

**.ORDINANCE NO. 849-B**

AN ORDINANCE OF THE CITY OF CHEHALIS, WASHINGTON, RELATING TO LAND USE; AMENDING THE CITY'S CRITICAL AREAS REGULATIONS; REPEALING EXISTING CHEHALIS MUNICIPAL CODE CHAPTERS 17.21 FLOOD HAZARD ZONE (FHZ), 17.24 WETLANDS (NWI), 17.25 RIPARIAN HABITAT AREAS (RHA) AND 17.27 GEOLOGICALLY HAZARDOUS AREAS (GHA); REPEALING ALL OTHER ORDINANCES IN CONFLICT HEREWITH; CREATING NEW CHAPTERS 17.21, 17.22, 17.23, 17.24, 17.25, AND 17.26 IN THE CHEHALIS MUNICIPAL CODE RELATING TO CRITICAL AREAS; ESTABLISHING AN EFFECTIVE DATE HEREOF AND ESTABLISHING PENALTIES FOR VIOLATION HEREOF.

WHEREAS, regulations protecting critical areas are required by RCW 36.70.060(2) and 36.70.172(1) and WAC 365-195-900 through 925 and WAC 365-195-825(2) AND RCW 36.70A.060(3); and

WHEREAS, critical areas regulations are required to include "best available science" (BAS) as required in RCW 36.70A.172; and

WHEREAS, the last major updates to the City's critical areas regulations occurred in 2002; 2003; and 2008; and

WHEREAS, the City's current regulations adopt by reference the Department of Fish and Wildlife's National Wetland Inventory Map [Ord. 834B § 1, 2008; Ord. 750B § 5, 2003; Ord. 720B § 1, 2002]; and

WHEREAS, the City's current regulations adopt by reference the following intergovernmental agreements: the FORMATION OF THE CHEHALIS RIVER BASIN WATERSHED MANAGEMENT PARTNERSHIP & DESIGNATION OF LEAD AGENCY (approved on August 31, 1998) for the management of WRIA 23, and Phase Four of the Chehalis Basin Watershed Plan (adopted in May 2004) that detailed the framework for water resource management in Water Resource Inventory Areas (WRIA) 22 and 23, and the Chehalis Basin Partnership Watershed Management Plan 2007-2008 Detailed Implementation Plan (approved in June 2007); and

WHEREAS, the City and other cities and counties have formed a partnership known as the Chehalis River Basin Flood Authority to address basin-wide issues relating to flooding and ecological functions of the Chehalis River; and

WHEREAS, the City's Comprehensive Plan adoption of the county-wide planning policy for Lewis County under Chapter 10 - ENVIRONMENT provides for regulating the protection of critical areas and related resources effectively; and

WHEREAS, the City hired LaJane Schopfer (consultant) to draft an update to the City's critical areas regulations based upon best available science; and

WHEREAS, a draft code dated September 2009 was developed to provide a level of protection to critical areas based on the best available science (BAS) record regarding the ecological functions provided, and employs protective measures and buffers supported by the BAS record as appropriate to protect ecological functions and values; and

WHEREAS, the BAS record and the code in Section 17.25.030.C. recognize the altered nature of certain stream reaches in the city, in relation to functions provided in the watershed as a whole and provide an appropriate balance of preservation and enhancement of resources, particularly those related to use by anadromous fish; and

WHEREAS, the City's planning commission and the City's planner held numerous public meetings to facilitate public input and dialogue on the proposed amendments, including open houses on 11/25/08, 01/13/09, 01/27/09, regular planning commission meetings and workshops throughout 2009 and a public hearing on 10/27/09, in addition to meetings with interested stakeholders, tribes and state agencies; and

WHEREAS, the City's consultant, LaJane Schopfer forwarded a copy of the changes proposed under this Ordinance to the Washington State Department of Commerce on October 30, 2009, pursuant to RCW 36.70A.106; and

WHEREAS, there were no comments received from the public, tribes or state agencies, including the Department of Commerce and the Department of Ecology, on the changes proposed under this ordinance as of the first reading of the ordinance; and

WHEREAS, a determination of Non-Significance was issued pursuant to the State Environmental Policy Act on October 22, 2009 by the city's responsible official with a comment date of November 23, 2009; and

WHEREAS, no comments were received on the determination of Non-Significance; and

WHEREAS, Notice of Action was published in the Chronicle December 12 and 19, 2009, Pursuant to RCW 43.21C.080,

WHEREAS, the City Council held a public hearing on this Ordinance during its regular City Council meetings of November 9 and 23, 2009; with first reading on December 14, 2009 and second reading on December 21, 2009; and

WHEREAS, the City Council finds that adoption of revisions to the city's Critical Areas regulations, Aquifer Protection regulations and Flood Damage Prevention regulations, provides for protection of critical areas in a manner that assures protection of the ecological functions and values of critical areas and provides special consideration to the preservation and conservation measures necessary to preserve and enhance anadromous fisheries, while appropriately balancing other goals of the Growth

Management Act as provided in RCW 36.70A.020;

NOW THEREFORE, be it ordained by the City Council of the City of Chehalis, Washington:

**Section 1**

EXISTING CHEHALIS MUNICIPAL CODE CHAPTERS 17.21 FLOOD HAZARD ZONE (FHZ); 17.24 WETLANDS (NWD); 17.25 RIPARIAN HABITAT AREAS (RHA) AND 17.27 GEOLOGICALLY HAZARDOUS AREAS (GHA) shall be, and the same hereby are, repealed.

**Section 2**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 21 to read as follows:

**17.21 CRITICAL AREAS – GENERAL / DEFINITIONS**

- 17.21.010 Purpose and authority.
- 17.21.020 Applicability.
- 17.21.030 Definitions.
- 17.21.040 Critical area maps.
- 17.21.050 Multiple designations.
- 17.21.060 SEPA.
- 17.21.070 Permitted uses.
- 17.21.071 Allowed activities.
- 17.21.080 Preliminary consultation.
- 17.21.081 Permit processing.
- 17.21.082 Critical area studies.
- 17.21.083 Reasonable use.
- 17.21.084 Density credits.
- 17.21.085 Notice on title.
- 17.21.086 Building setbacks.
- 17.21.087 Mitigation.
- 17.21.088 Non-conforming development.
- 17.21.089 Administrative rules.
- 17.21.090 Enforcement.
- 17.21.091 Appeals.

**17.21.010 Purpose and authority.**

A. These sections establish regulations pertaining to the development of critical areas, as required under the Growth Management Act of 1990 (RCW 36.70A). State guidelines for classification and protective methods for critical areas are addressed in WAC Chapter 365-190. "Critical areas" are wetland areas, aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas.

B. The purpose of these local regulations is to protect the environmentally sensitive resources of the City of Chehalis by establishing minimum standards for development of properties which contain or adjoin environmentally sensitive features and thus protect the public health, safety and welfare in regard to critical areas. The city is classifying all required categories of critical areas throughout the city and implementing development regulations to address these areas through these chapters. These standards serve to preclude land uses and developments which are incompatible with critical areas by:

1. Protecting the public from personal injury, loss of life or property damage due to flooding, erosion, landslides, seismic events, or soil subsidence;
2. Protecting against publicly financed expenditures to address improper use or improper management of critical areas;
3. Preventing degradation of the natural environment;
4. Protecting unique, fragile, and valuable elements of the environment;
5. Including the best available science in developing policies and development regulations to protect the functions and values of critical areas.
6. Giving special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.
7. Alerting property owners, potential buyers or lessees, appraisers, assessors, and others to the existence of and the development limitations of critical areas;
8. Providing city officials with sufficient information to adequately protect critical areas when approving, conditioning or denying public or private development proposals;
9. Meeting the requirements of the National Flood Insurance Program and maintain Chehalis as an eligible community for federal flood insurance benefits;

#### **17.21.020 Applicability.**

This chapter establishes designations and regulations for the protection of all properties which are critical areas. Properties listed, identified, designated, classified or rated as critical areas are those so designated on the resource maps referenced in this chapter, or by separate studies which indicate that all or portions of a particular area or specific site are environmentally sensitive or critical areas. A site-specific analysis which indicates that any element regulated by this chapter is present will result in a property being classified as an environmentally sensitive critical area. Land uses or developments proposed on or adjacent to sites which are critical areas shall comply with the provisions of this chapter. "Critical areas" are wetlands, frequently flooded areas, critical aquifer recharge areas, geologically hazardous areas, and critical fish and wildlife habitat conservation areas.

#### **17.21.030 Definitions.**

Definitions of terms used in this chapter are:

"Accessory structure" means a structure that is incidental and subordinate to a primary use. Barns, garages, storage sheds, and similar structures are examples.

"Activity" means human activity associated with the use of land or resources.

“Adaptive management” means using scientific methods to evaluate how well regulatory and non-regulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. Management policy may be adapted based on a periodic review of new information.

"Agricultural activities" means those activities directly pertaining to the production of crops or livestock including, but not limited to, cultivation, harvest, grazing, animal waste storage and disposal, fertilization, the operation and maintenance of farm and stock ponds or drainage ditches irrigation systems, canals, and normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. Activities that bring an area into agricultural use are not agricultural activities.

“Agricultural land” is land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, or animal products, or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, or livestock, and/ or lands that have been designated as capable of producing food and fiber, which have not been developed for urban density housing, business, or other uses incompatible with agricultural activity.

"Alluvial fan" means a fan shaped deposit of sediment and organic debris formed where a stream flows or has flowed out of a mountainous upland onto a level plain or valley floor because of a sudden change in sediment transport capacity (e.g. significant change in slope or confinement).

"Alluvium" is a general term for clay, silt, sand, gravel, or similar other unconsolidated detrital materials, deposited during comparatively recent geologic time by a stream or other body of running water, as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta.

“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), draining, construction, compaction, excavation, or any other activity that changes the character of the critical area.

"Anadromous fish" means fish species that spend most of their lifecycle in salt water, but return to freshwater to reproduce.

"Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs (Chapter 173-160 WAC).

“Aquifer susceptibility” means the ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer

unimpeded by chemical interactions with the vadose zone media.

"Aquifer vulnerability" is the combined effect of susceptibility to contamination and the presence of potential contaminants.

"Base flood" is a flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A (zone subject to flooding during a 100-year flood, but less so than V zones) or V (zone subject to the highest flows, wave action, and erosion during a 100-year flood).

"Bedrock" is a general term for rock, typically hard, consolidated geologic material that underlies soil or other unconsolidated, superficial material or is exposed at the surface.

"Best available science" means information from research, inventory, monitoring, surveys, modeling, synthesis, expert opinion, and assessment that is used to designate, protect, or restore critical areas. As defined by WAC 365-195-900 through 925, Best Available Science is derived from a process that includes peer-reviewed literature, standard methods, logical conclusions and reasonable inferences, quantitative analysis, and documented references to produce reliable information.

"Best management practices" means conservation practices or systems of practices and management measures that reflect the current scientific and technical consensus on the best or most effective means of addressing adverse effects upon a resource.

"Buffer" means the area adjacent to the outer boundaries of a critical area, such as wetlands; habitat conservation (streams, marine shorelines habitat areas); and/or landslide hazard areas, that provides an area for related ecological functions to take place and/or separates and protects critical areas from adverse impacts associated with adjacent land uses.

"Channel migration zone" means the area along a river or stream within which the channel can reasonably be expected to migrate over time as a result of normally occurring processes. It encompasses that area of current and historic lateral stream channel movement that is subject to erosion, bank destabilization, rapid stream incision, and/or channel shifting, as well as adjacent areas that are susceptible to channel erosion.

"City" means the City of Chehalis, Washington.

"Clearing" means the removal of vegetation or plant cover by manual, chemical, or mechanical means. Clearing includes, but is not limited to, actions such as cutting, felling, thinning, flooding, killing, poisoning, girdling, uprooting, or burning.

"Compensatory mitigation" means a mitigation project for the purpose of replacing, at an equivalent or greater level, unavoidable critical area and buffer impacts that remain after all appropriate and practicable avoidance and minimization measures have been implemented. Compensatory mitigation includes, but is not limited to, wetland creation,

restoration, enhancement, and preservation; stream restoration and relocation, rehabilitation; and buffer enhancement.

"Conservation" means the prudent management of rivers, streams, wetlands, wildlife and other environmental resources in order to preserve and protect them. This includes the careful utilization of natural resources in order to prevent depletion or harm to the environment.

"Conservation easement" means a legal agreement that the property owner enters into to restrict uses of the land for purposes of natural resources conservation. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property.

"Contaminant" means any chemical, physical, biological, or radiological substance that does not occur naturally in ground water, air, or soil or that occurs at concentrations greater than those in the natural levels (see also Chapter 173-200 WAC).

"Critical areas" The following areas as required in this chapter shall be regarded as critical areas:

- (a) Frequently Flooded Areas
- (b) Wetlands
- (c) Geologically Hazardous Areas
- (d) Fish and Wildlife Habitat Conservation Areas
- (e) Critical Aquifer Recharge Areas

"Critical area study or report" means a report prepared by a qualified professional or qualified consultant based on Best Available Science, and the specific methods and standards for technical study required for each applicable critical area. Geotechnical reports and hydrogeological reports are critical area reports specific to geologically hazardous areas and critical aquifer recharge areas, respectively.

"Critical area tract" means land held in an open undeveloped condition with preservation of native vegetation and other natural features in perpetuity for the protection of critical areas.

"Critical aquifer recharge area" means areas designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers (i.e., maintain the quality and quantity of water) used for potable water as defined by WAC 365-190-030(2).

"Critical facilities means buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes pursuant to the City's adopted International Building Code (IBC). These include, but are not limited to:

- (a) Buildings and other structures that represent a substantial hazard to human life in the event of failure including, but not limited to:
  - (i) Buildings and other structures where more than 50 people congregate in one area;

(ii) Buildings and other structures with elementary school, secondary school or day care facilities with an occupant load greater than 50;

(iii) Buildings and other structures with an occupant load greater than 50 for colleges or adult education facilities;

(iv) Health care facilities with an occupant load of 50 or more resident patients but not having surgery or emergency treatment facilities;

(v) Jails and detention facilities;

(vi) Any other occupancy with an occupant load greater than 50;

(vii) Power generating stations, water treatment for potable water, waste water treatment facilities and other public utility facilities not included in Subsection (b);

(viii) Buildings and structures not included in Subsection (b) containing sufficient quantities of toxic or explosive substances to be dangerous to the public if released.

(b) Buildings and other structures designed as essential facilities including, but not limited to:

(i) Hospitals and other health care facilities having surgery or emergency treatment facilities;

(ii) Fire, rescue and police stations and emergency vehicle garages;

(iii) Designated earthquake, hurricane or other emergency shelters;

(iv) Designated emergency preparedness, communication, and operation centers and other facilities required for emergency response;

(v) Structures containing highly toxic materials as defined by IBC Section 307 where the quantity of the material exceeds the maximum allowable quantities of the City's adopted IBC Table 307.7(2);

(vi) Aviation control towers, air traffic control centers and emergency aircraft hangars;

(vii) Buildings and other structures having critical national defense functions;

(viii) Water treatment facilities required to maintain water pressure for fire suppression;

(ix) Power-generating stations and other public utility facilities required as emergency backup facilities for structures listed above.

"Critical habitat" means habitat areas with which endangered, threatened, sensitive or monitored plant, fish, or wildlife species have a primary association (e.g., feeding, breeding, rearing of young, migrating). Such areas are identified herein with reference to lists, categories, and definitions promulgated by the Washington Department of Fish and Wildlife as identified in WAC 232-12-011 or 232-12-014; in the Priority Habitat and Species (PHS) program of the Department of Fish and Wildlife; or by rules and regulations adopted by the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or other agency with jurisdiction for such designations.

"Debris flow" means a moving mass of rock fragments, soil, and mud; more than half of the particles being larger than sand size; a general term that describes a mass movement of sediment mixed with water and air that flows readily on low slopes.

"Debris torrent" means a violent and rushing mass of water, logs, boulders and other debris.

"Deepwater habitats" means permanently flooded lands lying below the deepwater boundary of wetlands. Deepwater habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium in which the dominant organisms live. The boundary between wetland and deepwater habitat in the riverine and lacustrine systems lies at a depth of two meters (6.6 feet) below low water; however, if emergent vegetation, shrubs, or trees grow beyond this depth at any time, their deepwater edge is the boundary.

"Development" means any activity that results in a change of use or modification of land or its resource. These activities include, but are not limited to: clearing of vegetation; filling, grading and other topographic modification; building construction or modification; construction of roads, trails, utilities and other facilities.

"Director" means the director of the City of Chehalis Department of Community and Economic Development. Functions of the director as defined by this Chapter may be assigned to other City of Chehalis staff persons at the discretion of the director.

"Drainage ditch" means an artificially created watercourse constructed to drain surface or ground water. Ditches are graded (man-made), channels installed to collect and convey runoff from fields and roadways. Ditches may include irrigation ditches, waste ways, drains, outfalls, operational spillways, channels, storm water runoff facilities or other wholly artificial watercourses, except those that directly result from the modification to a natural watercourse. Ditched channels that support fish are considered to be streams.

"Emergency" refers to an unanticipated and imminent threat to public health, safety or the environment. Emergency construction does not include development of new permanent protective structures where none previously existed. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency.

"Emergent wetland" means a wetland with at least 30 percent of the surface area covered by erect, rooted, herbaceous vegetation as the uppermost vegetative strata.

"Enhancement" means actions performed within an existing degraded critical area and/or buffer to intentionally increase or augment one or more functions or values of the existing critical area or buffer. Enhancement actions include, but are not limited to, increasing plant diversity and cover, increasing wildlife habitat and structural complexity (snags, woody debris), installing environmentally compatible erosion controls, or removing non-indigenous plant or animal species.

"Erosion" means a process whereby wind, rain, water and other natural agents mobilize, and transport, and deposit soil particles.

"Erosion hazard areas" means lands or areas underlain by soils identified by the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) as having

“severe” or “very severe” erosion hazards and areas subject to impacts from lateral erosion related to moving water such as river channel migration and shoreline retreat.

“Essential public facility” means those facilities that are typically difficult to site, such as airports, state education facilities, and state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and inpatient facilities including substance abuse facilities, mental health facilities, and group homes.

“Feasible alternative” means a course of action, that can include uses, design, construction techniques, and other features on a site or alternative sites that are reasonably capable of being carried out after taking into consideration existing technology and logistics and that has less impact to critical areas. Cost is one factor in determining whether an action is capable of being carried out.

“Fill material” means any solid or semi-solid material, including rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure, that when placed, changes the grade or elevation of the receiving site.

“Filling” means the act of transporting or placing by any manual or mechanical means fill material from, to, or on any soil surface, including temporary stockpiling of fill material.

“Fish and wildlife habitat conservation areas” are areas important for maintaining species in suitable habitats within their natural geographic distribution so that isolated populations are not created.

"Fish habitat" means a complex of physical, chemical, and biological conditions that provide the life supporting and reproductive needs of a species or life stage of fish. Although the habitat requirements of a species depend on its age and activity, the basic components of fish habitat in rivers, streams, ponds, lakes, estuaries, marine waters, and nearshore areas include, but are not limited to, the following:

- (a) Clean water and appropriate temperatures for spawning, rearing, and holding;
- (b) Adequate water depth and velocity for migrating, spawning, rearing, and holding, including off-channel habitat;
- (c) Abundance of bank and in-stream structures to provide hiding and resting areas and stabilize stream banks and beds;
- (d) Appropriate substrates for spawning and embryonic development. For stream and lake dwelling fishes, substrates range from sands and gravel to rooted vegetation or submerged rocks and logs. Generally, substrates must be relatively stable and free of silts or fine sand;
- (e) Presence of riparian vegetation as defined in this article. Riparian vegetation creates a transition zone, which provides shade, and food sources of aquatic and terrestrial insects for fish;
- (f) Unimpeded passage (i.e. due to suitable gradient and lack of barriers) for upstream and downstream migrating juveniles and adults.

“Flood or Flooding” mean a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

“Floodplain” means the total land area adjoining a river, stream, watercourse, or lake subject to inundation by the base flood.

“Floodway” means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the surface water elevation more than one (1) foot.

"Forested wetland" means a wetland with at least 30 percent of the surface area covered by woody vegetation greater than 20 feet in height, excluding monotypic stands of red alder or cottonwood that average eight inches in diameter at breast height or less.

“Frequently flooded areas” means lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance and attenuation functions, as determined by the County in accordance with WAC 365-190-080(3). Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

“Function and value” means the beneficial roles served by critical areas and the values people derive from these roles including, but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, providing historical and archaeological resources, noise and visual screening, open space, and recreation. These beneficial roles are not listed in order of priority.

“Function assessment or Functions and values assessment” mean a set of procedures, applied by a qualified professional, to identify the ecological functions being performed in a wetland or other critical area, usually by determining the presence of certain characteristics, and determining how well the critical area is performing those functions. Function assessments can be qualitative or quantitative and may consider social values potentially provided by the wetland or other critical area. Function assessment methods must be consistent with Best Available Science.

"Functions" means the processes or attributes provided by areas of the landscape (e.g. wetlands, rivers, streams, and riparian areas) including, but not limited to, habitat diversity and food chain support for fish and wildlife, ground water recharge and discharge, high primary productivity, low flow stream water contribution, sediment stabilization and erosion control, storm and flood water attenuation and flood peak desynchronization, and water quality enhancement through biofiltration and retention of sediments, nutrients, and toxicants. These beneficial roles are not listed in order of priority.

"Game fish" means those species of fish that are classified by the Washington Department of Wildlife as game fish (WAC 232-12-019).

"Geologically hazardous areas" means areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological events, pose unacceptable risks to public health and safety and may not be suited to commercial, residential, or industrial development.

"Gradient" means a degree of inclination, or a rate of ascent or descent, of an inclined part of the earth's surface with respect to the horizontal; the steepness of a slope. It is expressed as a ratio (vertical to horizontal), a fraction (such as meters/ kilometers or feet/miles), a percentage (of horizontal distance), or an angle (in degrees).

"Grading" means any excavating or filling of the earth's surface or combination thereof.

"Ground water" means all water that exists beneath the land surface or beneath the bed of any stream, lake, reservoir, or other body of surface water within the boundaries of the state, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves (Chapter 90.44 RCW).

"Ground water management area" means a specific geographic area or subarea designated pursuant to Chapter 173-100 WAC for which a ground water management program is required.

"Ground water management program" means a comprehensive program designed to protect ground water quality, to assure ground water quantity, and to provide for efficient management of water resources while recognizing existing ground water rights and meeting future needs consistent with local and state objectives, policies and authorities within a designated ground water management area or subarea and developed pursuant to Chapter 173-100 WAC.

"Growing season" means the portion of the year when soil temperatures are above biologic zero (41 degrees Fahrenheit).

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

"Hazard tree" means any tree that is susceptible to immediate fall due to its condition (damaged, diseased, or dead) or other factors, and which because of its location is at risk of damaging permanent physical improvements to property or causing personal injury.

"Hazardous substance" 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.

"High intensity land use" means land use that includes the following uses or activities: commercial, urban, industrial, institutional, retail sales, residential (more than 1 unit/acre), high-intensity new agriculture (dairies, nurseries, greenhouses, raising and

harvesting crops requiring annual tilling, raising and maintaining animals), high-intensity recreation (golf courses, ball fields), hobby farms.

“Hydraulic Project Approval” (HPA) means a permit issued by the State Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 77.55 RCW.

“Hydric soil” means a soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual (RCW 90.58.380).

“Hydrologic soil groups” means soils grouped according to their runoff-producing characteristics under similar storm and cover conditions. Properties that influence runoff potential are depth to seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a low permeable layer. Hydrologic soil groups are normally used in equations that estimate runoff from rainfall, but can be used to estimate a rate of water transmission in soil. There are four hydrologic soil groups:

- (a) Low runoff potential and a high rate of infiltration potential;
- (b) Moderate infiltration potential and a moderate rate of runoff potential;
- (c) Slow infiltration potential and a moderate to high rate of runoff potential; and
- (d) High runoff potential and very slow infiltration and water transmission rates.

“Hydrophytic vegetation” means macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

“Hyporheic zone” means the saturated zone located beneath and adjacent to streams that contain some proportion of surface water from the surface channel. The hyporheic zone serves as a filter for nutrients, as a site for macroinvertebrate production important in fish nutrition and provides other functions related to maintaining water quality.

“Impervious surface” means a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow compared to natural conditions prior to development. Common impervious surfaces may include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of storm water. Impervious surfaces do not include surface created through proven low impact development techniques.

“Infiltration” means the downward entry of water into the immediate surface of soil.

“In-kind compensation” means to replace critical areas with substitute areas whose characteristics and functions mirror those destroyed or degraded by a regulated activity.

"Invasive species" means a species that is 1) non-native (or alien) to area within the City of Chehalis and its Urban Growth Area whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes). Human actions are the primary means of invasive species introductions.

"Lake" means a naturally or artificially created body of deep (generally greater than 6.6 feet) open water that persists throughout the year. A lake is larger than a pond, greater than one acre in size, equal to or greater than 6.6 feet in depth, and has less than 30 percent (30%) aerial coverage by trees, shrubs, or persistent emergent vegetation. A lake is bounded by the ordinary high water mark or the extension of the elevation of the lake's ordinary high water mark to the stream where the stream enters the lake.

"Landfill" means a disposal facility or part of a facility at which solid waste and/or demolition waste is permanently placed in or on land including facilities that use solid waste as a component of fill. In addition, landfill includes all related land and structures and other improvements on the land used for the disposal of solid waste, pursuant to Chapter 173-351 WAC.

"Landslide" is a general term covering a wide variety of mass movement landforms and processes involving the downslope transport, under gravitational influence of soil and rock material en masse; included are debris flows, debris avalanches, earthflows, mudflows, slumps, mudslides, rock slides, and rock falls.

"Landslide hazard areas" means areas that, due to a combination of site conditions like slope inclination and relative soil permeability are susceptible to mass wasting.

"Low intensity land use" means land use that includes the following uses or activities: forestry (cutting of trees only), low-intensity open space (such as passive recreation and natural resources preservation), unpaved trails.

"Maintenance and repair" means work required to keep existing improvements in their existing operational state. This does not include any modification that changes the character, scope, or size of the original structure, facility, utility or improved area.

"Major alteration or renovation" means the alteration or renovation of any structure, or associated improvements within a critical area or buffer that results in an expansion of floor area of 500 square feet or more, or more than 10 percent and less than 50 percent, whichever is greater; or the expansion of impervious surface by more than 1,000 square feet, or more than 10 percent and less than 50 percent whichever is greater; or remodeling or renovation that is greater than 50 percent but less than 100 percent of the value of the structures or improvements, excluding plumbing, electrical and mechanical systems..

"Mass wasting" means downslope movement of soil and rock material by gravity. This includes soil creep, erosion, and various types of landslides, not including bed load associated with natural stream sediment transport dynamics.

"Mature forested wetland" means a wetland with an overstory dominated by mature trees having a wetland indicator status of facultative (FAC), facultative-wet (FACW), or obligate (OBL). Mature trees are considered to be at least 21 inches in diameter at breast height.

"Mean annual flow" means the average flow of a river or stream (measured in cubic feet per second) from measurements taken throughout the year. If available, flow data for the previous 10 years should be used in determining mean annual flow.

"Minor alteration or renovation" means alteration or renovation of any structure, or associated improvements within a critical area or buffer that results in an expansion of floor area of less than 500 square feet, or 10 percent, whichever is less, or the expansion of impervious surface by less than 1,000 square feet, or 10 percent, whichever is less; or remodeling or renovation that is less than 50 percent of the value of the structure or improvements, excluding plumbing, electrical and mechanical systems.

"Mitigation" means individual actions that may include a combination of the following measures, listed in order of preference:

- (a) Avoiding an impact altogether by not taking a certain action or parts of actions;
- (b) Minimizing impacts by limiting the degree or magnitude of an action and its implementation;
- (c) Rectifying impacts by repairing, rehabilitating, or restoring the affected environment; such as repairing damage done to a critical area resource such as stream or wetland after it is affected by a project.
- (d) Reducing or eliminating an impact over time by preservation and maintenance operations during the life of the action;
- (e) Compensating for an impact by replacing or providing substitute resources or environments; and
- (f) Monitoring the mitigation and taking remedial action when necessary.

"Mitigation bank" means a site where wetlands or similar habitats are restored, created, enhanced, or in exceptional circumstances, preserved, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to aquatic resources.

"Mitigation plan" means a detailed plan indicating actions necessary to mitigate adverse impacts to critical areas.

"Moderate intensity land use" means land use that includes the following uses or activities: residential (1 unit/acre or less), moderate-intensity open space (parks), moderate-intensity new agriculture (orchards and hay fields), plant nurseries, paved trails, building of logging roads.

"Monitoring" means evaluating the impacts of development proposals over time on the biological, hydrological, pedological, and/or geological elements of such systems and/or assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and documenting

changes in natural ecosystems and features, and includes gathering baseline data.

"Native vegetation" means plant species that are indigenous to the area within the City of Chehalis and its Urban Growth Area. For the purposes of establishment of native vegetation within buffer areas, native vegetation shall include, but not be limited to the following:

- Native evergreen trees: Douglas-fir, *Pseudotsuga menziesii*; Grand fir, *Abies grandis*; Pacific madrone, *Arbutus menziesii*; Western red cedar, *Thuja plicata*; Western hemlock, *Tsuga heterophylla*
- Native deciduous trees: Big-leaf maple, *Acer macrophyllum*; Hazelnut, *Corylus cornuta*; Bitter Cherry, *Prunus emarginata*; Black hawthorn, *Crataegus douglasii*; Oregon ash, *Fraxinus latifolia*; Oregon white oak, *Quercus garryana*; Red alder, *Alnus rubra*; Vine maple, *Acer circinatum*; Hooker's willow, *Salix hookeriana*; Pacific willow, *Salix lasiandra*; Scouler willow, *Salix scouleriana*; Sitka willow, *Salix sitchensis*
- Native understory: Black twinberry, *Lonicera involucrata*; Blue elderberry, *Sambucus cerulea*; Red elderberry, *Sambucus racemosa*; Red huckleberry, *Vaccinium parvifolium*; Indian plum, *Oemleria cerasiformis*; Red Columbine *Aquilegia Formosa*; Pacific dogwood, *Cornus nuttallii*; Red-osier dogwood, *Cornus stolonifera*; Pacific ninebark, *Physocarpus capitatus*; Western rhododendron, *Rhododendron macrophyllum*; White Rhododendron, *Rhododendron albiflorum*; Straggly gooseberry, *Ribes divaricatum*; Red-flowering currant, *Ribes sanguineum*; Baldhip rose, *Rosa gymnocarpa*; Nootka rose, *Rosa nutkana*, Clustered wild rose, *Rosa pisocarpa*; Thimbleberry, *Rubus parviflorus*; Salal, *Gaultheria shallon*; Serviceberry, *Amelanchier alnifolia*; Salmonberry, *Rubus spectabilis*; Common Snowberry, *Symphoricarpos albus*; and Black twinberry, *Lonicera involucrata*.

Choice of plants for a specific site must consider the hydric, shade, aspect and other conditions. Spacing of plants shall depend upon the presence of existing native vegetation and the size of plants installed. Generally plantings shall result in a vegetation community consisting of no more than fifty (50) percent deciduous trees. Tree planting shall achieve a spacing where new materials are required of 10 feet of one gallon or smaller specimens, 15 feet with two gallon specimens, larger sizes shall be spaced according to specimen size. Understory generally should be installed at a spacing of 12 inches for 4 inch pots and 36 inches for one gallon specimens.

"No net loss" means the maintenance of the aggregate total of ecological functions and values within a geographic area defined in terms of natural processes, such as a watershed or catchment area.

"Off-site mitigation" means to replace critical areas away from the site on which a critical area has been adversely impacted by a regulated activity.

"Ordinary high water mark" means the mark or line on all lakes, rivers, streams and tidal water that will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland in

respect to vegetation [RCW 90.58.030(2)(b)].

“Person” means an individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, state agency or local governmental unit, however, designated, or Indian Nation or tribe.

“Planned Unit Development (PUD)” means one or a group of specified uses, such as residential, resort, commercial or industrial, to be planned and constructed as a unit. Zoning or subdivision regulations with respect to lot size, building bulk, etc., may be varied to allow design innovations and special features in exchange for additional and/or superior site amenities or community benefits.

"Pond" means an open body of water, generally equal to or greater than 6.6 feet deep, that persists throughout the year and occurs in a depression of land or expanded part of a stream and has less than 30 percent (30%) aerial coverage by trees, shrubs, or persistent emergent vegetation. Ponds are generally smaller than lakes. Farm ponds are excluded from this definition. Beaver ponds that are two-years old or less are excluded from this definition.

"Potable" means water that is suitable for drinking by the public (Chapter 246-290 WAC).

“Preservation” means actions taken to ensure the permanent protection of existing, ecologically important critical areas and/or buffers that the City has deemed worthy of long-term protection.

“Primary association” means the use of a habitat area by a listed or priority species for breeding/spawning, rearing young, resting, roosting, feeding, foraging, and/or migrating on a frequent and/or regular basis during the appropriate season(s) as well as habitats that are used less frequently/regularly but which provide for essential life cycle functions such as breeding/nesting/spawning.

“Priority habitat” means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes: Comparatively high fish or wildlife density; comparatively high fish or wildlife species diversity; fish spawning habitat; important wildlife habitat; important fish or wildlife seasonal range; important fish or wildlife movement corridor; rearing and foraging habitat; important marine mammal haul-out; refuge; limited availability; high vulnerability to habitat alteration; unique or dependent species; or shellfish bed. A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or non-priority fish and wildlife (WAC 173-26-020(24)).

“Priority species” means wildlife species of concern due to their population status and their

sensitivity to habitat alteration, as defined by the Washington Department of Fish and Wildlife.

"Project" means any proposed or existing activity that results in "development", as defined above.

"Project permit or Project approval" means any land use or environmental permit or approval required by the City of Chehalis, but not limited to, building permits, subdivisions, binding site plan, planned unit developments, conditional uses, shoreline substantial development permits, variance, site plan review, permits or approvals authorized by a comprehensive plan or subarea plan.

"Qualified professional or qualified consultant" mean a person with experience and training with expertise appropriate for the relevant critical area subject in accordance with WAC 365195-905(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, soil science, engineering, environmental studies, fisheries, geology, geomorphology or related field, and related work experience and meet the following criteria:

(a) A qualified professional for wetlands must have a degree in biology, ecology, soil science, botany, or a closely related field and a minimum of five years of professional experience in wetland identification and assessment in the Pacific Northwest.

(b) A qualified professional for habitat conservation areas must have a degree in wildlife biology, ecology, fisheries, or closely related field and a minimum of five years professional experience related to the subject species/habitat type.

(c) A qualified professional for geologically hazardous areas must be a professional engineering geologist or geotechnical engineer, licensed in the state of Washington.

(d) A qualified professional for critical aquifer recharge areas means a Washington State licensed hydrogeologist, geologist, or engineer.

"Recharge" means the process involved in the absorption and addition of water from the unsaturated zone to ground water.

"Re-establishment" means measures taken to intentionally restore an altered or damaged natural feature or process including:

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

(b) Actions performed to re-establish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or other events; and

(c) Restoration can include restoration of wetland functions and values on a site where wetlands previous existed, but are no longer present due to lack of water or hydric soils.

“Rehabilitation” means a type of restoration action that restores a critical area to its original form or type such as restoring a wetland to its original hydro geomorphic class.

“Relatively density” is a method for evaluating the density of trees in relation to the theoretical maximum density for trees of the same size and species. It is preferable to a simple density (trees/acre) because it is a more accurate measure of occupied growing space and suppression mortality. Relative density equals the basal area of all trees in the stand divided by the square root of the quadratic mean diameter. “Repair or maintenance” mean 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.

“Resident fish” means a fish species that completes all stages of its life cycle within freshwater and frequently within a local area.

“Restoration” See “re-establishment”.

“Rills” means steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.

"Riparian corridor or Riparian zone" mean the area adjacent to a water body (stream, lake or marine water) that contains vegetation that influences the aquatic ecosystem, nearshore area and/or fish and wildlife habitat by providing shade, fine or large woody material, nutrients, organic debris, sediment filtration, and terrestrial insects (prey production). Riparian areas include those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., zone of influence). Riparian zones provide important wildlife habitat. They provide sites for foraging, breeding and nesting; cover to escape predators or weather; and corridors that connect different parts of a watershed for dispersal and migration.

"Riparian vegetation" means vegetation that tolerates and/or requires moist conditions and periodic free flowing water thus creating a transitional zone between aquatic and terrestrial habitats which provides cover, shade and food sources for aquatic and terrestrial insects for fish species. Riparian vegetation and their root systems stabilize stream banks, attenuate high water flows, provide wildlife habitat and travel corridors, and provide a source of limbs and other woody debris to terrestrial and aquatic ecosystems, which, in turn, stabilize stream beds.

“Scrub-shrub wetland” means a wetland with at least thirty percent (30%) of its surface area covered by woody vegetation less than twenty (20) feet in height as the uppermost strata.

“Seismic hazard areas“ means areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

"SEPA" is a commonly used acronym for the State Environmental Policy Act.

"Shoreline Management Act" and "shoreline" means the planning and regulatory program established in RCW 90.58.

"Shoreline Master Program" means the local planning and regulatory program established in compliance with RCW 90.58, and as hereafter amended.

"Shorelines" are all of the water areas of the state as defined in RCW 90.58.030, including reservoirs and their associated shorelands, together with the lands underlying them except:

- (a) Shorelines of statewide significance;
- (b) Shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second (20 cfs) or less and the wetlands associated with such upstream segments; and
- (c) Shorelines on lakes less than twenty (20) acres in size and wetlands associated with such small lakes.

"Shorelines of statewide significance" means those areas defined in RCW 90.58.030(2)(e).

"Shorelines of the state" means the total of all "shorelines," as defined in RCW 90.58.030(2)(d), and "shorelines of statewide significance" within the state, as defined in RCW 90.58.030(2)(c).

"Shorelands or Shoreland areas" mean those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes and tidal waters which are subject to the provisions of Chapter 90.58 RCW.

"Single-family development" means the development of a single-family residence permanently installed and served with utilities on a lot of record.

"Site" means any parcel or combination of contiguous parcels, or right-of-way or combination of contiguous rights-of way under the applicant's ownership or control where the proposed project impacts an environmentally critical area.

"Slope" means:

- (a) Gradient.
- (b) The inclined surface of any part of the earth's surface, delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

"Soil" means all unconsolidated materials above bedrock described in the Soil Conservation Service Classification System or by the Unified Soils Classification System.

"Sphagnum bog" means a type of wetland dominated by mosses that form peat. Sphagnum bogs are very acidic, nutrient poor systems, fed by precipitation rather than surface inflow, with specially adapted plant communities.

"Streams" are those areas where surface waters produce a defined channel or bed. A defined channel or bed is an area that demonstrates clear evidence of the annual passage of water and includes, but is not limited to, bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round. This definition includes drainage ditches or other artificial water courses where natural streams existed prior to human alteration, and/or the waterway is used by anadromous or resident salmonid or other fish populations or flows directly into Shellfish Habitat Conservation Areas.

"Structure" means a permanent or temporary building or edifice of any kind, or any piece of work artificially built up or composed of parts joined together in some definite matter whether installed on, above, or below the surface of the ground or water, except for vessels.

"Substantial reconstruction" means the alteration or renovation that results in an expansion of floor area of more than 50 percent, or the expansion of impervious surface by more than 50 percent, or remodeling or renovation that exceeds 100 percent of the value of the structures or other improvements, excluding plumbing, electrical and mechanical systems. Such substantial reconstruction shall be considered the same as new construction and shall fully comply with the provisions of this code.

"Toe" means the lowest part of a slope or cliff; the downslope end of an alluvial fan, landslide, etc.

"Top" means the top of a slope; or in this chapter it may be used as the highest point of contact above a landslide hazard area.

"Unavoidable adverse impact" means adverse impacts that remain after all appropriate avoidance and minimization measures have been implemented.

"Utilities" means all lines and facilities used to distribute, collect, transmit, or control electrical power, natural gas, petroleum products, information (telecommunications), water, and sewage.

"Volcanic hazard areas" means geologically hazardous areas that are subject to pyroclastic flows, lava flows, debris avalanche, or inundation by debris flows, mudflows, or related flooding resulting from volcanic activity.

"Watershed" means a geographic region within which water drains into a particular river, stream or body of water.

“Watershed improvement district” means a special district established pursuant to RCW 85.38.

“Well head protection area” means the area (surface and subsurface) managed to protect ground water based public water supplies.

“Wetland mosaic” means two or more wetlands that are less than 100 feet apart such that within the outer boundaries of the area delineated as wetland and the associated upland between the wetlands more than 50 percent of the total area is comprised of wetlands and open water as defined by the OHWM.

“Wet meadow” means palustrine emergent wetlands, typically having disturbed soils, vegetation, or hydrology.

“Wet season” means the period generally between November 1 and March 30 of most years when soils are wet and prone to instability. The specific beginning and end of the wet season can vary from year to year depending on weather conditions.

“Wetland” means areas defined pursuant to RCW 36.70A.030 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, retention 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. However, wetlands include those artificial wetlands intentionally created to mitigate wetland impacts.

“Wetland buffer” means a designated area contiguous or adjacent to a wetland that is required for the continued maintenance, function, and ecological stability of the wetland.

“Wetland class” means the general appearance of the wetland based on the dominant vegetative life form or the physiography and composition of the substrate. Multiple classes can exist in a single wetland. Types of wetland classes include forest, scrub/shrub, emergent, and open water.

“Wetland delineation” means the precise determination of wetland boundaries in the field according to the application of specific methodology as described in the 1997 Washington State Wetland Delineation Manual or 1987 edition, as amended, Corps of Engineers Wetlands Delineation Manual and the mapping thereof.

“Wetland edge” means the boundary of a wetland as delineated based on the definitions contained in this chapter.

"Wetland enhancement" See "enhancement."

"Wetland mitigation bank" means a site where wetlands and buffers are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

"Wetland Restoration" See "mitigation" and "re-establishment".

"Windthrow" means a natural process by which trees are uprooted or sustain severe trunk damage by the wind.

"Wood waste" means solid waste consisting of wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, handling and storage of raw materials and trees and stumps. This includes, but is not limited to, sawdust, chips, shavings, bark, pulp, hog fuel, and log sort yard waste, but does not include wood pieces or particles containing chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.

#### **17.21.040 Critical area maps.**

Those documents and maps which are referenced in this chapter for designation of critical areas are resources for the identification of the probable location, extent and classification of critical areas. Such information may be used by the director as a basis for applying the provisions of this code, including requiring field investigation and special reports. In the event of a conflict between information contained in the critical area maps and information resulting from a field investigation, the latter shall prevail. Preparation and maintenance of such documents and maps shall not create liability on the part of the City of Chehalis or any officer or employee thereof for any damages that result from reliance on said maps.

#### **17.21.050 Multiple designations.**

Where any parcel may be designated as having more than one critical area designation, the development standards for each category of critical area must be met. Where there is conflict between development standards of critical area categories, the most restrictive standards shall apply. (Ord. 454 B), 1992)

#### **17.21.060 SEPA.**

This chapter is an officially adopted land use policy of the city of Chehalis and shall provide an additional basis for analyzing development proposals pursuant to RCW 43.21c. Adopted critical area maps, pursuant to Section 17.21.040, are declared sensitive areas under provisions of WAC 197-11-908 and CMC 17.15.010 (D). (Ord. 720B, 2002)

#### **17.21.070 Permitted uses.**

A. Uses permitted on properties classified as critical areas shall be the same as those permitted in the zoning and Shoreline Master Program district which applies to the subject property, subject to the specific provisions of this code where more restrictive.. Each use shall be evaluated in accordance with the review process required for the

proposed use in the underlying zone in conjunction with the requirements of this chapter, as well as state and federal regulations.

B. Altering critical areas and/or buffers related to wetlands, streams, and geological hazard areas is prohibited except when:

1. Alteration is approved pursuant to the reasonable use or variance provisions of Section 17.21.83.
2. Alteration is necessary to accommodate an essential public facility or public utility where no feasible alternative location will accommodate the facility and the facility is located, designed, and constructed to minimize, mitigate and where possible avoid critical area disturbance to the maximum extent feasible;
3. Alteration is part of an essential element of an activity allowed by this chapter and all feasible measures to avoid and minimize impacts have been employed. Such feasible measures shall include but not be limited to clustering where permitted by zoning and as appropriate to protect critical areas and buffers. The purposes of clustering shall be to minimize adverse effects of development on critical area functions and values, minimize land clearing, maintain soil stability, preserve native vegetation, maintain hydrology, and mitigate risk to life and property; or
4. Alteration is associated with an activity enumerated in Section 17.21.071 that has negligible impact on critical areas.

C. Land that is located wholly within a critical area or buffer may not be subdivided for purposes of creating buildable parcels. Land that is located partially within a critical area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of the critical area or buffer with provision for drainage, erosion control, vegetation maintenance and related features that will not adversely affect the critical area or its buffer.

#### **17.21.071 Allowed activities.**

The following actions and activities are allowed in critical areas as actions with negligible effects on the resource and ecological functions, subject to the standards and criteria provided, and subject to review and approval processes.

A. Emergency actions are those activities necessary to prevent an immediate threat to life, to public health, safety, or welfare, or that pose an immediate risk of damage to private structures or improvements and that require remedial or preventative action in a timeframe too short to allow for compliance with the procedural requirements of this chapter.

1. Emergency actions that create an impact on a critical area or its buffer shall be limited to those actions that are required to address the emergency and generally are limited to the actions necessary to remove the immediate threat. Additional actions to permanently address a deficiency generally do not qualify as emergency actions and require full compliance with the procedural requirements of this chapter. Emergency actions also must be carried out in a manner that has the least feasible impact on the critical area or its buffer.
2. The person or agency undertaking emergency action shall notify the director within one (1) working day following commencement of the emergency activity. Within fourteen (14) days, the director shall determine if the action taken was within the scope of the emergency actions allowed in this subsection. If the director determines that the action taken, or any part of the action taken, was beyond the

scope of an allowed emergency action, then the enforcement provisions of Section 17.21.090 shall apply.

3. After the emergency, the person or agency undertaking the action shall submit a critical area report to assess effects on critical areas and conduct necessary restoration and/or mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved critical area report and mitigation plan. The person or agency undertaking the action shall apply for all approvals required by this chapter. Restoration and/or mitigation activities must be initiated within sixty (60) days of the date of the emergency, unless an extension is approved by the director, and completed in a timely manner;

B. Maintenance, operation and/or repair of existing rights-of-way, trails, roads, utilities, buildings and other facilities within critical areas and buffers, provided that the activity does not further alter, impact, or encroach upon the sensitive area or buffer or further affect the functions of sensitive areas, and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair and provided further that:

1. Prior to undertaking such actions, the applicant shall submit a written description of the maintenance activity to the director with all of the following general information:

a. Type, timing, frequency and sequence of maintenance activity to be conducted;

b. Type of equipment to be used (hand or mechanical);

c. Manner in which the equipment will be used; and

d. Best management practices to be used.

C. Maintenance of existing, lawfully established landscaping and gardens within a regulated critical area or its buffer, including but not limited to, mowing lawns, weeding, removal of noxious and invasive species, harvesting and replanting of garden crops, pruning and planting of ornamental vegetation or indigenous native species to maintain the condition and appearance of such areas as they existed prior to adoption of this code, provided that native growth protection areas, mitigation sites, or other areas protected via conservation easements or similar restrictive covenants are not covered by this exception.

D. Maintenance, repair or replacement of an existing non-conforming structure pursuant to Section 17.21.088 that does not further alter or increase the impact to the sensitive area or buffer and results in no increased risk to life or property as a result of the proposed modification or replacement.

E. Replacement, modification, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances, not including substations, when such facilities are located within the existing improved portion of the public right-of-way (road surface, shoulder, sidewalks, and fill slopes) or the improved portion of City authorized private roadway provided that no fill or discharge occurs outside the existing improved area and with appropriate Best Management Practices to control erosion, sedimentation and other potential impacts. Excluded is work within a water body or wetland, including but not limited to culverts or bridge replacement or construction.

F. Utility projects that have minor or short-duration impacts to critical areas and buffers, as determined by the director in accordance with the criteria below, and which do not significantly impact the functions or values of a sensitive area(s), provided that such projects are constructed with best management practices and appropriate restoration

measures are provided. These activities shall not result in the transport of sediment or increased stormwater. Such allowed minor utility projects shall meet the following criteria:

1. There is no practical alternative to the proposed activity with less impact on sensitive areas;
2. The activity involves the placement of a utility pole, street signs, anchor, or vault or other small component of a utility facility; and
3. The activity involves disturbance of less than 75 square feet of the sensitive area and/or buffer;

G. Low impact activities such as hiking, canoeing, nature study, photography, fishing, education or scientific research.

H. Public and private pedestrian trails provided they are subject to the following

1. The trail surface shall not exceed four (4) feet in width;
2. The trail surface shall consist of gravel or pervious materials, including boardwalks;
3. The trail shall meet all other City requirements including water quality standards;
4. Sensitive area and/or buffer widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas; and
5. Trails proposed to be located in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report;

I. The following vegetation removal activities:

1. The removal of the noxious weed species designated by Washington State or the local weed control authority, and the following species, with hand labor and light equipment:

- a. English Ivy (*Hedera helix*);
- b. Himalayan blackberry (*Rubus discolor*, *R. procerus*);
- c. Evergreen blackberry (*Rubus laciniatus*); and

2. The removal of hazard trees from sensitive areas and buffers that are posing a threat to public safety, or an imminent risk of damage to a permanent structure, provided that:

- a. The applicant submits a report from a certified arborist, or professional forester that documents the hazard provided that the director may waive this requirement for any trees that are clearly dead, or dying, and provides a replanting schedule for the replacement trees;
- b. Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified by a qualified professional. Where pruning or crown thinning is not sufficient to address the hazard, trees should be removed or converted to wildlife snags;
- c. If native vegetation is cut or removed from a sensitive area or buffer, it shall be left within the sensitive area or buffer where practicable unless removal is warranted due to safety considerations, the presence of an established disease infestation or other hazard, or because of access or maintenance needs if the area is a utility or access right-of-way;
- d. The landowner shall replace any trees that are removed with new trees at a ratio of two replacement trees for each tree removed (2:1) within one (1) year

in accordance with an approved restoration plan. Replacement trees shall be species that are native and indigenous to the site and a minimum of one (1) inch in diameter-at-breast height (dbh) for deciduous trees and a minimum of three (3) feet in height for evergreen trees as measured from the top of the root ball, provided that the director may allow smaller replacement trees with a higher replacement ratio;

e. Hazard trees that constitute an emergency may be removed or pruned by the landowner prior to receiving written approval from the City provided that within fourteen (14) days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this Chapter.

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

J. Minor site investigative work necessary for land use submittals, such as surveys, soil logs, percolation tests, and other related activities, where such activities do not require construction of new roads, removal of native trees or shrubs, or displacement of more than 5 cubic yards of material. Investigations involving displacement of more than 5 cubic yards of material, including geotechnical soil borings, groundwater monitoring wells, percolation tests, and similar activities shall require submittal of specific plans and restoration plans. In every case, impacts to the sensitive area shall be minimized and disturbed areas shall be immediately restored.

K. Forest Practices governed by a valid Forest Practices Permit granted by the Washington State Department of Natural Resources, except where:

1. The lands have been or are proposed to be converted under a conversion option harvest plan to a use other than commercial forest product production as provided in chapter RCW 76.09.050 and RCW 76.09.240, or

2. On lands which have been platted after January 1, 1960, as provided in RCW 76.09.050 and RCW 76.09.240.

L. Activities undertaken to comply with a United States Environmental Protection Agency superfund related order, or a Washington Department of Ecology order pursuant to the Model Toxics Control Act that specifically preempts local regulations in the findings of the order.

M. Project and facilities for restoration and enhancement of ecological functions of critical areas and related resources may be allowed within critical areas and buffers, upon approval of a restoration and mitigation plan in accordance with the provisions of this Chapter, or for restoration or enhancement programs in an adopted Shoreline Restoration Plan pursuant to WAC 173-26, a watershed planning document prepared and adopted pursuant to RCW 90.82, a watershed restoration project pursuant to RCW 89.08.460, a Salmonid Recovery Plan, the Salmon Recovery Board Habitat Project List, or identified by the Washington Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement pursuant to RCW 77.55.290.

#### **17.21.080 Preliminary consultation.**

During the application completeness review period for any subdivision of property, short

plat, boundary line adjustment, site plan review, building permit, business license, or any activity requiring city review and/or approval, the property which is the subject of such permit or approval process shall be reviewed by the city for the purpose of identifying the possible presence of a critical area on or adjacent to such property. Where appropriate the city will conduct a preliminary site inspection to confirm the presence of a potential critical area. Within fifteen city business days of the receipt of any such application, the city shall notify the applicant in writing of the possible presence of a critical area and provide consultation, if requested, regarding additional data requirements or methods of compliance with this chapter, including submittal of a critical area study.

**17.21.081 Permit processing.**

A. The approval or denial of an activity or modification within a critical area shall be an administrative action of the director for actions requiring only a building permit or other permit action requiring only ministerial action as defined by relevant City codes. The review process will be integrated with the review of the underlying permit. Public notice is required only if required by the underlying permit.

B. If a project requires another permitting action by the city which requires a public hearing consideration of critical areas will be integrated with the underlying permitting process.

C. The director shall perform a critical area review for any application for a development proposal on a site that includes one or more critical areas or would affect critical areas on adjacent lands, unless otherwise provided in this chapter. As part of all development applications,

the director shall verify the information submitted by the applicant to:

1. Confirm the nature and type of the critical areas and associated buffers;
2. Evaluate the need for critical area studies or the adequacy of any such studies submitted with the application;
3. Determine whether the development proposal is consistent with these critical area regulations;
4. Determine whether proposed alterations to critical areas are necessary;
5. Determine if the mitigation and monitoring plans and bonding measures proposed by the applicant are sufficient to protect the public health, safety and welfare consistent with the goals, purposes, objectives and requirements of this overlay district.

D. Compliance with the provisions of this chapter does not necessarily constitute compliance with other regulations and permit requirements. Permit applicants are responsible for complying with all federal, state, county, and local regulations that may pertain to a proposed development, provided that conditions imposed by the city shall be coordinated with the conditions imposed by other agencies to the extent feasible.

**17.21.082 Critical area studies.**

An applicant for a development proposal that includes, or is adjacent to, or could adversely impact critical areas or buffers shall submit such studies prepared by a qualified professional as are required by the director to adequately evaluate the proposal and all probable impacts. The study shall be prepared by a qualified professional as defined in Section 21.64.030 and paid for by the applicant.

A. Waivers. The director may waive the requirement for a critical area study if there is a

substantial showing that:

1. The boundaries of the critical area and associated buffers can be reliably determined without a technical study;
2. There will be no alteration of the critical area or required buffer;
3. The development proposal will not impact critical areas in a manner contrary to the goals, purposes, objectives and requirements of this chapter;
4. The criteria and standards required by this chapter are met.

B. The contents of the critical area study are specified in the following sections of this chapter. The director may require such supplements or amendments to the study as necessary to develop a reasonably comprehensive understanding of the site conditions, potential impacts, and required mitigation.

C. Independent Review. Based on a review of the information contained in the critical area study and the conditions of the development proposal site, the director may require independent review of any such study. This independent review shall be performed by qualified professional selected by the City and paid for by the applicant. The purpose of such independent review is to assist the City in evaluating the effects on critical areas that may be caused by a development proposal and to facilitate the decision making process.

**17.21.083 Reasonable use.**

A. If the application of the regulations in this chapter would deny all reasonable use of the property; development may be allowed consistent with the general purposes of these regulations and the public interest.

B. Reasonable Use Standards: To qualify as a reasonable use, the decision maker must find that proposal is consistent with all of the following criteria:

1. There is no portion of the site under contiguous ownership not subject to critical area regulations where the provisions of this chapter allow reasonable economic use, including agricultural use, forestry use or continuation of legal nonconforming uses;
2. There is no feasible on-site alternative to the proposed use or activities that will provide reasonable economic use, including location on any contiguous parcel that has been under the ownership or control of the applicant since the effective date of this chapter; other allowed uses; continuation of legal non-conforming uses; reduction in size, change in timing of activities, revision of road and lot layout, and/or related site planning considerations, that would allow a reasonable economic use with less adverse impacts to critical areas and associated buffers;
3. The inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and/or creating the condition of lack of use after the effective date of this chapter.
4. All reasonable methods, to avoid or reduce adverse effects on critical area functions and values have been employed, including locating activities as far as possible from critical areas and design that will result in the minimum alteration of critical areas and associated buffers, existing topography, vegetation, fish and wildlife resources, hydrological conditions, and geologic conditions. Where both critical areas and buffer areas are located on a parcel, buffer areas shall be disturbed in preference to the critical area;
5. The project includes compensatory mitigation for unavoidable impacts to critical area and buffers in accordance with the mitigation requirements of this chapter.

6. The proposed activities will not result in adverse effects on endangered or threatened species as listed by the federal government or the State of Washington, or be inconsistent with an adopted recovery plan;
  7. The proposed activities will not result in damage to nearby public or private property and no threat to the health or safety of people on or off the site;
  8. The proposed activities will not lead to degradation of ground water or surface water quality and will comply with all state, local and federal laws, including those related sediment control, pollution control, floodplain restrictions, and on-site wastewater disposal.
- C. Non conforming single family residential lots meeting the criteria of Section 17.21.088.F. shall not be required to meet Criteria B.1, 2 and 5, above.
- D. An application for a Critical Areas Reasonable Use exception shall follow the procedures for a Special Use Permit review pursuant to CMC 17.09.110, except that approvals in accordance with subsection "C" above shall be approved by the director in accordance with the approval procedure for the underlying permit.
- E. An application for variance to provisions of this code may be considered in accordance with variance provisions in CMC 17.09.120

**17.21.084 Density credits.**

- A. Critical areas and their buffers may be used in the calculation of allowed density to the extent provided by the zoning code and Shoreline Master Program.
- B. Full density as allowed by underlying zoning and minimum residential density goals may not be attained on specific parcels where critical areas impose inherent limitations on development intensity.

**17.21.085 Notice on title.**

- A. The owner of any property containing critical areas on which a development proposal is approved shall file with the Records Division of Lewis County a notice in a format approved by the director and provide a copy of the filed notice to the City of Chehalis Planning Department, unless notice is provided on a plat as provided in B, below. The notice shall:
  1. State the presence of the critical area and/or buffer area on the property, and identify that there are limitations and restrictions on uses and actions in or affecting the critical area and/or buffer imposed by this code and by the provisions of the critical areas code and specific conditions of approval. The notice shall indicate that the restrictions run with the land and may be altered only in conjunction with amendment of this chapter or amendment of specific conditions of approval as provided by this chapter.
  2. Provide that management of the critical area is required to include, but is not limited to, maintenance or replacement of vegetation to assure the long-term viability of a community of native vegetation, control of invasive plant control, and fulfillment of other conditions of approval.
  3. Provide for the right of the public, and specifically the City of Chehalis, to enforce the terms of the restrictions through civil infraction or other legal address.
  4. If a site plan has been approved indicating the extent of the critical area and buffer and permit conditions, a copy of the site plan together with relevant survey

information and permit conditions shall be included in the notice filed.

B. Restrictions on use and development of critical areas buffers and setback areas on plats and short plats shall include the information in A, above, shall designate the party responsible for maintenance of the critical area, if other than the property owner, and shall place critical areas in tracts or easements as provided below:

1. Designation of separate tracts for critical areas and buffers shall be the preferred method of designation and protection of critical areas in plats to provide for integrated management of the critical area and buffer separately from lots. The tract may be:

a. Held in an undivided interest by each owner of a building lot within the development, the ownership of which shall pass with the ownership of the lot. Responsibility for meeting all requirements of preservation and management shall be designated to an incorporated homeowner's association or other legal entity that assures the ownership and protection of the critical area.

b. Dedicated to the City of Chehalis or other governmental entity qualified to own and manage open space.

c. Conveyed to a non-profit land trust, provided the land may not be thereafter transferred to a private party, and provided that if the land trust is dissolved or otherwise fails to perform its functions, ownership and responsibility for management shall devolve to an undivided interest by each owner of a building lot within the development, as provided in a., above.

2. The director may allow a critical area and buffer to be placed within a protective easement on a parcel with the responsibility for meeting all requirements of preservation and management placed on the owner of the parcel over which the easement is placed. This means of designation shall be used in cases where the size and the ecological functions of the critical area do not require coordinated management or where formation of an incorporated homeowner's association or other legal entity for management is found to be impractical because of the limited number of lots, or where ownership and management by the City, a qualified special district or a land trust is found to be impractical. This alternative generally will be limited to critical areas and buffers of less than 20,000 square feet and developments of fewer than ten (10) parcels, or commercial or multi-family development.

C. This notice on title shall not be required for a development proposal by a public agency or public or private utility within a right-of-way or easement for which they do not have fee-simple title.

D. The applicant shall submit proof that the notice, dedication or easement has been filed for public record before the City shall approve any final plat or final site plan for such site. The notice shall run with the land and failure to provide such notice to any purchaser prior to transferring any interest in the property shall be a violation of this section.

#### **17.21.086 Building setbacks.**

A. Buildings and other structures shall be set back a sufficient distance to assure that disturbance to sensitive area vegetation and soils is avoided during construction, maintenance and use.

B. Buildings and other structures shall be set back a distance of ten (10) feet from the edges of all critical area buffers or from the edges of all critical areas if no buffers are required, provided that the director may modify the building setback based on specific development plans that document that construction techniques, maintenance needs and use will not disturb critical areas or buffer.

C. If slopes adjacent to the buffer for wetlands or water bodies exceed 15 percent, including slopes created by grading, a swale sufficient to intercept surface water movement shall be installed outside the edge of the buffer.

D. The following facilities and uses are allowed in the building setback:

1. Landscaping, including rockeries not over 42 inches high provided construction does not alter the buffer or critical area;
2. Uncovered decks, platforms, porches and similar projections not over 42 inches high;
3. Building eaves, cornices, chimneys and similar projections no greater than two (2) feet into the building setback;
4. Impervious surfaces such as driveways, parking lots, roads, and patios provided that such surfaces conform to applicable water quality standards and that construction equipment does not enter the buffer or critical area;
5. Clearing and grading consisting of not over 42 inches of cut or fill;

#### **17.21.087 Mitigation.**

A. Mitigation measures shall be implemented to protect critical areas and buffers from alterations occurring on all or portions of a site being developed. The mitigation measures required below shall be implemented in conjunction with other applicable mitigation requirements outlined in the subsequent sections of this chapter.

B. For purposes of this chapter, mitigation means the use of the following actions that are listed in descending order of preference:

1. Avoiding the impact all together by not taking a certain action or parts of an action;
2. Minimizing impact 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 impact;
3. Rectifying the impact by repairing, rehabilitating or restoring the critical areas;
4. Reducing or eliminating the impact over time by prevention and maintenance operations;
5. Compensating for the impact by replacing, enhancing or providing substitute areas and environments and replacing the ecological processes and functions of the resource;
6. Monitoring the impact and taking appropriate corrective measures.

C. Location. Compensatory mitigation shall be provided on-site or off-site in the location that will provide the greatest ecological benefit and have the greatest likelihood of success. Off-site mitigation is preferred close as possible to the impact area and within the same watershed sub-basin as the permitted alteration. Off-site mitigation sites preference shall be given to sites and restoration activities identified in an adopted Shoreline Restoration Plan pursuant to WAC 173-26, a watershed planning document prepared and adopted pursuant to RCW 90.82, a watershed restoration project pursuant to RCW 89.08.460, a Salmonid Recovery Plan, the Salmon Recovery Board Habitat Project List, or identified by

the Washington Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement pursuant to RCW 77.55.290.

D. Mitigation Plan. A mitigation plan shall be required for the design, implementation, maintenance and monitoring of mitigation. A plan shall provide the following, in addition to criteria for the specific critical areas provided below for individual critical areas:

1. A description and evaluation of any critical areas that could be altered by the proposed development, including evaluation of ecological processes and functions based on best available science and detailed field assessment of the affected resources;
2. A description and scaled drawings of the proposed mitigation activities including, but not limited to, clearing, grading/excavation, drainage alterations, planting, invasive plant management, installation of habitat structures, irrigation, and other site treatments;
3. A description of the ecological functions and values that the proposed alteration may affect and of the specific ecological functions and values the proposed mitigation area(s) shall provide;
4. A description of required or recommended mitigation ratios and an assessment of factors that may affect the success of the mitigation program;
5. Specific measurable performance standards that the proposed mitigation action(s) shall achieve together with a description of how the mitigation action(s) will be evaluated and monitored to determine if the performance standards are being met;
6. A description of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates that project performance standards are not being met;
7. Cost estimates for the installation of the mitigation program, monitoring, and maintenance as well as for corrective action if mitigation performance standards are not met.

E. A performance assurance shall be provided to guarantee installation, monitoring and performance of mitigation actions.

1. Performance Surety: The applicant shall post a cash performance bond, letter of credit, or other security acceptable to the city of Chehalis in the amount of one hundred and twenty-five percent (125%) of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater. The surety shall be based on an itemized cost estimate of the mitigation activity including clearing and grading, plant materials, plant installation, irrigation, weed management, monitoring, and other costs. The conditions of the surety shall be consistent with the purposes of this chapter and the conditions to be fulfilled. In the event of a breach of any condition of any such bond, the City of Chehalis may institute an action in a court of competent jurisdiction upon such bond and prosecute the same to judgment and execution. The City of Chehalis shall release the bond upon determining that:
  - a. All activities, including any required compensatory mitigation, have been completed in compliance with the terms and conditions of the permit and the requirements of this chapter;
  - b. Upon the posting by the applicant of a maintenance surety.
2. Maintenance Surety: The City of Chehalis shall require the holder of a development

permit issued pursuant to this chapter to post a cash performance bond, letter of credit, or other security acceptable to the City of Chehalis in an amount and with surety and conditions sufficient to guarantee that structures, improvements and mitigation required by the permit of by this Chapter perform satisfactorily, generally for a period of five (5) years after they have been completed. The City of Chehalis shall release the maintenance bond upon determining that performance standards established for evaluating the effectiveness and success of the structures, improvements and/or compensatory mitigation have been satisfactorily met for the required period. For compensation projects, the performance standards shall be those contained in the mitigation plan developed and approved during the permit review process. The maintenance bond applicable to a compensation project shall not be released until the City of Chehalis determines that performance standards established for evaluating the effect and success of the project have been met. The Director may return up to 50 % of the surety following the first year of monitoring provided that the year 1 performance standards are met and the risk of subsequent failure is considered low.

3. Depletion, failure, or collection of surety funds shall not discharge the obligation of an applicant or violator to complete required mitigation, maintenance, or monitoring.

4. Public development proposals may be relieved from having to comply with the surety requirements of this section if public funds have been committed through a budget process with final approval for mitigation, maintenance, or monitoring.

F. Mitigation Banking. The City may approve mitigation banking as a form of compensatory mitigation for wetlands and fish and wildlife habitat conservation area impacts when the provisions of this chapter require mitigation and when it is clearly demonstrated that the use of a mitigation bank will provide equivalent or greater replacement of critical area functions and values when compared to conventional on-site mitigation, provided that all of the following criteria are met:

1. Mitigation banks shall only be used when they provide significant ecological benefits including long-term conservation of critical areas, important species, habitats and/or habitat linkages, and when they are consistent with the City's Comprehensive Plan and create a viable alternative to the piecemeal mitigation for individual project impacts to achieve ecosystem-based conservation goals.

2. The mitigation bank shall be established in accordance with the Washington State Draft Mitigation Banking Rule WAC 173-700 or as revised, and RCW 90.84 and the federal mitigation banking guidelines as outlined in the Federal Register Volume 60, No 228, November 28, 1995. These guidelines establish the procedural and technical criteria that banks must meet to obtain state and federal certification.

3. Preference shall be given to mitigation banks that implement restoration actions that have been identified in an adopted Shoreline Restoration Plan, watershed planning document prepared and adopted pursuant to RCW 90.82, a Salmonid Recovery Plan or project that has been identified on the Salmon Recovery Board Habitat Project List or by the Washington Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement.

**17.21.088 Non-conforming development.**

The following provisions shall apply to lawfully established uses, buildings and/or structures that do not meet the specific standards of this Program.

A. Nonconforming uses shall be governed in accordance with the provisions of CMC 17.03.090 and the Shoreline Master Program subject to additional provisions in this chapter.

Such use may not be altered or

expanded except in compliance with standards provided in said codes.

B. Nonconforming structures, facilities and development damaged by fire or other cause shall be governed in accordance with CMC17.03.080 and the Shoreline Master Program, subject to additional provisions in this chapter.

C. Minor alteration or renovation shall be defined as alteration or renovation of any structure, or associated improvements within a critical area or buffer that results in an expansion of floor area of less than 500 square feet, or 10 percent, whichever is less, or the expansion of impervious surface by less than 1,000 square feet, or 10 percent, whichever is less; or remodeling or renovation that is less than 50 percent of the value of the structure or improvements, excluding plumbing, electrical and mechanical systems. Minor alteration may require compliance with specific performance standards of this code.

D. Major alteration or renovation shall be defined as the alteration or renovation of any structure, or associated improvements within a critical area that results in an expansion of floor area of 500 square feet or more, or more than 10 percent and less than 50 percent, whichever is greater; or the expansion of impervious surface by more than 1,000 square feet, or of more than 10 percent and less than 50 percent, whichever is greater; or remodeling or renovation that is greater than 50 percent and less than 100 percent of the value of the structures or improvements excluding plumbing, electrical and mechanical systems.. Major alteration may require compliance with specific performance standards of this code.

E. Substantial reconstruction shall be defined as the alteration or renovation that results in an expansion of floor area of more than 50 percent, or the expansion of impervious surface by more than 50 percent, or remodeling or renovation that exceeds 100 percent of the value of the structures or other improvements, excluding plumbing and mechanical systems. Such substantial reconstruction shall be considered the same as new construction and shall fully comply with the provisions of this code.

F. Non-conforming single family residential lots within a subdivision filed within five years previous to the adoption of provisions of this code that render them non-conforming in compliance with RCW 58.17.17, or other lots or parcels under contiguous ownership and less than 20,000 square feet in size that are not subject to landslide hazard areas and associated buffers, shall be subject to the following standards, in conformance with the provisions for a reasonable use exception in subsection 17.21.83. and in accordance with the following criteria:

1. Non-conforming lots with an area of 2,000 square feet or more available for a building area unrestricted by critical areas or buffers shall comply with the standards of this chapter. The building area means the entire area that will be disturbed to construct a structure containing an allowed use and normal appurtenances, including parking and landscaping.

2. Non-conforming lots that do not meet the requirement of subsection 1 above shall

provide the maximum setback and buffer dimension feasible while providing for a building envelope of at least 2,000 square feet on the lot. The building area shall generally be located on the portion of the lot farthest from the required critical area or buffer and/or the least sensitive portion of the lot.

3. The area between the structure and the critical area shall be maintained or planted in native trees and understory vegetation.

**17.21.089 Administrative rules.**

The director shall have the authority to adopt administrative rules as deemed necessary consistent with the provisions of this chapter and that are necessary for the implementation of critical area regulations.

**17.21.090 Enforcement.**

A. The director or its designee shall have a right to enter upon any property at reasonable times and to make such inspections as are necessary to determine compliance with the provisions of this chapter or the conditions imposed pursuant to this chapter. The City shall make a reasonable effort to locate the owner or persons in charge and notify them of the times and purposes of required entry.

B. The director is further authorized to take such actions as may be necessary to enforce the provisions of this chapter including but not limited to the civil infraction, abatement and criminal penalties provided in CMC Chapter 17.09.

C. 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.

**17.21.091 Appeals.**

Appeal of any decision made in the administration of this ordinance shall be as provided in CMC 17.09.150.

**Section 3**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 22 to read as follows:

**17.22 FREQUENTLY FLOODED AREAS – FLOOD HAZARD ZONE (FHZ)**

- 17.22.010 Findings of fact.
- 17.22.020 Statement of purpose.
- 17.22.030 Methods of reducing flood losses.
- 17.22.040 Flood hazard zone created.
- 17.22.050 Compliance.
- 17.22.060 Abrogation and greater restrictions.
- 17.22.070 Interpretation.
- 17.22.080 Criteria for land management and use.
- 17.22.090 Warning and disclaimer of liability.
- 17.22.100 Development permit required.
- 17.22.110 Use of other base flood data.

- 17.22.120 Information to be obtained and maintained.
- 17.22.130 Variance criteria (flood hazard zone).
- 17.22.140 Anchoring.
- 17.22.150 Construction materials and methods.
- 17.22.160 Utilities.
- 17.22.170 Flood protection elevation.
- 17.22.180 Residential construction.
- 17.22.190 Nonresidential construction.
- 17.22.200 Manufactured homes.
- 17.22.210 Critical facilities.
- 17.22.220 Floodways.
- 17.22.225 Alteration of watercourses.
- 17.22.230 Special flood hazard areas with designated floodways.
- 17.22.240 Special flood hazard areas without designated floodways.
- 17.22.250 Standards for shallow flood areas (AO zones).

**17.22.010 Findings of fact.**

A. The flood hazard areas of Chehalis are subject to periodic inundation which may result 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 climatic conditions and the cumulative effect of natural and manmade obstructions in areas of special flood hazards which increase flood heights and velocities, and may damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss. [Ord. 720B § 1, 2002.]

**17.22.020 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 to:

- A. Protect human life and health;
- B. Minimize expenditure of public money and costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. 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. 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. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. [Ord. 720B § 1, 2002.]

**17.22.030 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 which may increase flood hazards in other areas. [Ord. 720B § 1, 2002.]

**17.22.040 Flood hazard zone created.**

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Chehalis," dated July 17, 2006, (Appendix Chapter W), with associated flood insurance rate maps (FIRMs), is hereby adopted by reference and declared to be a part of this chapter. The FIRMs are on file at the Community Development Department, 1321 S. Market Boulevard. Best available information shall also be used to determine the flood hazard zone based on elevation data, topographic information and flood-of-record data. [Ord. 836B § 4, 2008; Ord. 810B § 6, 2006; Ord. 806B § 3, 2006; Ord. 720B § 1, 2002.]

**17.22.050 Compliance.**

This chapter shall apply to all areas subject to a base flood and/or designated as an area of special flood hazard within the jurisdiction of the city. All development shall hereafter proceed in compliance with the terms of this chapter and other applicable regulations. [Ord. 720B § 1, 2002.]

**17.22.060 Abrogation and greater restrictions.**

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions which may be enforced by private action among the affected parties. This chapter establishes the standards for public action. [Ord. 720B § 1, 2002.]

**17.22.070 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.
- [Ord. 720B § 1, 2002.]

**17.22.080 Criteria for land management and use.**

The standards and definitions contained in this title shall be the minimum standards administered and enforced for flood damage reduction within the city and its UGA. [Ord. 720B § 1, 2002.]

**17.22.090 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 unpredictable occasions. Flood heights may be increased by manmade or natural causes. This chapter does not warrant or imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. The city and/or any of its officers or employees shall not be responsible for the accuracy of materials submitted for review and do not guarantee that flood damage will not result from reliance on this chapter or any administrative decision lawfully made thereunder. [Ord. 720B § 1, 2002.]

**17.22.100 Development permit required.**

A. A development permit shall be obtained before any construction or development begins within any special flood hazard zone established in CMC 17.22.040. The permit shall be for all structures, including manufactured homes, as set forth in the definitions in Chapter 17.06 CMC and for all development including fill and other activities, also as set forth in the definitions in Chapter 17.06 CMC.

B. In addition to the standard development permit application, a JARPA application (see Appendix Chapter B) shall be required for any development or site work which is not constructed to the flood protection elevation within any flood hazard zone (the 100-year floodplain). If such application is not otherwise required to comply with Chapter 17.18 or 17.24 CMC, no fee shall be required for a JARPA form submitted only to satisfy the requirement in this section for such information. [Ord. 836B § 5, 2008; Ord. 769B § 13, 2004; Ord. 720B § 1, 2002.]

**17.22.110 Use of other base flood data.**

When base flood elevation data has not been provided on official maps, the administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, local, or other source, including topographic data, in order to administer this chapter, including application of such information to subdivisions and other proposed development. [Ord. 769B § 14, 2004; Ord. 720B § 1, 2002.]

**17.22.120 Information to be obtained and maintained.**

A. Where base flood elevation is provided through the flood insurance study, the developer shall provide to the building official the actual elevation, certified by a licensed land surveyor (in relation to mean sea level), of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. The building official shall maintain this elevation certificate in a permanent file.

B. For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required:

1. The developer shall provide to the building official the actual elevation, certified by a licensed land surveyor. The building official shall obtain and record the elevation (in relation to mean sea level) to which the structure was floodproofed; and

2. The building official shall maintain such floodproofing certifications.

C. The building official shall maintain for public inspection all records pertaining to development within the flood hazard zone. [Ord. 836B § 6, 2008; Ord. 720B § 1, 2002.]

#### **17.22.130 Variance criteria (flood hazard zone).**

A. Generally, a variance from the elevation standard may be issued by the hearing examiner for new construction, additions, and substantial improvements of habitable structures 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; and provided, that floodproofing is required as a condition of such a variance. As the lot size increases, the technical justification required for issuing the variance increases.

B. Generally, variance requests for habitable structures shall be heard and decided by the hearing examiner; however, the administrator may grant flood elevation variances under the following circumstances:

1. The examiner has previously granted a flood elevation variance for the subject property, and the conditions of record, if any, are incorporated into the conditions attached to the subject proposal;

2. The administrator finds that the proposal is consistent with the policies outlined in CMC 17.22.020, and with the development requirements of this section through CMC 17.22.190;

3. The methods of floodproofing are reasonable and afford maximum protection from flood damage, and are consistent with any conditions of record;

4. The applicant must attend a DRC meeting where the variance criteria and the notice to the applicant are made a matter of public record.

C. Generally, a variance from the elevation standard may be issued by the administrator for nonhabitable accessory structures if:

1. The administrator finds that the proposal is consistent with the policies outlined in CMC 17.22.020, and with the development requirements of this section through CMC 17.22.190;

2. The methods of floodproofing are reasonable and afford maximum protection from flood damage, and are consistent with any conditions of record;

3. The applicant must attend a DRC meeting where the variance criteria and the notice to the applicant are made a matter of public record.

D. Variances may be issued by the administrator 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.

E. Variances shall not be issued within a designated floodway except for nonhabitable accessory structures designed by a licensed engineer to comply with all other applicable regulations in addition to this section.

F. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

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; and
3. 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 CMC 17.22.020, or conflict with existing local laws or ordinances.

H. 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.

I. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing (e.g., wet-floodproofing) where it can be determined that such action will have low damage potential, complies with all other applicable variance criteria, and otherwise complies with CMC 17.22.140 and 17.22.150.

J. 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. [Ord. 769B § 15, 2004; Ord. 720B § 1, 2002.]

#### **17.22.140 Anchoring.**

All structures, including manufactured homes, must likewise be anchored to prevent flotation, collapse, or lateral movement and shall be constructed or 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. Anchoring methods which are not described in the adopted edition of the uniform codes shall be engineered. [Ord. 720B § 1, 2002.]

#### **17.22.150 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, ductwork, and air-conditioning equipment and other similar service facilities shall be elevated or otherwise located so as to prevent water from entering or accumulating within the components during conditions of flooding to the required flood protection elevation.

D. Additional Requirements for Below-Grade Crawlspace (FEMA Technical Bulletin (TB) 11-01).

1. The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade (LAG), shown as D in Figure 3 of TB 11-01;

2. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, must not exceed four feet (shown as L in Figure 3 of TB 11-01) at any point for unsupported wall height of plain masonry walls. The height limitation is the maximum allowable unsupported wall height of plain masonry walls according to the engineering analyses and International Building Code requirements for flood hazard areas;

3. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means;

4. The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used;

5. Below-grade crawlspace construction in accordance with the requirements listed above will not be considered basements. [Ord. 836B § 7, 2008; Ord. 769B § 16, 2004; Ord. 720B § 1, 2002.]

#### **17.22.160 Utilities.**

A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.

B. New and replacement sanitary sewer systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. On-site water wells shall be located on high ground that is not in the floodway. [Ord. 836B § 8, 2008; Ord. 720B § 1, 2002.]

#### **17.22.170 Flood protection elevation.**

A. Development within special flood hazard areas which requires elevation or floodproofing shall be elevated or floodproofed to or above the flood protection elevation (base flood elevation plus one foot or base flood elevation plus three feet for critical facilities), or to the flood of record elevation at the specific location as identified by the city, whichever minimum elevation is higher.

B. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source, 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 judgement and includes use of historical data, high water marks, photographs of past flooding, etc., where available. [Ord. 836B § 9, 2008; Ord. 720B § 1, 2002.]

#### **17.22.180 Residential construction.**

A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to the flood protection elevation as described in CMC 17.22.170.

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic 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:

1. 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;

2. The bottom of all openings shall be no higher than one foot above the lowest grade; and

3. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters, and do not become obstructed during a flood event. [Ord. 720B § 1, 2002.]

#### **17.21.190 Nonresidential construction.**

New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated to the flood protection elevation; or, together with attendant utility and sanitary facilities, shall:

A. Be floodproofed so that below the flood protection elevation 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 section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the building official;

D. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in CMC 17.22.180(B); and

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 constructed to the base flood level will be rated as one foot below that level). [Ord. 720B § 1, 2002.]

#### **17.22.200 Manufactured homes.**

All manufactured homes to be placed or substantially improved within zones A1-30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at the flood protection elevation as described in CMC 17.22.170 and be securely anchored to an adequately anchored foundation system (CMC 17.22.140). [Ord. 720B § 1, 2002.]

#### **17.22.210-Critical facilities.**

A. Critical facilities should be afforded additional flood protection due to their nature.

B. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the 100-year floodplain as identified on the city's FIRM. Construction of new critical facilities shall be permissible within the 100-year frequency floodplain if no feasible alternative site is available. Critical facilities constructed within the 100-year frequency floodplain shall have the lowest floor elevated to three feet or more above the level of the 100-year frequency floodplain. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters.

C. Access routes elevated to or above the level of the 100-year frequency floodplain shall be provided to all critical facilities to the extent possible. [Ord. 720B § 1, 2002.]

#### **17.22.220 Floodways.**

Located within 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. New development, substantial improvements and other development may be allowed only if certification by a registered professional engineer or architect is provided demonstrating, through hydrologic and hydraulic analysis 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; and

B. All new development and substantial improvements shall comply with all applicable flood hazard reduction provisions of this title and applicable state and federal regulations. [Ord. 836B § 10, 2008; Ord. 720B § 1, 2002.]

#### **17.22.225 Alteration of watercourses.**

A. The city shall 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.

B. Any approval of any alteration or relocation of any watercourse shall include a program of maintenance of such watercourse so that the flood-carrying capacity is not diminished. [Ord. 769B § 17, 2004.]

#### **17.22.230-Special flood hazard areas with designated floodways.**

When a regulatory floodway for a stream has been designated, the following shall apply:

A. Construction or reconstruction of residential structures shall be 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.

B. Work done on structures to comply with existing health, sanitary, or safety codes which have been identified by the local code enforcement official and which are the

minimum necessary, or to structures identified as historic places, shall not be included in the 50 percent determination. [Ord. 836B § 11, 2008; Ord. 720B § 1, 2002.]

#### **17.22.240 Special flood hazard areas without designated floodways.**

When a regulatory floodway or stream has not been designated, the following shall apply:

A. Applicants for new construction and substantial improvements shall reasonably utilize the best available information from a federal, state, and/or other source to:

1. Consider the cumulative effect of existing, proposed, and anticipated future development; and

2. Determine that the increase in water surface elevation of the base flood will not be more than one foot at any point in the community.

B. Building and development near streams without a designated floodway shall comply with the requirements of:

1. 44 Code of Federal Regulations; and

2. The National Flood Insurance Program regulations. [Ord. 720B § 1, 2002.]

#### **17.22.250 Standards for shallow flood areas (AO zones).**

Shallow flooding areas appear on FIRM as AO zones with depth designations. The base flood depths in these zones range from one to three feet 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 to one foot above the highest adjacent grade of the building site, to one foot above the depth number specified in the FIRM (at least two feet if no depth number is specified);

B. New construction and substantial improvements of nonresidential structures within the AO zones shall either:

1. Have the lowest floor (including basement) elevated to one foot above the highest adjacent grade of the building site, or one foot above the depth number specified in 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 the flood protection elevation 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;

C. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. [Ord. 720B § 1, 2002.]

### **Section 4**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 23 to read as follows:

#### **17.23 WETLANDS**

- 17.23.010 Wetland designation.
- 17.23.020 Wetland review and reporting requirements.
- 17.23.030 Wetland buffers.
- 17.23.040 Provisions for small isolated wetlands.
- 17.23.050 Wetland buffer averaging.
- 17.23.051 Wetland buffer increase.
- 17.23.052 Allowed activities in wetlands and buffers.
- 17.23.053 Wetland mitigation.
- 17.23.054 Wetland mitigation plan.
- 17.23.055 Wetland mitigation monitoring.
- 17.23.056 Wetland development standards.

**17.23.010 Wetland designation.**

A. Wetlands are 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 typically adapted for life in saturated soil conditions. Swamps, marshes, bogs, and wet meadows/pastures are examples of wetland. Some riparian areas adjacent to streams are also wetland.

B. Wetlands shall be identified in accordance with the requirements of RCW 36.70A.175 and 90.58.380. Unless otherwise provided for in this chapter, all areas within the City meeting the criteria in the Washington State Wetland Identification and Delineation Manual, (Ecology Publication 96-94) regardless of any formal identification are hereby designated critical areas and are subject to the provisions of this chapter.

C. The approximate location and extent of known or suspected wetlands are shown on the City's critical area maps. Other, unmapped wetlands may exist within the City. These maps are to be used as a guide and do not provide a definitive critical area designation.

D. Wetlands shall be rated based on categories that reflect the functions and values of each wetland. Wetland categories shall be based on the criteria provided in the Washington State Wetland Rating System for Western Washington, revised August 2004 (Ecology Publication #04-06-025). These categories are generally defined as follows:

1. Category I Wetlands. Category I wetlands are those wetlands of exceptional value in terms of protecting water quality, storing flood and storm water, and/or providing habitat for wildlife as indicated by a rating system score of 70 points or more. These are wetland communities of infrequent occurrence that often provide documented habitat for critical, threatened or endangered species, and/or have other attributes that are very difficult or impossible to replace if altered.
2. Category II Wetlands. Category II wetlands have significant value based on their function as indicated by a rating system score of between 51 and 69 points. They do not meet the criteria for Category I rating but occur infrequently and have qualities that are difficult to replace if altered.
3. Category III Wetlands. Category III wetlands have important resource value as indicated by a rating system score of between 30 and 50 points.
4. Category IV Wetlands. Category IV wetlands are wetlands of limited resource value as indicated by a rating system score of less than 30 points. They typically have vegetation of similar age and class, lack special habitat features, and/or are

isolated or disconnected from other aquatic systems or high quality upland habitats.

**17.23.020 Wetland review and reporting requirements.**

A. If the project site is within 300 feet of a National Wetland Index mapped area, the director shall require a site evaluation (field investigation) by a qualified professional to determine whether or not a regulated wetland is present and if so, its relative location in relation to the proposed project area on site. If the director determines that a wetland is more likely than not present, the director shall require a critical area study. If no regulated wetlands are present, then wetland review will be considered complete.

B. A critical area study (wetland assessment study) describes the characteristics of the subject property and adjacent areas. The assessment shall be completed pursuant to Section 17.21.082 and include the following:

1. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc;
2. Determination of the wetland category and wetland buffers;
3. Field identification and delineation of wetland boundaries. For on-site wetlands, the assessment shall include the dominant and subdominant plant species; soil type, color and texture; sources of hydrology (patterns of surface and subsurface water movement, precipitation, etc), topography, and other pertinent information;
4. Identification of critical areas and buffers within three hundred (300) feet of the site and an estimate of the approximate acreage for each. The assessment of off-site wetlands shall be based on available information and shall not require accessing off-site properties;
5. A detailed description of the effects of the proposed development on wetland and buffer function and value, including the area of direct wetland disturbance; area of buffer reduction or averaging including documentation that functions and values will not be adversely affected by the reduction or averaging; effects of storm water management; proposed hydrologic alteration including changes to natural drainage or infiltration patterns; effects on fish and wildlife species and their habitats; clearing and grading impacts; temporary construction impacts; and effects of increased noise, light or human intrusion.
6. A mitigation plan, if applicable.

**17.23.030 Wetland buffers.**

A. Wetland buffer zones shall be required for all regulated activities adjacent to regulated wetlands. Any wetland created, restored or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored or enhanced wetland. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer zone shall be determined according to wetland category. Buffers shall not include areas that are functionally and effectively disconnected from the wetland by a road or other substantially developed surface of sufficient width and with use characteristics such that buffer functions are not provided.

B. The buffer standards required by this chapter presume the existence of a dense vegetation community in the buffer adequate to protect the wetland functions and values. When a buffer lacks adequate vegetation, the director may increase the standard buffer, require

buffer planting or enhancement, and/or deny a proposal for buffer reduction or buffer averaging.

**C. Buffer Dimensions:**

Wetland Category	Low Wildlife Function (less than 20 points)	Moderate Wildlife Function (20 – 26 points)	High Wildlife Function (27 or more points)
	Buffer Width (feet)		
Category IV	50	50	50 <sup>1</sup>
Category III	80	100	150 <sup>1</sup>
Category II	100	150	See Table in D
Category I	100	150	See Table in D

1. Habitat scores over 26 points would be very rare for Category III wetlands and almost impossible for Category IV wetlands that have a total rating of 30 or less.

**D. Buffers for Wetlands with High Wildlife Function (27 points or more)**

Wetland Category	Points for Habitat from Wetland Rating Form									
	27	28	29	30	31	32	33	34	35	36
Category I & II	165	180	195	215	225	225	225	225	225	225

E. Where lands within the wetland buffer have an average continuous slope of 20 percent to 35 percent, and the required buffer width is less than 100 feet, the buffer shall extend to a 30 percent greater dimension. In all cases, where slopes within the buffers exceed 35 percent, the buffer shall extend 25 feet beyond the top of the bank of the sloping area or, if a buffer associated with a geological hazard is present, to whichever extent is greater

F. Where other critical areas defined in this chapter fall within the wetland buffer, the buffer dimension shall be the most expansive of the buffers applicable to any applicable critical area.

**17.23.040 Provisions for small isolated wetlands.**

A. All wetlands shall be regulated regardless of size, provided that the director shall assure that preservation of isolated wetlands and associated buffers of less than ten thousand (10,000) square feet of combined wetland and buffer shall maintain effective wetland functions, or be mitigated as provided below.

B. Wetlands and associated buffers of less than one thousand (1,000) square feet may be displaced when the wetland meets all of the following criteria, as documented in a wetland critical area study.

1. The wetland is not associated with a riparian corridor,
2. The wetland is not part of a wetland mosaic and
3. The wetland does not contain habitat identified as essential for local populations of priority species identified by Washington Department of Fish and Wildlife.
4. Impacts of displaced wetlands are mitigated pursuant to Section 17.21.087 and 17.21.143.

C. Category 3 and 4 wetlands between 1,000 and 4,000 square feet may be displaced without meeting the provisions of Section 17.23.087 regarding avoidance, minimization, rectification, and reducing and eliminating the impact over time, provided that the criteria in B, above are met and the wetland does not score 20 points or greater for habitat in the 2004 Western Washington Rating System

D. Preservation of isolated wetlands with a total area of the combined wetland and buffer of 10,000 square feet or less shall meet the following provisions, or if the said provisions cannot be demonstrated, as specified by the director, they may be displaced and shall be mitigated as specified in Section 17.23.053.

1. Depressional wetlands recharged only by precipitation, interflow or groundwater shall be assured a source of recharge to maintain its hydrologic character through stormwater infiltration, or other means.

2. Wetlands that have a potential to reduce flooding or erosion or has the potential and opportunity to maintain or improve water quality as evidenced by a score of at least 10 points on the applicable criteria of the Wetland Rating Form for Western Washington shall maintain a hydraulic connection to surface water that maintains effective wetland function for flood or erosion reduction or water quality and does not substantially alter the existing hydroperiod of the wetland.

3. Wetlands that achieve a score of at least 20 points on the Habitat Functions criteria of the Wetland Rating Form for Western Washington shall maintain a connection to a linear corridor maintained as a stream buffer, a buffer associated with a geological hazard or other designated open space buffer sufficient to allow movement of terrestrial wildlife to and from the wetland and buffer complex without interruption by roads, paved areas or buildings within 50 feet.

#### **17.23.050 Wetland buffer averaging.**

The permit approval authority may average wetland buffer widths on a case-by-case basis when the applicant demonstrates through a critical area study to the satisfaction of the director that all the following criteria are met:

A. Averaging to improve wetland protection may be permitted when all of the following conditions are met as demonstrated by a wetland assessment study pursuant to Section 17.23.020:

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

3. The total area of the buffer after averaging is equal to the area required without averaging and all increases in buffer dimension for averaging are generally parallel to the wetland edge;

4. The buffer at its narrowest point is never less than 3/4 of the required width

B. Averaging to allow reasonable use of a parcel may be permitted when all of the following are met as demonstrated by a wetland assessment study pursuant to Section 17.23.020:

1. There are no feasible alternatives to the site design that could be accomplished

without buffer averaging;

2. The averaged buffer will not result in degradation of the wetland's functions and values;
  3. The total buffer area after averaging is equal to the area required without averaging and all increases in buffer dimension for averaging are generally parallel to the wetland edge;
  4. The buffer at its narrowest point is never less than 3/4 of the required width except where the director finds that there is an existing feature such as a roadway that limits buffer dimension, or an essential element of a proposed development such as access that must be accommodated for reasonable use and requires a smaller buffer.
- C. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no net loss of wetland functions and values in conjunction with a wetland assessment study and mitigation plan. The specific measures that shall be implemented include, but are not limited to, those in Section 17.23.056.

**17.23.051 Wetland buffer increase.**

The permit approval authority may increase the width of the standard buffer width on a case-by case basis, based on a critical area study, when a larger buffer is required to protect critical habitats as outlined in Section 17.25.010, or such increase is necessary to:

- A. Protect the function and value of that wetland from proximity impacts of adjacent land use, including noise, light and other disturbance, not sufficiently limited by buffers provided above;
- B. To maintain viable populations of priority species of fish and wildlife; or
- C. Protect wetlands or other critical areas from landslides, erosion or other hazards.

**17.23.052 Allowed activities in wetlands and buffers.**

The following uses and activities may be allowed in wetlands or buffer areas subject to the priorities, protection, and mitigation requirements of this section:

A. Utility lines and facilities providing local delivery service, not including facilities such as electrical substations, water and sewage pumping stations, water storage tanks, petroleum products pipelines and not including transformers or other facilities containing hazardous substances, may be located in Category II, III, and IV wetlands and their buffers and/or Category I wetland buffers if the following criteria are met:

1. There is no reasonable location or route outside the wetland or wetland buffer based on analysis of system needs, available technology and alternative routes.

Location within a wetland buffer shall be preferred over a location within a wetlands.

2. The utility line is located as far from the wetland edge as possible and in a manner that minimizes disturbance of soils and vegetation.

3. Clearing, grading, and excavation activities are limited to the minimum necessary to install the utility line, which may include boring, and the area is restored following utility installation.

4. Buried utility lines shall be constructed in a manner that prevents adverse impacts to subsurface drainage. This may include the use of trench plugs or other devices as needed to maintain hydrology.

5. Impacts on wetland functions are mitigated in accordance with Section 17.23.053.

B. Public and private roadways and railroad facilities, including bridge construction and

culvert installation, if the following criteria are met

1. There is no reasonable location or route outside the wetland or wetland buffer based on analysis of system needs, available technology and alternative routes. Location within a wetland buffer shall be preferred over a location within a wetland.

2. Facilities parallel to the wetland edge are located as far from the wetland edge as possible and in a manner that minimizes disturbance of soils and vegetation.

3. Clearing, grading, and excavation activities are limited to the minimum necessary, which may include placement on elevated structures as an alternative to fill, where feasible.

4. Impacts on wetland functions are mitigated in accordance with Section 17.23.053.

C. Access to private development sites may be permitted to cross Category II, III, or IV wetlands or their buffers, pursuant to the criteria in B above, provided that alternative access shall be pursued to the maximum extent feasible, including through the provisions of RCW 8.24. Exceptions or deviations from technical standards for width or other dimensions, and specific construction standards to minimize impacts may be specified, including placement on elevated structures as an alternative to fill, if feasible.

D. Maintenance, repair, or operation of existing structures, facilities, or improved areas, including minor modification of existing serviceable structures within a buffer zone where modification does not adversely impact wetland functions, and subject to the provisions for non-conforming use and facilities.

E. Storm water conveyance or discharge facilities such as dispersion trenches, level spreaders, and outfalls may be permitted within a Category II, III, or IV wetland buffer on a case by case basis if the following are met:

1. Due to topographic or other physical constraints, there are no feasible locations for these facilities to discharge to surface water through existing systems or outside the buffer. Locations and designs that infiltrate water shall be preferred over a design that crosses the buffer.

2. The discharge is located as far from the wetland edge as possible and in a manner that minimizes disturbance of soils and vegetation and avoids long-term rill or channel erosion.

F. On-site sewage disposal system conventional drainfields may be permitted in the outer 25 percent of a Category II, III and IV wetland buffer when accessory to an approved residential structure, if the following conditions are met:

1. It is not feasible to connect to a public sanitary sewer system;

2. There is no reasonable location outside the wetland buffer based on analysis of conditions within the contiguous property owned by the applicant;

3. The facility is located as far from the wetland edge as possible and is designed and constructed in a manner that minimizes disturbance of soils and vegetation, and no trees in excess of 4 inches in diameter are removed or disturbed;

4. Clearing, grading, and excavation activities are limited to the minimum necessary and the area is restored following installation.

G. Outdoor recreational or educational activities which do not significantly affect the function of the wetland or regulated buffer (including wildlife management or viewing structures, outdoor scientific or interpretive facilities, trails, hunting blinds, etc.) may be permitted within a Category II, III, or IV wetlands or their buffers and within a Category

I wetland buffer if the following criteria are met:

1. Trails shall not exceed 4 feet in width and shall be surfaced with gravel or pervious material, including boardwalks;
2. The trail or facility is located in the outer fifty percent (50%) of the buffer area unless a location closer to the wetland edge or within the wetland is required for interpretive purposes;
3. The trail or facility is constructed and maintained in manner that minimizes disturbance of the wetland or buffer. Trails or facilities within wetlands shall be placed on an elevated structure as an alternative to fill.
4. Wetland mitigation in accordance with Section 17.23.053.

**17.23.053 Wetland mitigation.**

Activities that adversely affect wetlands and/or wetland buffers shall include mitigation sufficient to achieve no net loss of wetland function and values in accordance with Section 17.21.087 and this section.

A. Wetland alterations. Compensatory mitigation shall be provided for all wetland alteration and shall re-establish, create, rehabilitate, enhance, and/or preserve equivalent wetland functions and values. Compensation for wetland alterations shall occur in the following order of preference:

1. Re-establishing wetlands on upland sites that were formerly wetlands.
2. Rehabilitating wetlands for the purposes of repairing or restoring natural and/or historic functions.
3. Creating wetlands on disturbed upland sites such as those consisting primarily of nonnative, invasive plant species.
4. Enhancing significantly degraded wetlands.
5. Preserving Category I or II wetlands that are under imminent threat, provided that preservation shall only be allowed in combination with other forms of mitigation and when the director determines that the overall mitigation package fully replaces the functions and values lost due to development.

B. Mitigation Ratios. Compensatory mitigation for wetland alterations shall be based on the wetland category and the type of mitigation activity proposed. The replacement ratio shall be determined according to the ratios provided in the table below, provided that replacement ratio for preservation shall be determined by the director on a case-by-case basis. The created, re-established, rehabilitated, or enhanced wetland area shall at a minimum provide a level of function equivalent to the wetland being altered and shall be located in an appropriate landscape setting.

Wetland Category	Wetland Mitigation Type and Replacement Ratio*			
	Creation	Reestablishment	Re-habilitation	Enhancement Only
Category IV	1.5:1	1.5:1	2:1	3:1
Category III	2:1	2:1	3:1	4:1
Category II	3:1	3:1	4:1	6:1
Category I	6:1	6:1	8:1	Not allowed

\*Ratio is the replacement area: impact area.

C. Compensation for wetland buffer impacts shall occur at a minimum 1:1 ratio. Compensatory mitigation for buffer impacts shall include enhancement of degraded buffers by planting native species, removing structures and impervious surfaces within buffers, and other measures.

D. Mitigation banks shall not be subject to the replacement ratios outlined in the replacement ratio table above, but shall be determined as part of the mitigation banking agreement and certification process.

E. Buffers. Replacement wetlands established pursuant to these mitigation provisions shall have adequate buffers to ensure their protection and sustainability. The buffer shall be based on the category in Section 17.23.030, provided that the director shall have the authority to approve a smaller buffer when existing site constraints (such as a road) prohibit attainment of the standard buffer.

F. Adjustment of Ratios. The director shall have the authority to adjust these ratios when a combination of mitigation approaches is proposed. In such cases, the area of altered wetland shall be replaced at a 1:1 ratio through re-establishment or creation, and the remainder of the area needed to meet the ratio can be replaced by enhancement at a 2:1 ratio. For example, impacts to 1 acre of a Category II wetland requiring a 3:1 ratio for creation can be compensated by creating 1 acre and enhancing 4 acres (instead of the additional 2 acres of creation that would otherwise be required).

G. Location. Compensatory mitigation shall be provided on-site or off-site in the location that will provide the greatest ecological benefit and have the greatest likelihood of success, provided that mitigation occurs as close as possible to the impact area and within the same watershed sub-basin as the permitted alteration.

H. Protection. All mitigation areas whether on- or off-site shall be permanently protected and managed to prevent degradation and ensure protection of critical area functions and values into perpetuity. Permanent protection shall be achieved through deed restriction or other protective covenant in accordance with Section 17.21.085.

I. Timing. Mitigation activities shall be timed to occur in the appropriate season based on weather and moisture conditions and shall occur as soon as possible after the permitted alteration.

#### **17.23.054 Wetland mitigation plan.**

In addition to meeting the requirements of Section 17.21.087, a compensatory mitigation plan for wetland and wetland buffer impacts shall meet the following requirements:

A. The plan shall be based on applicable portions of the Washington State Department of Ecology's Guidelines for Developing Freshwater Wetland Mitigation Plans and Proposals, 2004 or other appropriate guidance document that is consistent with best available science.

B. The plan shall contain sufficient information to demonstrate that the proposed activities are logistically feasible, constructible, ecologically sustainable, and likely to succeed.

Specific information to be provided in the plan shall include:

1. The rationale for site selection;
2. General description and scaled drawings of the activities proposed including, but not limited to, clearing, grading/excavation, drainage alterations, planting, invasive plant management, installation of habitat structures, irrigation, and other site treatments associated with the development activities and proposed mitigation action(s);
3. A description of the ecological functions and values that the proposed alteration will affect and the specific ecological functions and values the proposed mitigation area(s) shall provide, together with a description of required or recommended mitigation ratios and an assessment of factors that may affect the success of the mitigation program;
4. Overall goals of the plan, including wetland function, value, and acreage;
5. Description of baseline (existing) site conditions including topography, vegetation, soils, hydrology, habitat features (i.e., snags), surrounding land use, and other pertinent information;
6. Field data confirming the presence of adequate hydrology (surface and/or groundwater) to support existing and compensatory wetland area(s);
7. Nature of mitigation activities, including area of restored, created, enhanced and preserved wetland, by wetland type;
8. Detailed grading and planting plans showing proposed post-construction topography; general hydrologic patterns; spacing and distribution of plant species, size and type of proposed planting stock, watering or irrigation plans, and other pertinent information;
9. A description of site treatment measures including invasive species removal, use of mulch and fertilizer, placement of erosion and sediment control devices, and best management practices that will be used to protect existing wetlands and desirable vegetation.
10. A demonstration that the site will have adequate buffers sufficient to protect the wetland functions into perpetuity.

C. Specific measurable performance standards that the proposed mitigation action(s) shall achieve together with a description of how the mitigation action(s) will be evaluated and monitored to determine if the performance standards are being met and identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates that project performance standards are not being met. The performance standards shall be tied to and directly related to the mitigation goals and objectives.

D. Cost estimates for the installation of the mitigation program, monitoring, and potential

corrective actions if project performance standards are not being met.

**17.23.055 Wetland mitigation monitoring.**

A. All compensatory mitigation projects shall be monitored for a period necessary to establish that performance standards have been met, but generally not for a period less than five (5) years. Reports shall be submitted annually for the first three (3) years following construction and at the completion of years 5, 7, and 10 if applicable to document milestones, successes, problems, and contingency actions of the compensatory mitigation. The director shall have the authority to modify or extend the monitoring period and require additional monitoring reports for up to ten (10) years when any of the following conditions apply:

1. The project does not meet the performance standards identified in the mitigation plan.
2. The project does not provide adequate replacement for the functions and values of the impacted critical area.
3. The project involves establishment of forested plant communities, which require longer time for establishment.

B. Mitigation monitoring reports shall include information sufficient to document and assess the degree of mitigation success or failure as defined by the performance standards contained in the approved mitigation plan. Information to be provided in annual monitoring reports shall include the following:

1. Number and location of vegetation sample plots used to document compliance with performance standards;
2. Measurements of the percent survival of planted material, plant cover, stem density, presence of invasive species, or other attributes;
3. For sites that involve wetland creation, re-establishment or rehabilitation, hydrologic observations of soil saturation/inundation as needed to demonstrate that a site meets the wetland hydrology criterion;
4. Representative photographs of the site;
5. A written summary of overall site conditions and recommendations for maintenance actions if needed;
6. Other information that the director deems necessary to ensure the success of the site.

**17.23.056 Wetland development standards.**

A. Development standards for adjacent development shall minimize adverse effects on the wetland, and shall include:

1. Subdivision of land shall assure that each lot has sufficient building area outside wetlands and buffers. Lots in subdivisions shall be oriented whenever feasible to provide a rear yard of at least 20 feet between the buffer area and buildings.
2. Fencing shall be provided at the perimeter of residential development to limit domestic animal entry into wetlands and buffer areas.
3. Activities that generate noise shall be located as far from the wetland and buffer as feasible. Roads, driveways, parking lots and loading areas, mechanical or ventilating equipment shall be located on sides of buildings away from the wetland, or separated by noise attenuating walls

4. Light penetration into buffer areas and wetlands shall be limited by locating areas requiring exterior lighting away from the wetland boundary, or limiting light mounting heights to a maximum 4 of feet. Windows that will be lit at night should be minimized on the side of buildings facing wetlands and buffers, or screened as provided for in C, below.

B. Management of surface runoff from adjacent land shall minimize adverse effects on wetland ecological functions and shall include:

1. Control of surface water peak flow and duration of flow should be maintained at rates typical of native forest cover;
2. Runoff should be routed to infiltration systems, to the maximum extent feasible, to provide groundwater interflow recharge to wetlands and/or water bodies and to limit overland flow and erosion.
3. Surface or piped stormwater should be routed to existing conveyances or to other areas, wherever hydraulic gradients allow. Where stormwater is routed to wetlands, system design shall assure that erosion and sedimentation will be avoided to the maximum extent feasible.
4. To prevent channelized flow from lawns and other landscaped areas from entering the buffer, and to prevent washing of fertilizers, herbicides and pesticides into the buffer, if slopes adjacent to the buffer exceed 15%, a 10 foot wide swale to intercept runoff or other effective interception facility approved by the director shall be provided at the edge of the buffer.
5. Adopt and implement an integrated pest management system including limiting use of fertilizers, herbicides and pesticides within 25 feet of the buffer.

C. In order to maintain effective buffer conditions and functions, a vegetation management plan shall be required for all buffer areas, to include:

1. Maintaining adequate cover of native vegetation including trees and understory; if existing tree cover is less than a relative density of 20, planting shall be required consisting of seedlings at a density of 300 stems per acre or the equivalent;
2. Provide a dense screen of native evergreen trees at the perimeter of the buffer. If existing vegetation is not sufficient to prevent viewing adjacent development from within the buffer. Planting shall be required equivalent to two rows of 3' high stock of native evergreens at a triangular spacing of 15 feet, or three rows of gallon containers at a triangular spacing of 8 feet. Fencing may be required if needed to block headlights or other sources of light or to provide an immediate effective visual screen.
3. Provide a plan for control of invasive weeds, and remove existing invasive species;
4. Provide for a monitoring and maintenance plan for a period of at least five (5) years, except this provision may be waived for single family residential lots.

## **Section 5**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 24 to read as follows:

### **17.24 GEOLOGICALLY HAZARDOUS AREAS**

- 17.24.010 Geologically hazardous areas: designation..
- 17.24.020 Development standards for landslide hazard areas.
- 17.24.030 Development standards for erosion hazard area standards.
- 17.24.040 Seismic areas standards.
- 17.24.050 Multiple designations.

**17.24.010 Geologically hazardous areas: Designation.**

The following areas are designated as “geologically hazardous areas”:

A. Landslide Hazard Areas - Landslide hazard areas include areas susceptible to landslides because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other physical factors. Landslide hazard areas shall include areas susceptible to landslides because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other physical factors. Potential landslide hazard areas exhibit one or more of the following characteristics:

1. Sensitive Sloped Areas: Slopes exceeding 30 percent with a vertical relief of ten (10) or more feet except areas composed of competent rock and properly engineered slopes designed and approved by a geotechnical engineer licensed in the State of Washington and experienced with the site;
2. Areas designated by the Soil Conservation Service as having “severe” limitation for building site development;
3. Areas that have shown evidence of historic failure or instability, including but not limited to back-rotated benches on slopes; areas with structures that exhibit structural damage such as settling and racking of building foundations; and areas that have toppling, leaning, or bowed trees caused by ground surface movement;
4. Slopes greater than fifteen percent that have a relatively permeable geologic unit overlying a relatively impermeable unit and having springs or groundwater seepage;
5. Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action include slopes exceeding 10 feet in height adjacent to streams, and lakes with more than a 30 percent gradient;; and
6. Areas located in a canyon or active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding.
7. Areas that are at risk of mass wasting due to seismic forces.

B. Erosion Hazard Areas - Erosion hazard areas are those areas of Chehalis containing soils that may experience severe to very severe erosion hazard including those soils groups designated in the Soil Conservation Service “Soil Survey of Lewis County, Washington as “highly erodible land” and “potentially highly erodible land.”

C. Seismic Hazard Areas: Areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, soil liquefaction or surface faulting including:

1. Areas subject to surface faulting during a seismic event;
2. Areas with underlying deposits indicative of a risk of liquefaction during a seismic event;
3. Areas subject to slope failure during a seismic event;
4. Areas that are at risk of mass wasting due to seismic forces.

Seismic hazards shall be as identified in Washington State Department of Natural Resources seismic hazard maps for Western Washington and other geologic resources.

**17.24.020 Development standards for landslide hazard areas.**

Uses and activities in landslide hazard areas shall conform to the following standards:

A. Protection of Landslide Area and Buffer. The landslide hazard area and associated buffer shall be protected from disturbance, except in compliance with the standards of this section. Modification of topography and vegetation in landslide hazard areas shall be stringently limited to provide multiple benefits of long-term stability of sensitive slopes and related benefits including reduction of erosion potential, reduction of stormwater runoff, and preservation of related ecological values. Unless otherwise provided or as part of an approved alteration, removal of vegetation from a landslide hazard area or related buffer shall be prohibited. If the designated landslide hazard and buffer area lacks adequate woody vegetation to provide for stability, the director shall have the authority to require vegetation restoration or other measures to improve slope stability.

B. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined as follows to minimize or eliminate the risk of property damage, death, or injury and effects on other elements of the environment resulting from earth movement caused in whole or part by the development:

1. The buffer from the top of a slope shall be designed to protect persons and property from damage due to catastrophic slope failure and slope retreat over the lifetime of the use and provide an area of vegetation to promote shallow stability, control erosion and promote multiple benefits to wildlife and other resources. The minimum dimension of the buffer shall be equal to the greater of:

- a. The distance from the top of slope equal to the vertical distance from the toe of slope to the top of slope;
- b. The distance from the top of slope equal to the distance from the toe of slope upslope at a slope of 2:1 (horizontal to vertical) to a point that intersects with the site's ground elevation., or
- c. Fifty (50) feet from the top of the slope.

The minimum buffer from the bottom of a slope shall provide for safety of persons and property from the run-out resulting from slope failure and shall be the greater of:

- a. The height of the slope, or
- b. 50 feet from the toe of the slope.

3. Buffer Reduction. The buffer may be reduced to a minimum of ten (10) feet based on analysis of specific development plans provided by a qualified professional that demonstrates to the director's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and other nearby critical areas.

4. Increased Buffer. The buffer may be increased where the director determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.

C. Development Standards

1. Division of land within or adjacent to landslide hazard areas and associated buffers shall be clustered to avoid landslide hazard areas and associated buffers. Land that is located partially within a landslide hazard area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of the landslide

area and buffer with provision for drainage, erosion control and related features that will not adversely affect the stability of the landslide area.

2. Alteration of a landslide hazard area and buffer in order to accommodate structures or land alteration may be authorized only in cases where the director finds that reasonable development cannot be accommodated on portions of the site not subject to landslide hazards and buffers, and if analysis by a qualified professional establishes compliance with the following standards, based on specific development plans:

- a. The proposed development will not result in a risk of landslide that may affect development on the subject property or other properties in the vicinity, and will not result in a greater risk or a need for increased buffers on neighboring properties; For unconsolidated deposits, development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code.
- b. Measures to maintain slope stability, such as drainage systems, must be of a design that will assure operation without facilities requiring regular maintenance that would jeopardize stability if the facility fails.
- c. The development will not increase erosion or sedimentation risk on the site;
- d. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
- e. Such alterations will not adversely impact other critical areas;
- f. Structures shall be located on the least sensitive portion of the site and clustered where possible to reduce disturbance and removal of vegetation.
- g. Grading shall minimize alterations to the natural contour of the slope,
- h. Foundations should conform to the natural contours of the slope and foundations should be stepped/tiered where possible to conform to existing topography of the site;
- i. Retaining walls shall be preferred over cut and fill and shall be incorporated into structures wherever feasible.
- j. Landslide hazard areas on unconsolidated deposits with a gradient of 40 percent where the toe of slope is within the buffer area of a wetland, stream, pond or lake are not eligible for alteration of landslide hazard areas or but may be subject to alteration of buffers, subject to compliance with the standards of this chapter.

3. Critical facilities, including, but not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations that produce, use, or store hazardous materials shall not be located in landslide hazard areas if there is a feasible alternative location outside the hazardous areas that would serve the intended service population. A facility may be allowed only subject to the standards in 2., above.

4. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater

conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior;

5. Point discharges from surface water facilities and roof drains onto or upgradient from an erosion or landslide hazard area shall be prohibited.

6. Roads, driveways and other vehicular access, trails and walkways, may be permitted only if the applicant demonstrates that no other feasible alternative exists, including through the provisions of RCW 8.24 and subject to the standards in 2., above. If access through a hazard area is granted, exceptions or deviations from technical standards for width or other dimensions, and specific construction standards to minimize impacts may be specified. Access roads and trails shall be engineered and built to standards that avoid the need for major repair or reconstruction beyond that which would be required in non-hazard areas and shall be:

- a. Located in the least sensitive area of the site.
  - b. Designed to minimize topographic modification with low gradients and/or parallel to the natural contours of the site.
  - c. Retaining walls shall be preferred over cut and fill slopes to minimize topographic modification.
  - d. Clearing and grading shall minimize ground disturbance to the maximum extent feasible to accommodate allowed development and generally shall not extend more than 10 feet beyond the approved development;
- D. A qualified professional, licensed in the state of Washington, shall review projects in geologically hazardous areas to ensure that they are properly designed and constructed.

**17.24.030 Development standards for erosion hazard areas standards.**

A. Within erosion hazard areas disturbance of natural vegetation shall be limited. The following chart sets forth the maximum disturbance allowed on a site:

Amount of Slope Which Can be Disturbed

Slope	Disturbance Allowed
0 to 15 percent	100 percent
15 to 25 percent	60 percent
25 to 40 percent	45 percent
Greater than 40 percent	0 percent

1. The overall 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 site having 0-15% slopes) x 1.00 + (square footage of site having 15%-25 slopes) x .60 + (square footage of site having 25-40% slopes) x .45 = Total allowable site disturbance.

2. Areas protected as critical areas by other provisions of this chapter shall be eliminated from the calculation of allowed site disturbance, above.

3. The total allowable site disturbance limits shall be applied to the entire site and

shall include all disturbance over the life of the project.

4. The disturbed area of the site shall be located within areas of the least sensitivity portions of the site.

5. Areas to be preserved as undisturbed shall be located on site plans and protected from disturbance during construction and use. Areas to be preserved in subdivisions shall be indicated on the face of the plat in accordance with Section 17.21.085. Notice on Title. Disturbance limits shall be observed in subsequent development of lots.

6. Disturbance limits shall not be applied to existing single family residential lots less than 20,000 square feet in size that were created prior to the adoption of this chapter. B. Structures shall be located on the least sensitive portion of the site and clustered where possible to reduce disturbance and removal of vegetation.

C. Grading shall minimize alterations to the natural contour of the slope. Building foundations shall conform to the natural contours of the slope and be stepped/tiered to conform to existing topography of the site;

D. Retaining walls shall be preferred over cut and fill for roads, parking lots and structures. Structures on slopes in excess of 25% shall incorporate earth retaining structures in buildings rather than employing free-standing earth retention structures. d. Clearing and grading shall minimize ground disturbance to the maximum extent feasible and generally shall not extend more than 10 feet beyond the approved development;

E. All structures or impervious surface improvements shall a be required to have on-site drainage systems to meet the specifications of the public works department to control conveyance of stormwater to avoid erosion hazard areas. Point discharges or overland dispersion systems from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited from discharging onto slopes in excess of 5%. Conveyance should be provided to the foot of slopes..

F. Roads, driveways and other vehicular access, trails and walkways, shall be

1. Located in the least sensitive area of the site.

2. Designed to minimize topographic modification with low gradients and/or parallel to the natural contours of the site.

3. Retaining walls shall be preferred over cut and fill slopes to minimize topographic modification.

G. Logging activity allowed on slope exceeding twenty-five percent shall be partial cutting only and not clear cutting. "Partial cutting" is defined here as per Washington Administrative Code Chapter 222-16-010. In addition, subsequent harvest shall not create a condition inconsistent with that definition. Timber harvest in these areas shall be consistent with all applicable laws including but not limited to 222-30 WAC Timber Harvesting, 222-34 WAC Reforestation, and 222-38 WAC Forest Chemicals.

#### **17.24.040 Seismic hazard areas standards.**

Development may be allowed in seismic hazard areas when all of the following apply:

A. If evaluation of site-specific subsurface conditions by a qualified professional demonstrates that the proposed development site is not subject to the conditions indicating seismic risk in, the provisions of this subsection shall not apply.

B If a site is subject to seismic risk, the applicant shall implement appropriate engineering design based on analysis by a qualified professional of the best available engineering and

geological practices that either eliminates or minimizes the risk of structural damage or injury resulting from seismically induced settlement or soil liquefaction, including compliance with the following criteria:

1. Subdivision within a seismic hazard areas shall assure that each resulting lot has sufficient buildable area outside of the hazard area or that appropriate limitations on building and reference to appropriate standards are incorporated into subdivision approval and may be placed as restrictions on the face of the plat;
2. Structures in seismic hazard areas shall conform to applicable analysis and design criteria of the International Building Code;
3. Public Roads, bridges, utilities and trails shall be allowed when there are no feasible alternative locations and geotechnical analysis and design are provided that ensure the roadway, bridge and utility structures and facilities will not be susceptible to damage from seismic induced ground deformation. Mitigation measures shall be designed in accordance with the most recent version of the American Association of State Highway and Transportation Officials (AASHTO) Manual or other appropriate document.

C. The director may waive or reduce engineering study and design requirements for alterations in seismic hazard areas for:

1. Mobile homes;
2. Additions or alterations to existing structures that do not increase occupancy or significantly affect the risk of structural damage or injury; and
3. Buildings that are not dwelling units or used as places of employment or public assembly.

**17.24.050 Geologically hazardous areas review and reporting requirements.**

A. When critical area maps or other sources of credible information indicate that a site proposed for development or alteration is or may be located within a geologically hazardous area the director shall have the authority to require the submittal of a geological hazard assessment report.

B. A geological hazard assessment report is an investigation process to evaluate the geologic characteristics of the subject property and adjacent areas. The geological assessment shall include field investigation and may include the analysis of historical aerial photographs, review of public records and documentation, and interviews with adjacent property owners. The report shall include the following:

1. A description of which areas on the site, surrounding areas that influence or could be influenced by the site, or areas within three hundred (300) feet of the site meet the criteria for geologically hazard.
2. A scaled site plan showing:
  - a. The type and extent of geologic hazard areas, and any other critical areas, and buffers on, adjacent to or that are likely to impact or influence the proposal, including properties upslope of the subject site;
  - b. The location of existing and proposed structures, fill, access roads, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;
  - c. The existing site topography preferably accurate to within two-foot contours;and

d. Clearing limits.

3. A description of the site features, including surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report. This may include surface exploration data such as borings, drill holes, test pits, wells, geologic reports, and other relevant reports or site investigations that may be useful in making conclusions or recommendations about the site under investigation;

4. A description of the processes affecting the property or affected by development of the property including soil erosion, deposition, or accretion;

5. A description of the vulnerability of the site to seismic and other geologic processes and a description of any potential hazards that could be created or exacerbated as a result of site development.

C. If development is proposed in an area subject to geologic hazards, the assessment shall include:

1. A description and analysis of the level of risk associated with development that complies with prohibitions and buffers associated with this code;

2. A description and analysis of the level of risk associated with alternative proposals for development within or with less setback from the area of geological hazard including risk to future occupants of the subject property, adjacent property, other critical areas and the general public safety;

3. A description and analysis of the level of risk associated with the measures proposed to mitigate the hazards, ensure public safety, and protect property and other critical areas, including the risk of failure if structures, drainage systems or other facilities are not monitored, maintain, or cease to function as designed for any reasons;

4. A description and analysis of the level of risk associated with increased erosion or sedimentation risk on the site and potential effects on adjacent properties, water bodies and wetlands.

5. For projects in or affecting landslide hazard areas the report shall also include:

a. Assessments and conclusions regarding slope stability for both the existing and developed conditions including the potential types of landslide failure mechanisms (e.g., debris flow, rotational slump, translational slip, etc.) that may affect the site. The stability evaluation shall also consider dynamic earthquake loading, and shall use a minimum horizontal acceleration as established by the current version of the International Building Code;

b. Description of the run-out hazard of landslide debris to the proposed development that starts upslope (whether part of the subject property or on a neighboring property) and/or the impacts of landslide run-out on down slope properties and critical areas;

c. For proposed development on unconsolidated deposits, analysis of whether the development results in a factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions.

Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code.

6. For projects in seismic hazard areas the report shall also include a detailed

engineering evaluation of expected ground displacements or other liquefaction and/or dynamic settlement effects and proposed mitigation measures to ensure an acceptable level of risk for the proposed structure type or other development facilities such as access roads and utilities.

## **Section 6**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 25 to read as follows:

### **17.25 FISH AND WILDLIFE HABITAT AREAS**

- 17.25.010 Fish and wildlife habitat: designation.
- 17.25.020 Fish and wildlife habitat conservation areas: water bodies.
- 17.25.030 Fish and wildlife habitat conservation areas: water bodies – buffers.
- 17.25.031 Fish and wildlife habitat conservation areas: water bodies – buffer averaging.
- 17.25.032 Fish and wildlife habitat conservation areas: water bodies – buffer increases.
- 17.25.040 Fish and wildlife habitat conservation areas: water bodies – allowed uses.
- 17.25.050 Other fish and wildlife habitat conservation areas.
- 17.25.060 Fish and wildlife habitat conservation areas: review and reporting requirements.
- 17.25.070 Fish and wildlife habitat conservation areas: mitigation standards.
- 17.25.080 Fish and wildlife habitat conservation areas: development standards for adjacent development.

#### **17.25.010 Fish and wildlife habitat: designation.**

A. Fish and wildlife habitat conservation areas are those areas identified as being of critical importance to the maintenance of certain fish, wildlife, and/or plant species. These areas are typically identified either by known point locations of specific species (such as a nest or den) or by habitat areas or both. All areas within the City meeting these criteria are hereby designated critical areas and are subject to the provisions of this chapter.

B. For purposes of this chapter, fish and wildlife habitat conservation areas shall include all of the following:

1. The Washington State Department of Fish and Wildlife Priority Habitats and Species Recommendations for Species and Habitats, for:
  - a. Endangered species listed at WAC 232-12-014
  - b. Threatened species listed at WAC 232-12-001
  - c. Sensitive species listed at WAC 232-12-011;
2. Bald Eagle habitat pursuant to WAC 232-12-292
3. Endangered or threatened species listed in accordance with the federal Endangered Species Act together with the areas with which they have a primary association.
4. State natural area preserves and natural resource conservation areas including
  - a. Department of Natural Resources (DNR) designated Natural Areas Preserves (NAP) and Natural Resource Conservation Areas (NECA);
  - b. Washington Department of Fish and Wildlife (WDFW) designated Wildlife Recreation Areas (WRA);

5. Waters of the state as defined in RCW 77.55.011, and RCW 90.56.010 including shorelines of the state as defined in RCW 90.58.010;
  6. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;
  7. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
- C. In addition to the species and habitats identified in B above, the City may designate additional species and/or habitats of local importance as follows:
1. In order to nominate an area or a species to the category of Locally Important an individual or organization must :
    - a. Demonstrate a need for special consideration based on:
      - i. Declining population;
      - ii. High sensitivity to habitat manipulation; or
      - iii. Demonstrated commercial, recreational, cultural, or other special value;
    - b. Propose relevant management strategies considered effective and within the scope of this Chapter; and
    - c. Provide a map showing the species or habitat location(s).
  2. Submitted proposals shall be reviewed by the City and may be forwarded to the State departments of Fish and Wildlife, Natural Resources, and/or other local, State, Federal, and/or Tribal agencies or experts for comments and recommendations regarding accuracy of data and effectiveness of proposed management strategies.
  3. If the proposal is found to be complete, accurate, and consistent with the purposes and intent of this chapter, the City Planning Commission will hold a public hearing to solicit comment. Approved nominations will become designated locally important habitats or species and will be subject to the provisions of this chapter.

**17.25.020 Fish and wildlife habitat conservation areas: water bodies.**

A. Streams shall be designated in accordance with the Washington State Department of Natural Resources (DNR) stream type as provided in WAC 222-16-030 with the following provisions:

1. Type S Water - all waters, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW including periodically inundated areas of their associated wetlands.
2. Type F-A Water - segments of natural waters other than Type S Waters, which are within defined channels greater than 10 feet in width, as defined by the OHWM and periodically inundated areas of their associated wetlands or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat.
3. Type F-B Water - segments of natural waters other than Type S Waters, which are within defined channels less than 10 feet in width, as defined by the OHWM. or within lakes, ponds, or impoundments having a surface area of less than 0.5 acre at seasonal low water and which in any case contain fish habitat.
4. Type Np Water - all segments of natural waters within defined channels that are perennial non-fish habitat streams. Perennial streams are waters that do not go dry

any time of a year of normal rainfall. However, for the purpose of water typing, Type Np Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

5. Type Ns Water - all segments of natural waters within defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

B. Non-fish habitat streams are those streams that have no known or potential use by anadromous or resident fish based on the stream character, hydrology and gradient, provided that human-made barriers shall not be considered a limit on fish use except when the director makes the following findings:

1. The human-made barrier is located beneath public infrastructure that is unlikely to be replaced and it is not feasible to remove the barrier without removing the public infrastructure, provided that the infrastructure is not identified for future modification in the capital facility or other plans of the public agency responsible for the infrastructure, and the facility will not exceed its design-life within the foreseeable future;
2. The human-made barrier is located beneath one or more occupied structures and it is not feasible to remove the barrier without removing the structure, and the structure is of a size and condition that removal or substantial remodel is not likely;
3. The human-made barrier is not identified for removal by a public agency or in an adopted watershed plan.

#### **17.25.030 Fish and wildlife habitat conservation areas: water bodies – buffers.**

The director shall have the authority to require buffers from the edges of all streams in accordance with the following:

A. Buffers shall be established for activities adjacent to as necessary to protect the integrity, functions and values of the resource. Buffer widths shall reflect the sensitivity of the species or habitat and the type and intensity of the adjacent human use or activity. Two systems of buffer dimensions are specified below, standard buffers and buffers based on specific water body reach characteristics and ecological functions.

B. Standard Buffers. The standard buffer widths required by this section are based on scientific studies of the conditions necessary to sustain ecological functions and values to support anadromous and resident fish and presume the existence of a dense native vegetation community in the buffer zone adequate to protect the stream functions and values at the time of the proposed activity. Buffers shall be measured as follows:

1. Type S Water - all waters, as inventoried as "shorelines of the state" under the jurisdiction of the Shoreline Management Act, except associated wetlands, which shall be regulated in accordance with sections 21.64.100 through 21.64.147 of this chapter - 150 feet
2. Type F-A Water - segments of natural waters other than Type S Waters, which are greater than 10 feet in width - 150 feet
3. Type F-B Water - segments of natural waters other than Type S Waters, which are less than 10 feet in width - 100 feet

4. Type Np Water - segments of natural waters that are perennial non-fish habitat streams. - 75 feet

5. Type Ns Water - segments of natural waters within defined channels that are seasonal, non-fish habitat streams – 50 feet

6. Non fish-bearing streams in existing subdivisions:

a. Where streams have been placed in separate tracts, buffers will be provided by the tract, provided a minimum dimension of 25 feet from the edge of the stream is provided;

b. Where streams have not been placed in separate tracts, or if a minimum dimension of 25 feet from the edge of the stream is not provided, buffers will meet the dimensional requirements in 4, above, unless existing structures are located within the buffer. In that case, the following provisions shall apply:

i. An inner riparian buffer shall be provided with a dense community of native trees, shrubs, and groundcover. The dimension of this buffer shall be a minimum of 15 feet, and may be expanded if sufficient clearance is available between the stream and existing primary structures;

ii. An outer riparian buffer may be provided to extend within 10 feet of an existing primary structure. Within the outer buffer, a maximum of 25 percent of the zone may be used as grass turf; with the balance a dense community of native trees, shrubs, and groundcover.

C. Buffer Measurement. The buffer shall be measured landward horizontally on both sides of the water body from the ordinary high water mark as identified in the field perpendicular to the alignment of the stream or lake/pond bank. The required buffer shall be extended to include any adjacent regulated wetland(s), landslide hazard areas and/or erosion hazard areas and required buffers, but shall not be extended across roads or other lawfully established structures or hardened surfaces that are functionally and effectively disconnected from the stream. Where lands adjacent to a stream display an average continuous slope of 20 percent to 35 percent and the required buffer is less than 100 feet, the buffer shall extend to a 30% greater dimension. In all cases, where slopes within the required buffer exceed 35 percent, the buffer shall extend to a minimum dimension of 25 feet from the top of said slopes, or if a buffer associated with a geological hazard is present, to whichever extent is greater.

D. Buffers in conjunction with other critical areas. Where other critical areas defined in this chapter fall within the water body buffer, the buffer area shall be the most expansive of the buffers applicable to any applicable critical area.

**17.25.031 Fish and wildlife habitat conservation areas: water bodies –buffer averaging.**

The director shall have the authority to average standard stream buffer widths on a case-by-case basis when the applicant demonstrates to the satisfaction of the director that all the following criteria are met. Stream buffer averaging shall not be allowed if the performance-based stream buffers are implemented pursuant to subsection 17.25.030.C, above

A. Averaging to improve wetland protection may be permitted when all of the following conditions are met as demonstrated by an assessment study pursuant to Section 17.21.082 and 17.25.060:

1. The water body or buffer area has significant differences in characteristics that affect its habitat functions;

2. The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the water body and decreased adjacent to the lower-functioning or less sensitive portion
  3. The buffer averaging does not reduce the functions or values of the stream or riparian habitat, or the buffer averaging, in conjunction with vegetation enhancement, increases the habitat function;
  4. The total area of the buffer after averaging is equal to the area required without averaging and all increases in buffer dimension for averaging are generally parallel to the wetland edge;
  5. The buffer at its narrowest point is never less than 3/4 of the required width;
  6. The slopes adjacent to the stream within the buffer area are stable and the gradient does not exceed thirty percent (30%);
- B. Averaging to allow reasonable use of a parcel may be permitted when all of the following are met as demonstrated by an assessment study pursuant to Section 17.21.082 and 17.25.060:
1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging;
  2. The buffer averaging does not reduce the functions or values of the stream or riparian habitat, or the buffer averaging, in conjunction with vegetation enhancement, increases the habitat function;
  3. The total area of the buffer after averaging is equal to the area required without averaging and all increases in buffer dimension for averaging are generally parallel to the wetland edge;
  4. The buffer at its narrowest point is never less than 3/4 of the required width except where the director finds that there is an existing feature such as a roadway that limits buffer dimension, or an essential element of a proposed development such as access that must be accommodated for reasonable use and requires a smaller buffer.
- C. The applicant implements all reasonable measures to reduce the adverse effects of adjacent land uses and ensure no net loss of functions and values in conjunction with a critical area mitigation study. The specific measures that shall be implemented include but are not limited to those in Section 17.25.080.

**17.25.032 Fish and wildlife habitat conservation areas: water bodies –buffer increase.**

The director shall have the authority to increase the width of a stream buffer on a case-by-case basis when such increase is necessary to achieve any of the following:

- A. Protect fish and wildlife habitat, maintain water quality, ensure adequate flow conveyance; provide adequate recruitment for large woody debris, maintain adequate stream temperatures, or maintain in-stream conditions.
- B. Compensate for degraded vegetation communities or steep slopes adjacent to the stream.
- C. Maintain areas for channel migration.
- D. Protect adjacent or downstream areas from erosion, landslides, or other hazards.

**17.25.040 Fish and wildlife habitat conservation areas: water bodies – allowed uses.**

The following activities or uses may be permitted in streams and/or their buffers when all reasonable measures have been taken to avoid adverse effects on species and habitats, the amount and degree of the alteration are limited to the minimum needed to accomplish the

project purpose, and compensatory mitigation is provided for all adverse impacts that cannot be avoided.

A. Restoration of streams previously piped or channeled into a new or relocation streambed when part of a restoration plan that will result in equal or better habitat and water quality and quantity, and that will not diminish the flow capacity of the stream or other natural stream processes, provided that the relocation has a state Hydraulic Project Approval and all other applicable permits.

B. Road, trail, bridge, and right-of-way crossings provided they meet the following criteria:

1. There is no other feasible alternative route with less impact on critical areas.

2. The crossing minimizes interruption of natural processes such as the downstream movement of wood and gravel and the movement of all fish and wildlife. Bridges are preferred for all stream crossings and should be designed to maintain the existing stream gradient and substrate, provide adequate horizontal clearance on each side of the ordinary high water mark and adequate vertical clearance above ordinary high water mark for animal passage. If a bridge crossing is not feasible, culverts shall be designed according to applicable state and federal guidance criteria for fish passage as identified in Fish Passage Design at Road Culverts, WDFW March 1999, and/or the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000, (and subsequent revisions) and in accordance with a state Hydraulic Project Approval. The applicant or property owner shall maintain fish passage through bridge or culvert.

3. The City may require that existing culverts be removed, repaired, or modified as a condition of approval if the culvert is detrimental to fish habitat or water quality, and a feasible alternative exists.

4. Crossings shall be limited to the minimum width necessary. Common crossings are the preferred approach where multiple properties can be accessed by one crossing.

5. Access to private development sites may be permitted to cross streams, if there are no feasible alternative alignments. Alternative access shall be pursued to the maximum extent feasible, including through the provisions of RCW 8.24.

Exceptions or deviations from technical standards for width or other dimensions, and specific construction standards to minimize impacts may be specified, including placement on elevated structures as an alternative to fill, if feasible.

C. Outdoor recreational or educational activities which do not significantly affect the function of the water body or regulated buffer (including wildlife management or viewing structures, outdoor scientific or interpretive facilities, trails, hunting blinds, etc.) and meet the following criteria: .

1. Trails shall not exceed 4 feet in width and shall be surfaced with gravel or pervious material, including boardwalk.

2. The trail or facility shall be located in the outer fifty percent (50%) of the buffer area unless a location closer to the water body edge is required for interpretive purposes.

3. The trail or facility shall be constructed and maintained in manner that minimizes disturbance of the water body or buffer.

D. Utility lines and facilities providing local delivery service, not including facilities such as electrical substations, water and sewage pumping stations, water storage tanks, petroleum products pipelines and transformers or other facilities containing hazardous substances,

may cross water bodies or be located in buffers, if the following criteria are met:

1. There is no reasonable location or route that does not cross the water body or outside the buffer based on analysis of system needs, available technology and alternative routes. Location within a buffer shall be preferred over a location within a water body. Crossings shall be contained within the footprint of an existing road or utility crossing where possible.
2. Impacts to fish and wildlife habitat shall be avoided to the maximum extent possible and mitigated when avoidance is not feasible.
3. Utilities that cross water bodies shall be as close to perpendicular to the channel as possible to minimize disturbance. Boring under the water body may be required.
4. If not a crossing, the utility line shall be located as far from the water body as possible.
5. The utility installation shall maintain the existing stream gradient and substrate.
6. Clearing, grading, and excavation activities shall be limited to the minimum necessary to install the utility line, and the area is restored following utility installation.

E. Storm water conveyance or discharge facilities such as infiltration systems dispersion trenches, level spreaders, and outfalls may be permitted in a fish and wildlife habitat conservation area buffer on a case-by-case basis when all of the following are met:

1. Due to topographic or other physical constraints there are no feasible locations for these facilities outside the buffer;
2. The discharge is located as far from the ordinary high water mark as possible and in a manner that minimizes disturbance of soils and vegetation.
3. The discharge outlet is in an appropriate location and is designed to prevent erosion and promote infiltration.
4. The discharge meets stormwater flow and water quality standard as provided in the 2005 Ecology Stormwater Manual for Western Washington, or the equivalent.

F. Stream bank stabilization, shoreline protection, and public or private launching ramps may be permitted subject to all of the following standards:

1. Natural shoreline processes will be maintained to the maximum extent practicable. The activity will not result in increased erosion and will not alter the size or distribution of shoreline or stream substrate, or eliminate or reduce sediment supply from feeder bluffs;
2. Adverse impact to fish or wildlife habitat conservation areas, specifically juvenile and adult fish migration corridors, or associated wetlands will be mitigated,
3. Nonstructural measures, such as placing or relocating the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient;
4. Stabilization is achieved through bioengineering or soft armoring techniques in accordance with an applicable Hydraulic Project Approval is issued by the Washington Department of Fish and Wildlife;
5. Hard bank armoring may occur only when the property contains an existing permanent structure(s) that is in danger from shoreline erosion caused by riverine processes and not erosion caused by upland conditions, such as the alteration of natural vegetation or drainage, and the armoring shall not increase erosion on adjacent properties and shall not eliminate or reduce sediment supply;

G. New public flood protection measures and expansion of existing measures may be permitted, provided that bioengineering or soft armoring techniques shall be used where feasible. Hard bank armoring may occur only in situations where soft approaches do not provide adequate protection, and shall be subject to requirement of the Shoreline Master Program, where applicable, Hydraulic Project Approval and other permits

H. New docks shall be permitted only for public access, as an accessory to water-dependent uses or associated with a single-family residence provided that it is designed and used only as a facility for access to watercraft.

1. To limit the effects on ecological functions, the number of docks should be limited and new subdivisions should employ shared moorage whenever feasible. Docks on shorelines of the state must comply with policies and regulations of the Shoreline Master Program.

2. Docks shall be located and designed to minimize adverse effects on ecological processes through location where they will interfere with fluvial and limnetic processes including gradient and substrate; recruitment of woody debris; and fish habitat, including that related to anadromous fish.

3. Docks shall minimize reduction in ambient light level by limiting width to the minimum necessary and shall not exceed four (4) feet in width, except where specific information on use patterns justifies a greater width. Materials that will allow light to pass through the deck may be required including grating on walkways or gangplanks in nearshore areas.

4. Approaches shall utilize piers or other structures to span the entire upper foreshore to the point of intersection with stable upland soils and shall be design to avoid interfering with stream processes.

5. Pile spacing shall be the maximum feasible to minimize shading and avoid a wall effect that would block or baffle currents, sediment movement or movement of aquatic life forms, or result in structure damage from driftwood impact or entrapment.

6. Docks should be constructed of materials that will not adversely affect water quality or aquatic plants and animals in the long term.

I. Launch ramps may be permitted for access to the water for the public or for residents of a development or for water dependent use subject to the following criteria:

1. Launch ramps shall be located and designed to minimize adverse effects on fluvial and limnetic processes including stream gradient, and substrate; recruitment of woody debris; and fish habitat, including that related to anadromous fish.

2. Ramps shall be placed and maintained near flush with the bank slope. Preferred ramp designs, in order of priority, are:

a. Open grid designs with minimum coverage of beach substrate;

b. Seasonal ramps that can be removed and stored upland;

c. Structures with segmented pads and flexible connections that leave space for natural beach substrate and can adapt to changes in beach profile.

J. Instream structures, such as, but not limited to, high flow bypasses, dams, and weirs, other than those regulated exclusively by the Federal Energy Regulatory Commission (FERC) shall be permitted only when the multiple public benefits are provided and ecological impacts are fully mitigated. Dams on shorelines of the state shall be regulated in accordance with the Shoreline Master Program. Dams on other streams shall require a

Special Use Permit as provided by CMC 17.09.110.

1. Instream facilities locations shall avoid areas of high habitat value for aquatic organisms, specifically anadromous fish.
2. Instream facilities shall be designed to produce the least feasible effect on fluvial processes and shall minimize change in gradient.
- 3 Instream facilities shall provide mitigation of all impacts on aquatic species and habitat.

4. Instream facilities shall provide fish passage, in accordance with RCW 77.57.

5. A construction bond for 150% of the cost of the structure and all mitigation measures shall be filed prior to construction and a maintenance agreement shall specify responsibility for maintenance, shall incorporate the maintenance schedule specified by the design engineer, shall require annual inspections by a Civil Engineer licensed in the State of Washington and shall stipulate abandonment procedures which shall include, where appropriate, provisions for site restoration.

K. Facilities permitted as shoreline dependent or shoreline oriented uses in accordance with the Shoreline Master Program, may be located in water bodies and buffers, provided that only those facilities that are water dependent or water oriented and facilities for necessary access may be located in water bodies and buffers and provided that the facility is located, designed, constructed and operated to minimize and, where possible, avoid critical area disturbance to the maximum extent feasible.

L. Clearing and grading, when allowed as part of an authorized use or activity or as otherwise allowed in these standards, may be permitted provided that the following shall apply:

1. Grading is allowed only during the designated dry season, which is typically regarded as May 1 to October 1 of each year, provided that the City may extend or shorten the designated dry season on a case-by-case basis, based on actual weather conditions.
2. Appropriate erosion and sediment control measures shall be used at all times. The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, disturbed topsoil shall be redistributed to other areas of the site.
3. The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or reestablishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces

#### **17.25.050 Other fish and wildlife habitat conservation areas.**

A. Definition and Buffers.

Protection standards for fish and wildlife habitat conservation

areas other than streams and lakes are as provided in the table below.

Fish and Wildlife Habitat Conservation Area	Buffer Requirement
<p>Areas with which federally listed threatened or endangered species have a primary association.</p> <p>State Priority Habitats and areas with which Priority Species have a Primary Association</p> <p>A primary association means a critical component(s) of the habitats of a species, which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.</p>	<p>Buffers shall be based recommendations provided by the Washington Department of Fish and Wildlife PHS Program; provided that where no such recommendations are available, the buffer width shall be determined based on published literature concerning the species/habitat(s) in question and/or the opinions and recommendations of qualified professional with appropriate expertise.</p>
<p>Natural Area Preserves and Natural Resource Conservation Areas</p>	<p>Buffers shall be based on recommendations provided by site managers provided that the management strategies are considered effective and within the scope of this chapter.</p>
<p>Locally Important Habitat Areas</p>	<p>The need for and dimensions of buffers for locally important species or habitats shall be determined on a case by case basis, according to the needs of specific species or habitat area of concern. The director shall coordinate with the Washington Department of Fish and Wildlife and other State, Federal or Tribal exerts in these</p>

Fish and Wildlife Habitat Conservation Area	Buffer Requirement
	<p>instances, and shall use WDFW PHS management recommendations when available.</p>

B. Alterations that occur within a locally important habitat area or that may affect a locally important species as defined herein shall be subject to review on a case-by-case basis. The director shall have the authority to require an assessment of the effects of the alteration on species or habitats and may require mitigation to ensure that adverse effects do not occur. This standard is intended to allow for flexibility and responsiveness with regard to locally important species and habitats.

**17.25.060 Fish and wildlife habitat conservation areas: review and reporting requirements.**

A. When critical area maps or Washington Department of Fish and Wildlife Priority Species and Habitat information, or other sources of credible information indicate that a site proposed for development or alteration is more likely than not to contain fish and wildlife habitat conservation areas or be within the buffer of a fish and wildlife habitat conservation area, the director shall require a site evaluation (field investigation) by a qualified professional or other measures to determine whether or not the species or habitat is present and if so, its relative location in relation to the proposed project area or site. If no fish and wildlife habitat conservation areas are present, then review will be considered complete. If the site evaluation determines that the species or habitat is present, the director may require a critical areas assessment report.

B. The director may waive the report requirement for a single-family development that involves less than 2,000 square feet of clearing and/or vegetation removal and will not directly disturb the designated stream or pond buffer area, designated species, or specific areas or habitat features that comprise the fish and wildlife habitat conservation area (nest trees, breeding sites, etc.) as indicated by a site plan or scaled drawing of the proposed development, except in the case of a project site situated within 800 feet of an established eagle's nest. In this case, an approved bald eagle management plan by the Washington Department of Wildlife meeting the requirements and guidelines of the bald eagle protection rules (WAC 232-12-292), as now or hereafter amended must be filed with the City's Community Development Department.

C. The critical areas report shall describe the characteristics of the subject property and adjacent areas. The assessment shall include the following:

1. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc;
2. Determination of the resource category and standard buffers;
3. Identification of critical areas and buffers within three hundred (300) feet of the site and an estimate of the existing approximate acreage for each. The assessment of off-site resources shall be based on available information and shall not require accessing off-site properties if permission of the property owner cannot be obtained;
4. Proposed development activity.
5. A detailed description of the effects of the proposed development on ecological functions and buffer function and value, including the area of direct disturbance; area of buffer reduction or averaging including documentation that functions and values will not be adversely affected by the reduction or averaging; effects of storm water management; proposed hydrologic alteration including changes to natural drainage or infiltration patterns; effects on fish and wildlife species and their habitats; clearing and grading impacts; temporary construction impacts; and effects of increased noise, light or human intrusion.
6. Provisions to reduce or eliminate adverse impacts of the proposed development activities including, but not limited to:
  - a. Clustering and buffering of development,
  - b. Retention of native vegetation,
  - c. Access limitations, including fencing.

- d. Seasonal restrictions on construction activities in accordance with the guidelines developed by the Washington Department of Fish and Wildlife, the US Army Corps of Engineers, the Salmonid Recovery Plan and/or other agency or tribe with expertise and jurisdiction over the subject species/habitat, and
- e. Methods to reduce proximity impacts
- f. Other appropriate and proven low impact development techniques.

**17.25.070 Fish and wildlife habitat conservation areas: mitigation standards.**

- A. Activities that adversely affect fish and wildlife habitat conservation areas and/or their buffers should generally be avoided through site design, including clustering. Unavoidable impacts to designated species or habitats shall be compensated for through habitat creation, restoration and/or enhancement to achieve no net loss of habitat functions and values in accordance with the purpose and goals of this Chapter.
- B. When compensatory mitigation is required, the applicant shall submit a mitigation plan with sufficient information to demonstrate that the proposed activities are logistically feasible, constructible, ecologically sustainable, and likely to succeed. Specific information to be provided in the plan shall include, but not be limited to:
  - 1. General description and scaled drawings of the activities proposed including, but not limited to, clearing, grading/excavation, drainage alterations, planting, invasive plant management, installation of habitat structures, irrigation, and other site treatments associated with the development activities and proposed mitigation action(s);
  - 2. A description of the functions and values that the proposed mitigation area(s) shall provide, together with a description of required and an assessment of factors that may affect the success of the mitigation program; and
  - 3. A description of known management objectives for the species or habitat.
- C. Required mitigation shall be completed as soon as possible following activities that will disturb fish and wildlife habitat conservation areas and during the appropriate season. Mitigation shall be completed prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing wildlife and flora.
- D. The director shall have authority to require monitoring of mitigation activities and submittal of annual monitoring reports to ensure and document that the goals and objectives of the mitigation are met. The frequency and duration of the monitoring shall be based on the specific needs of the project as determined by the mitigation plan.

**17.25.080 Fish and wildlife habitat conservation areas: development standards for adjacent development.**

- A. Development standards for adjacent development shall minimize adverse effects on the fish and wildlife habitat conservation areas, including water bodies, and shall include:
  - 1. Subdivision of land shall assure that each lot has sufficient building area outside conservation areas and buffers. Lots in subdivisions shall be oriented whenever feasible to provide a rear yard of at least 20 feet between the buffer area and buildings.
  - 2. Fencing shall be provided at the perimeter of residential development to limit

domestic animal entry into conservation areas and buffer areas.

3. Activities that generate noise shall be located as far from the conservation areas and buffers as feasible. Roads, driveways, parking lots, loading areas, mechanical or ventilating equipment or shall be located on sides of buildings away from the conservation areas, or separated by noise attenuating walls

4. Light penetration into buffer areas and the water body shall be limited by locating areas requiring exterior lighting away from the conservation areas boundary, or limiting light mounting heights to a maximum 4 of feet. Windows that will be lit at night should be minimized on the side of buildings facing conservation areas and buffers, or screened as provided below in buffer management standards.

B. Management of surface runoff from adjacent land shall minimize adverse effects on fish and wildlife habitat conservation areas ecological functions and shall include:

1. Control of surface water peak flow and duration of flow should be maintained at rates typical of native forest cover;

2. Runoff should be routed to infiltration systems, to the maximum extent feasible, to provide groundwater interflow recharge to water bodies and to limit overland flow and erosion.

3. Surface or piped stormwater should be routed to existing conveyances or to other areas, wherever hydraulic gradients allow. Where stormwater is routed to water bodies, system design shall assure that erosion and sedimentation will be avoided to the maximum extent feasible.

4. To prevent channelized flow from lawns and other landscaped areas from entering the buffer, and to prevent washing of fertilizers, herbicides and pesticides into the buffer, if slopes adjacent to the buffer exceed 15%, a 10 foot wide swale to intercept runoff or other effective interception facility approved by the director shall be provided at the edge of the buffer.

5. Adopt and apply integrated pest management system including limiting use of fertilizers, herbicides and pesticides within 25 feet of buffers to water bodies.

C In order to maintain effective buffer conditions and functions, a vegetation management plan shall be required for all buffer areas established to include:

1. Maintaining adequate cover of native vegetation including trees and understory; if existing tree cover is less than a relative density of 20, planting shall be required consisting of seedlings at a density of o 300 stems per acre or the equivalent;

2. Provide a dense screen of native evergreen trees at the perimeter of the buffer. If existing vegetation is not sufficient to prevent viewing adjacent development from within the buffer, planting shall be required equivalent to two rows of 3' high stock of native evergreens at a triangular spacing of 15 feet or three rows of gallon containers at a triangular spacing of 8 feet. Fencing may be required if needed to block headlights or other sources of light or to provide an immediate effective visual screen.

3. Provide a plan for control of invasive weeds, and remove existing invasive species;

4. Provide for a monitoring and maintenance plan for a period of at least five (5) years, except this provision may be waived for single family residential lots.

## **Section 7**

Title 17 of the Chehalis Municipal Code shall be, and the same hereby is, amended to add a new Chapter 17. 26 to read as follows:

## **17.26 CRITICAL AQUIFER RECHARGE AREAS -CARA**

17.26.010 General authority.

17.26.020 Purpose.

17.26.030 Applicability.

17.26.040 Regulations.

17.26.050 On-site Septic System Inspection.

17.26.060 All Above Ground and Below-Ground Storage Tanks.

### **17.26.010 General authority.**

This chapter is adopted under the authority of RCW 36.70A.020.

### **17.26.020 Purpose.**

The purpose of this chapter is to regulate development and the use of land in critical aquifer recharge area (CARA) in order to ensure long-term protection of the water supply resources that exist under the city's jurisdiction; and to comply with the Washington State Growth Management Act.

### **17.26.030 Applicability.**

A. Critical aquifer recharge areas are "areas with a critical recharging effect on aquifers used for potable water". These areas can fall within the city's jurisdiction where the prevailing geologic conditions allow infiltration rates which create a high potential for contamination of groundwater resources or contribute to the replenishment of groundwater. Critical aquifer recharge areas are rated as having high, moderate, or low susceptibility to contamination based on soil permeability, geologic matrix, infiltration, and depth to water as determined by the criteria established by the state Department of Ecology.

B. The approximate location and extent of critical aquifer recharge area and municipal wellhead protection areas are shown on the Aquifer Protection Overlay . This overlay is to identify and classify vulnerable aquifer recharge areas within the City's jurisdiction. Protection of the aquifer within the critical aquifer recharge area is to be accomplished by controlling the use and handling of hazardous substances. Restrictions on development may be placed in order to protect public health and safety by preserving the existing and future groundwater supply for the City and urban growth area pursuant to the performance standards of 17.26.040 (H).

### **17.26.040 Regulations.**

A. Activities may only be permitted in a critical aquifer recharge area if the Community Development Director (Director) determines that the proposed activity will not cause contaminants to enter the critical aquifer and that the proposed activity will not adversely effect the recharging of the critical aquifer.

B. Any development which occurs within the City's jurisdiction will use Best Management Practices (BMPs) to prevent chemical and biological contaminants from entering

underground waters and aquifers which are now, or in the future, likely to be used as a potable drinking water source. All persons, corporations, or other legal entities that engage in the construction of regulated facilities contained in this ordinance must first obtain approval by the city through the critical area permit process and building permit(s).

C. To obtain City water hookups and services for any real property in the critical aquifer recharge area, City sewer hookups and services are required in compliance with CMC 12.04. This code allows the utilities director to review individual cases

for exception to this restriction. If the utilities director has determined that new construction, any change in the intensity or use of land such as an increase in dwelling units or a change to a commercial or industrial use from a less intense use and/or subdivisions cannot connect to city sewer within the critical aquifer recharge area, then the projects shall require an Hydrogeological Assessment for their impact on the groundwater in the critical aquifer recharge area. State of the art alternative sewage disposal systems for denitrification shall be required in areas where there is the potential for nitrate loading to groundwater. Open spaces may be required overlying areas highly susceptible for contaminating groundwater resources.

D. The proposed activity must comply with the water source protection requirements of the federal Environmental Protection Agency, state Department of Health, and the Lewis County Environmental Health Department.

E. Critical aquifer recharge area categories.

Critical aquifer recharge areas regulated under this title may be established based on general criteria described in this chapter, specifically designated due to special circumstances, or based on scientific studies and mapping efforts. Factors considered in the identification of critical aquifer recharge areas include depth to water table, presence of highly permeable soils, presence of flat terrain, and the presence of more permeable surficial geology.

1. Category I Critical Aquifer Recharge Areas. Category I critical aquifer recharge areas are those areas that were identified on the City of Chehalis Wellhead Protection Map as Class A wells and include the potential for certain land use activities to adversely affect groundwater is high. Category I critical aquifer recharge areas include:

a. Areas inside the five-year time of travel zone for Group A water system wells, calculated in accordance with the Washington State Well Head Protection Program.

b. Areas inside the ten-year time of travel zones in wellhead protection areas when the well draws its water from an aquifer that is at or above sea level and is overlain by permeable soils without an underlying protective impermeable layer.

c. The City may add, reclassify or remove critical aquifer recharge areas based on additional information about areas of significant potable water supply with susceptibility to groundwater contamination or based on changes to sole source aquifers or wellhead protection areas as identified in wellhead protection programs.

2. Category II Critical Aquifer Recharge Areas. Category II critical aquifer recharge areas are areas that provide recharge effects to aquifers that are currently or potentially will become potable water supplies and are vulnerable to contamination based on the type of land use activity. Category II critical aquifer recharge areas include:

a. Highly Permeable Soils. The general location and characteristics of permeable soils in Lewis County is given in the Soil Survey of Lewis County by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

b. Areas above shallow aquifers and/or surface areas which are not separated from the underlying aquifers by an impermeable layer that provides adequate protections from

contamination to the aquifer(s) below. The general location of shallow aquifers in Lewis County is based upon the professional judgment of licensed hydrogeologists with knowledge of the area.

F. Permitted Activities: The following activities are permitted in the critical aquifer recharge area and do not require submission of a Hydrogeological Assessment:

1. Construction of structures and improvements, including additions, resulting in less than five percent (5%) or 2,500 square feet (whichever is greater) total site impervious surface area and that does not result in a change of use or increase the use of a hazardous substance.
2. Development and improvement of parks, recreation facilities, open space, or conservation areas resulting in less than five percent (5%) total site impervious surface area and do not increase the use of a hazardous substance.
3. Existing on-site domestic septic systems releasing less than 14,500 gallons of effluent per day and that are limited to a maximum density of one (1) system per one (1) acre.
4. Application of household pesticides, herbicides, and fertilizers that do not exceed times and rates specified on the packaging.
5. Residential storage or use of petroleum products in amounts less than ten (10) gallons.
6. Activities which have a potential for contamination below threshold amounts as defined in applicable Revised Code of Washington or local regulations. The purpose of this clause is to allow for small-scale and residential activities having no significant impacts to critical aquifer recharge areas.

G. Prohibited Activities: The following activities and uses are prohibited in Category I critical aquifer recharge area and may be allowed with a hydrogeological assessment in Category II critical aquifer recharge area.

1. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, and wood waste;
2. Underground Injection Wells. Wells which meet the requirements of Chapter 173-218 WAC and Chapter 173-200 WAC with the exception of 5B22, 5D2, 5G30, 5W12, 5W32, 5R21, 5S23;
3. Commercial mining and washing of metals, hard rock, sand and gravel;
4. Chemical wood preservation and/or treatment Facilities;
5. Storage, processing, or disposal of radioactive substances;
6. Commercial activities that are not connected to an available sanitary sewer system;
7. Use or storage of pesticides listed as "state restricted use pesticides" by WAC 16-228;
8. Oil and Gas Drilling as defined in WAC 332-12-450 and WAC 173-218.
9. Underground storage of hazardous substances as regulated by WAC 173-360;
10. Use, storage, treatment, or production of perchloroethylene (PCE), other than in closed-loop systems that do not involve any discharge of PCE;
11. Petroleum refining, reprocessing, storage and petroleum-product pipelines;
12. Electroplating/metal finishing.
13. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source; and
14. Junkyards and salvage yards
15. Activities that would significantly reduce the recharge to aquifers that are a source of significant base flow to a regulated stream.

H. Permitted Uses subject to performance standards: Any activity not specifically exempted as

allowed or prohibited may be permitted in a critical aquifer recharge area if all of the following criteria are met:

1. Hydrogeological Assessment:

a. For Category I aquifer recharge areas the applicant must show through a hydrogeological assessment that the proposed activity will not cause contaminate Groundwater. The hydrogeological assessment will be evaluated and be reviewed by the Lewis County Environmental Health Department, affected entities, and affected water purveyors.

b. For Category II aquifer recharge areas a hydrogeological assessment may be required. The scope of the report shall be based on site specific conditions. The need for additional information will be determined by the City, the health district, affected entities, and the affected water purveyor. Based on the report, controls, mitigation, and/or other requirements will be established as a prerequisite for the development proposal being approved.

c. The proposed activity must comply with the source water protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, Washington Department of Ecology, and the Lewis County Health District.

d. The hydrogeological assessment shall be prepared by a qualified professional who is a hydrogeologist, geologist, or engineer, who is licensed in the state of Washington and has experience in preparing hydrogeological assessments.

e. The hydrogeological assessment shall include, but is not limited to:

1. Geologic setting;
2. Groundwater survey information, groundwater elevations, background water quality, direction and gradient of groundwater flow, location/depth of perched water tables, recharge potential (permeability and transmissivity);
3. Survey of nearby wells and springs, including all wells and springs within 1,000 feet of the site;
4. Location of nearby surface water and recharge potential;
5. Description of water supply to the site;
6. Information sources for assessment, including any well logs or borings used;
7. Discussion of the effects of the proposed project on the groundwater resource including, but not limited to a review of potential threats and how it interacts with the geology and all water sources;
8. Recommendations to mitigate the adverse impacts of the project on the groundwater resource; and
9. Other information as required by the Lewis County District Health Department.

f. As required, the director shall forward the assessment to the Lewis County District Health Department (LCDHD) for review. The applicant shall be responsible for paying any review costs required by the LCDHD. Based on the review by the LCDHD the proposal shall be either approved, approved with conditions or denied. Conditions may be imposed to reduce the impacts of the proposal on the critical aquifer, reduce the risk of contamination, and to protect the long-term viability of the water resource. A proposal may be denied upon a finding that feasible mitigating

measures are not sufficient to reduce the contamination risk. In the Category II CARA specific uses with potential threat to groundwater must comply with BMPs and go through the Critical Areas permitting process. Uses include, but are not limited to the following:

1. Anything that is not exempt;
2. All Above ground and underground storage tanks used for storage of petroleum products or any type of chemicals, either liquid or dry including but not limited to home heating fuel and chemically amended liquids proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to requirements in CMC 17.26.060 (C) (6).
3. Vehicle Repair and Servicing
  - a. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur. Records for chemical and petroleum waste disposal and/or recycling must be kept on-site for city staff inspections.
  - b. No dry wells shall be allowed in critical aquifer recharge areas on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility establishment must be abandoned using techniques approved by the state Department of Ecology prior to commencement of the proposed activity.
4. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the State Departments of Ecology and Health.
  - a. Use of reclaimed water for surface percolation must meet the ground water recharge criteria given in Chapter 90.46.080(1) and Chapter 90.46.010(10) RCW. The State Department of Ecology may establish additional discharge limits in accordance with Chapter 90.46.080(2) RCW.
  - b. Direct injection must be in accordance with the standards developed by authority of Chapter 90.46.042 RCW.
5. Automobile Washers as defined in WAC 173-216.
6. Chemical treatment Storage and Disposal Facilities as defined in WAC 173-303-182.
7. Hazardous Waste Generators. Including but not limited to: Boat repair shops, biological research facilities, dry cleaners, furniture stripping, motor vehicle service garages, photographic processing, printing and publishing shops, medical and dental facilities, etc. as defined in WAC 173-303.
9. On-Site Sewage Systems (Large Scale) as defined in WAC 173-240.
10. On-Site Sewage Systems (< 14,500 gal/day) as defined in WAC 246-272.
11. Pesticide Storage and Use as defined in RCW 15.54 and WAC 17.21.
12. Sawmills as defined in WAC 173-303 and 173-304, WDOE publication number 95-53, Best Management Practices to prevent Storm water Pollution at Log Yards.
13. Solid Waste Handling and Recycling Facilities as defined in WAC 173-304.
14. Wastewater Application to Land Surface as defined in WAC 173-216 and 173-200, and WDOE Land Application Guidelines, Best Management Practices for Irrigated agriculture.
15. New impervious surface area exceeding 20,000 Square feet.
16. Beneficial use of biosolids as defined in WAC 173-308.

f. The applicant must explore Low Impact Development site design alternatives and implement them where economically feasible. Low Impact Development techniques can include, but are not limited to:

1. Rainwater harvesting;
2. Reverse slope sidewalks;
3. Vegetated roofs;
4. Bio-retention areas (rain gardens) and;
5. Pervious pavement.

**17.26.050 On-site Septic System Inspection.**

On-site septic system located within the Critical Aquifer Recharge Area must be inspected once every three (3) years to ensure that the system is working properly. Proof of both pumping and a passing inspection are required to be shown when property owners apply for land use permits or building permits. Failure to provide proof of a passing inspection shall be grounds for denial of land use permits and building permits. All on site-septic inspections must be performed by a Lewis County Environmental Health certified septic professional. If the system fails, the property must work with Lewis County Environmental Health department and the City of Chehalis Public Works Department to determine if a new septic system will be permitted or if the property owner will be required to hook up to the City's sanitary sewer.

**17.26.060 All Above Ground and Underground Storage Tanks.**

**A. Permit Required**

1. No person may own or maintain an underground storage tank over the critical aquifer unless the tank is approved as described in 16.18.040 (B) and it otherwise complies with this chapter. An abandoned tank must be certified abandoned through the Lewis County Environmental Health Department. No permit is required for underground storage tanks that are certified abandoned in place.

**B. Permit Issuance-Duration**

1. The fire marshal issues all permits required by the currently adopted version of the International Fire Code under this ordinance.
2. Operational permits last one year.
3. The fire marshal may adjust the date of issuance and length of a permit to accommodate inspection schedules and administrative convenience.

**C. Permit Conditions-Fees-Testing**

1. To obtain an operational underground storage tank permit the owner/operator must:
  - a. Pay the required fees
  - b. Demonstrate that the underground storage tank passes an annual tightness test by using a precision leak test, or automatic tank gauge (ATG) test or other method as approved by the fire official to the fire official's satisfaction.
    - i. A leak test must be capable of statistically reliable measurement, down to one tenth of a gallon per hour, including temperature compensation, in accordance with the latest recommendations of the National Fire Protection Association.
    - ii. To be considered, leak test results must be less than six (6) months old.
2. The fire official may adjust or pro-rate on a monthly basis permit and approval fees when the fire official adjusts the date of issue but not in a case where the applicant fails to apply in a timely fashion.

3. In addition to permit and approval fees, the fire official has authority to set inspection fees and fees for other services, return trips and additional administrative, personnel or equipment charges, and to recover expenses related to permit issuance and other enforcement of this ordinance.
4. Permit transfer requests are determined in writing by the fire official and may be approved if the transferee shows willingness and ability to comply with conditions imposed and accepts the responsibilities of the permit holder.
5. For administrative convenience and the public convenience, the fire official may establish a list of qualified persons to serve as leak test inspectors, approved to certify to the City the results of any leak test or other technical testing required under this ordinance.
6. All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:
  - i. Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;
  - ii. Have a primary containment area enclosing or underlying the tank or part thereof; and
  - iii. The necessary containment system(s) either built into the tank structure or a dike system built outside the tank for all tanks and
  - iv. Provide on-site monitoring of the storage tank and/or ground, ground waters or surface waters as require

#### D. Revocation of Permit

1. A permit is invalid where the permittee:
  - a. Does not meet the requirements of this ordinance
  - b. Does not meet the requirements of the permit
  - c. Fails to renew the permit prior to expiration date.
2. A permit may be revoked, suspended or further conditioned by order of the fire official upon a determination:
  - a. That a violation of the permit or any provision of this ordinance or regulation hereunder has occurred; or
  - b. Circumstances exist which make it difficult or impossible to monitor compliance; or
  - c. The permittee has failed to act upon or refrain from an action in compliance with an order for the fire official; or
  - d. That the continued operation would pose a hazard to the environment.
3. Upon cancellation, expiration, revocation or suspension of any permit, the same must be immediately surrendered to the fire official and the tank(s) will be considered out of service.

#### E. Reporting Failures, Leaks and Leak Risks

1. A discovery of a leak or circumstances indicating possibility of a leak of an underground storage tank shall be immediately reported to the City, fire official and the Washington State Department of Ecology.
2. The requirements of WAC 173.360.360 shall apply.
3. This obligation is not limited to permits, and shall include product vendors and repair or testing personnel.

#### D. New Storage Systems – Tanks- Associated Piping

From and after (Date of adoption), no new or replacement storage system, tank and/or associated piping for petrochemical products or other critical material is permitted

without a secondary containment system approved by the Fire Marshal. This provision does not apply to ordinary maintenance or repair activity.

**E. Spills-Prevention –Monitoring-Response**

1. The Fire Marshall may order an owner, occupant or other responsible party, at such party's sole expense, to take such critical materials spill prevention, monitoring and/or cleanup measures as the Fire Marshall deems necessary to protect the public health and safety, or in the public convenience.
2. No notice or formal procedures are required in the event of an emergency, but the Fire Marshall may give such a form of notice and time to respond as the Fire Marshall deems reasonable.

**Section 8**

A. If any section, subsection, paragraph, sentence, clause or phrase of this ordinance is declared unconstitutional or invalid for any reason, such invalidity shall not affect the validity or effectiveness of the remaining portions of this ordinance.

B. Errors in pagination, punctuation or grammar, or other scriveners errors, shall not affect the validity of this ordinance.

**Section 9**

Any ordinance, or section or provision thereof, that is found to be in conflict with any provision of this ordinance is hereby repealed.

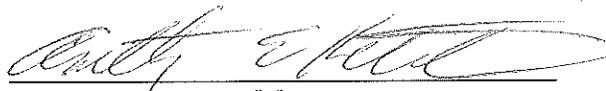
**Section 10**

The penalty for violation of any provision of this ordinance shall be as prescribed in Chehalis Municipal Code Section 17.09.160.

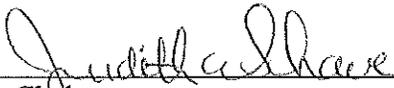
**Section 11**

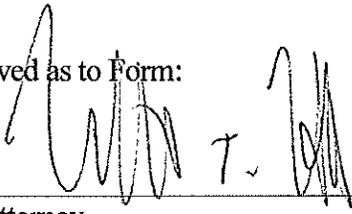
The effective date of this ordinance shall be the 1<sup>st</sup> day of January, 2010.

**PASSED** by the City Council of the city of Chehalis, Washington, and **APPROVED** by it's mayor this 21st day of December, 2009.

  
\_\_\_\_\_  
Mayor

Attest:

  
\_\_\_\_\_  
City Clerk

Approved as to Form:  
  
\_\_\_\_\_  
City Attorney