chapter. In the case of multiple application approvals, the highest level of application process shall govern.

[2] See RCW 36.70A.172(1).

SECTION 7
CRITICAL AREAS; STANDARDS FOR SITE-SPECIFIC ANALYSIS: DEVELOPMENT STANDARDS

7.1 Critical Areas

(1) Wetlands

a) Wetlands are to be regulated as they are defined Section 2.1(36) above and designated on-site through site analysis.

b) Site analysis – required for the purpose of establishing an exact wetland boundary using the *Washington State Wetlands Identification and Delineation Manual* (Ecology Publication #96-94, or as revised and approved by Ecology). Field delineation of the boundary is required and a scaled map must be produced. The *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology) must then be applied to the wetlands area to establish the category(s) of wetlands in evidence. The analysis required by this subsection shall be done by qualified professional or the Washington Department of Ecology.

c) Wetland Analysis

1. Categorize the wetland/s per the '*Washington State Wetland Rating System for Eastern Washington*', as amended.
2. Establish the wetland buffers based upon Department of Ecology's Wetland guidance in Alternative 3 in Wetlands in Washington State, Volume 2, as amended. More specifically found in Appendix 8-D 'Buffer Alternative 3' attached to this chapter as Appendix 1.
3. If impacts to the wetland or buffers are to occur, provide a mitigation plan identifying the impacts and associated mitigation consistent with Department of Ecology's guidance in '*Guidance on Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1)*', Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised.
4. Flexibility in mitigation is allowed provided that the mitigation is consistent with Department of Ecology's guidance in '*Wetlands in Washington State – Volume 1: A Synthesis of the Science*' (Washington State Department of Ecology Publication #05-06-006, Olympia, WA, March 2005), and '*Wetlands in Washington State – Volume 2: Guidance for Protecting and Managing Wetlands*' (Washington State Department of Ecology Publication # 05-06-008, Olympia, WA, April 2005) or can be supported by Best Available Science.
5. Wetland analysis must ensure that "No net loss of wetland area and functions including lost time when wetland does not perform the

function" is met (WAC173-26-221(2)(d)(i)(A) + (C)).

6. Mitigation ratios are found in the following table (Table 8D-11 Mitigation ratios for projects in Eastern Washington, Wetlands in Washington State, Volume 2'):

Category and Type of Wetland Impacts	Re-establishment or Creation	Rehabilitation Only[1]	Re-establishment or Creation (R/C) and Rehabilitation (RH)[1]	Re-establishment or Creation (R/C) and Enhancement (E)[1]	Enhancement Only[1]
All Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1
All Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category II Forested	4:1	8:1	1:1 R/C and 4:1 RH	1:1 R/C and 6:1 E	16:1
Category II Vernal pool	2:1 Replacement has to be seasonally ponded wetland	4:1 Replacement has to be seasonally ponded wetland	1:1 R/C and 2:1 RH	Case-by-case	Case-by-case
All other Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Natural Heritage site	Not considered possible[2]	6:1 Rehabilitation of a Natural Heritage site	R/C Not considered possible[2]	R/C Not considered possible[2]	Case-by-case
Category I Alkali	Not considered possible[2]	6:1 rehabilitation of an alkali wetland	R/C Not considered possible[2]	R/C Not considered possible[2]	Case-by-case
Category I Bog	Not considered possible[2]	6:1 Rehabilitation of a bog	R/C Not considered possible[2]	R/C Not considered possible[2]	Case-by-case

[1] These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

[2] Natural Heritage sites, alkali wetland, and bogs are considered irreplaceable wetlands because they perform some special functions that cannot be replaced through compensatory mitigation. Impacts to such wetlands would therefore result in a net loss of some functions no matter what kind of compensation is proposed.

c) Buffers

1. Wetland buffer zones shall be retained in their natural condition. Where buffer disturbance is unavoidable during adjacent construction, re-vegetation will be required with native plant materials preferred.
2. A Buffer zone shall be required adjacent to, and outside of, all regulated wetlands, including any wetland restored, relocated, replaced or enhanced because of wetlands alterations.
3. All buffers shall be measured from the wetland edge as delineated in the field. The buffer zone depths may be reduced up to no more than 25% or averaged if a special site analysis/report demonstrates to the satisfaction of the Administrator, or if the Administrator otherwise determines, that the adjacent land is, and will remain, extensively vegetated, is topographically remote from the wetland, and that no direct or indirect adverse impacts on the regulated wetlands is reasonably likely as a result of the buffer reduction.
4. Buffer averaging may not be used in conjunction with any other buffer reduction methods.
5. Buffer averaging may be used under the following conditions:
    i. Averaging to improve wetland protection may be permitted when all of the following conditions are met:
        i. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower rated area.
        ii. 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.
        iii. The total area of the buffer after averaging is equal to the area required without averaging.
        iv. The buffer at its narrowest point is never less than 3/4 of the required width
    ii. Averaging to accommodate otherwise allowed development of a parcel may be permitted when all of the following are met:
        i. There are no feasible alternatives to the site design

that could be accomplished without buffer averaging.

ii. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a report from a qualified wetland professional.

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

iv. The buffer at its narrowest point is never less than 3/4 of the required width.

d) Development

1. The following activities are allowed to occur on wetlands and wetland buffer zones: passive outdoor recreational activities, existing and ongoing agricultural activities (provided no additional area is added beyond demonstrable historic levels), maintenance of existing facilities, structures, ditches, roads and utility systems.
2. Nothing in this Section or Chapter abrogates, compromises, or otherwise subordinates the full force, effect and applicability of the Washington State Shoreline Management Act and the Wenatchee Shoreline Master Program.
3. A use or structure established prior to the effective date of this chapter which does not conform to standards set forth herein, is allowed to continue and be reasonably maintained provided that such activity or structure shall not be expanded or enlarged in any manner that increases the extent of its' nonconformity.

(2) Critical Aquifer Recharge Areas

a. Site analysis – required for the purpose of delineating the recharge areas on a scaled development plan and provided detailed information on the following items:

1. hydro-geological susceptibility to contamination and contamination loading potential
2. depth to groundwater
3. hydraulic conductivity and gradient
4. soil permeability and contamination attenuation
5. a vadose zone analysis including permeability and attenuation properties
6. an analysis of the recharge area's toleration for impervious surfaces in terms of both aquifer recharge and the effect on water quality degradation
7. a summary of the proposed development's effect on the recharge area concentrating on items "d" and "f"
8. existing aquifer water quality analysis

b. Development Standards

1. The site analysis will create a water quality baseline which will serve as a minimum standard that shall not be further degraded by proposed development.
2. The creation of additional impervious surfaces shall be limited to that amount described in the site analysis that will ensure adequate aquifer recharge and water quality protection.
3. Development approvals shall ensure that all best management practices are employed to avoid introducing pollutants into the aquifer. This includes the complete collection and disposal of storm water outside of the aquifer recharge area for all development impervious surfaces.

(3) Frequently Flooded Areas

a. Site analysis – required only for the purpose of establishing a pre-construction site elevation at the lot's highest point at the proposed building foundation.
b. Development Standards
    1. All developments must follow the provisions of the "Flood Damage Prevention Ordinance", Wenatchee Ordinance No. 2760 and as it may be amended.

(4) Geologically Hazardous Areas

a. Erosion Hazard
    1. Site analysis – required to determine the exact location and circumstances that might be expected to precipitate a significant erosion event. The type and effectiveness of mitigating measures available to safeguard the public safety and welfare shall be addressed. The analysis shall also discuss the proposed development's influence on the erosion hazard and suggest appropriate design and development measures/standards that might be taken to minimize such hazards.
    2. Development Standards
        i. Erosion hazard areas shall be avoided as locations for building construction, roads or utility systems where mitigation is not feasible.
        ii. Development activities or their support infrastructure shall not be allowed that would directly or indirectly worsen the erosion hazard identified in the site analysis.
        iii. A minimum buffer shall be established at a horizontal distance from the top, toe, and along all sides of slopes shown to be high-risk or intermediate-risk slopes. Existing native vegetation within the buffer area shall be maintained and the buffer shall be extended beyond these limits as required to mitigate landslide and erosion hazards, or as otherwise

necessary to protect public health, safety and welfare.

iv. The buffer may be reduced when an applicant demonstrates, pursuant to a special site analysis/report using best available science, that the reduction will adequately protect the proposed development and the critical area.

v. Building Setback Lines. A building setback line will be established at a minimum distance of fifteen (15) feet from the edge of the buffer.

(5) Landslide Hazard

a. Site analysis - required to identify and quantify geologic, topographic and hydrologic factors that might contribute to slope instability. The rate and extent of potential hazards to development activity must be assessed and mitigation measures, if any, evaluated. The proposed development must be analyzed in light of the hazards and effects represented by the landslide exposure on proposed private and public investments. Development operational factors should be included in the analysis to account for the effects of residential landscape irrigation, storm water generation from impervious surfaces and the influence of street conveyance on slope stability.

b. Development Standards

1. Documented landslide hazard areas shall be avoided as locations for building construction, roads or utility systems where mitigation is not feasible.
2. If the degree of hazard warrants some development activity, post construction slope stabilization and appropriately upgraded road construction specifications shall be employed to eliminate as completely as practicable, any public or private exposure to landslide hazards or abnormal maintenance or repair costs.

(6) Fish and Wildlife Habitat Conservation Areas

a. Site analysis - required to identify endangered, threatened, sensitive species, species and habitats of local importance and the nature and extent of their primary association with the habitat conservation area. The investigation shall include relative density and species richness, breeding, habitat, seasonal range dynamics and movement corridors. The analysis shall address the relative tolerance by species of human activities. The development proposal shall be evaluated in terms of its influence on the above wildlife factors and recommend mitigation measures for any area that would potentially degrade base-line populations and reproduction rates over the long term.

b. Development Standards

1. No development approval shall be granted unless mitigation of adverse effects can be provided that will ensure continuation of

base-line populations for all endangered, threatened and sensitive species.

2. Development may be allowed when only species and habitats of local importance will suffer population declines or interruption of migration routes provided that adequate regional populations are maintained.
3. Development reviews shall include regional species occurrence and movements and will avoid creating isolated sub-populations where warranted.

SECTION 8
WARNING AND DISCLAIMER OF LIABILITY

8.1 Warning and Disclaimer of Liability

The degree of hazard protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Catastrophic natural disasters can, and will, occur on rare occasions. This chapter does not imply that land outside the critical areas or activities permitted within such areas will be free from exposure or damage. This chapter shall not create liability on the part of the City of Wenatchee, and officers or employees thereof, for any damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

SECTION 9
NON-CONFORMING DEVELOPMENTS

9.1 Non-conforming Developments

Within the critical areas established by this chapter or subsequent amendments thereto, there exists developments and lots of record which were lawfully established or approved, but which would be prohibited, regulated or restricted under the terms of this chapter or future amendments. It is the intent of this chapter to permit these non-conformities to continue and to allow previously approved developments to reach the development conclusion anticipated in their approved applications. The lots of record within major subdivisions that have received preliminary plat approval and short plats filed for record at the Chelan County Auditor's office will be considered building lots in all respect and exempt from the provisions of this chapter. Planned Developments, conditional use permits and other land use applications approved prior to the effective date of this chapter are also exempt from this chapter.

SECTION 10
ADMINISTRATION

10.1 Administrator

(1) The Director of Community Development or the City of Wenatchee is hereby directed to administer the provisions of this chapter and may appoint other employees as may be necessary to assist in its' administration. The Director of Community Development shall adopt and revise, as required, such forms and instructions as are necessary or appropriate to serve the public and carry out the provisions of this chapter.

(2) As provided herein, the Director of Community Development is given authority to interpret and apply, and the responsibility to enforce this chapter to accomplish the stated purpose.

(3) The City of Wenatchee may withhold, condition, or deny development permits or activity approvals to ensure that the proposed action is consistent with this chapter.

(4) Appeals to administrative decisions shall follow the provisions of Section 7.13 of the Shoreline Master Program and Chapter 13.11 WCC.