Council Member Rumbaugh
Substitute Exhibit

MOTION FOR COUNCIL CONSIDERATION
ORDINANCE NO. 29114

July 7, 2026

I move to consider as a substitute, Substitute Exhibit A to Ordinance No. 29114, to clarify biodiversity classifications without reducing protections, by amending the definitions of “Mitigation” and “Wetlands” in Tacoma Municipal Code (“TMC”) 13.01.110 on page 4 and 8 of the Exhibit to more closely align with the requirements of the State Growth Management Act, and amending TMC 13.11.510 Subsection B.1.a.(2) on page 47 of the Exhibit.

This amendment would: Respond to comments by the Washington State Department of Ecology and the public by aligning the definitions of mitigation and wetlands with those in State law and clarify that the revised biodiversity classifications do not reduce protections.

SUBSTITUTE EXHIBIT A

CHAPTER 13.01
DEFINITIONS

* * *

13.01.110 Critical Areas Preservation Definitions.

For the purposes of Chapter 13.11 Critical Areas Preservation, the following terms and phrases used in this chapter shall be interpreted as defined below. Where ambiguity exists, words or phrases shall be interpreted so as to give this chapter its most reasonable application in carrying out its regulatory purpose.

13.01.110.A

"Adjacent." Immediately adjoining (in contact with the boundary of the influence area) or within a distance that is less than that needed to separate activates from critical areas to ensure protection of the functions and values of the critical areas. Adjacent shall mean any activity or development located:

a. On a site immediately adjoining a critical area;

b. A distance equal to or less than the required critical area buffer width;

c. A distance equal to or less than one-half mile (2,640 feet) from a bald eagle nest;

d. A distance equal to or less than three hundred (300) feet upland from a stream, wetland, or water body;

e. Bordering or within the floodway, floodplain or channel migration zone; or

f. A distance equal to or less than two hundred (200) feet from a critical aquifer recharge area.

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

"Anadromous fish." Fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following states; upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

"Aquifer." A geologic formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

"Aquifer critical recharging areas." Areas that, due to the presence of certain soils, geology, and surface water act to recharge groundwater by percolation.

13.01.110.B

"Base flood." A flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

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

"Best management practices (BMP's)." Conservation practices or systems of practices and management measures that:

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

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

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

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

"Biodiversity Areas". Biodiversity Areas are areas that contain valuable habitat that supports a diversity of plants and animals. Biodiversity areas are characterized by ~~include those areas that contain~~ native vegetation that is diverse with a mosaic of habitats and microhabitats. They include areas dominated by a vertically diverse assemblage of native vegetation containing multiple~~y~~ ~~canopy~~vegetation strata ~~layers~~ and/or areas that are horizontally diverse with a mosaic of habitats and microhabitats. They also include areas with rare or uncommon plant species and associations designated by the City or identified by Federal and State agencies such as the Department of Natural Resources Heritage Program. They are not associated with a specific priority species and their overall habitat function may be limited due to their location in a highly urbanized area; however, they are diverse relative to other areas in the City and support common urban species.

~~"Biodiversity Corridors." Areas of relatively undisturbed and unbroken tracts of vegetation that connect Biodiversity Areas, other Priority Habitat and Critical Areas, including shorelines and serve to protect those areas and allow movement of common urban species.~~

"Bioengineering." A combination of engineering techniques and natural products that increase the strength and structure of the soil through biological and mechanical means.

"Buffer or Buffer zone." An area required by this chapter that is contiguous to and protects a critical area which is required for the continued maintenance, functioning, and/or structural stability of a critical area. The area may be surrounding a natural, restored, or newly created critical area.

13.01.110.C

"Class, wetland." One of the wetland classes in the United States Fish and Wildlife Service publication, Classification of Wetlands and Deepwater Habitats of the United States (December 1979). A class describes the general appearance of the habitat in terms of either the dominant vegetation life form or the physical geography and composition of the substrate.

"Clearing." The destruction or removal of logs, scrub-shrubs, stumps, trees or any vegetative material by burning, chemical, mechanical or other means.

"Compensatory mitigation." Replacing project-induced loses or impacts to a critical area, and includes, but is not limited to, the following:

a. Restoration. Actions performed to reestablish wetland functional characteristics and processes that have been lost by alterations, activities, or catastrophic events within an area that no longer meets the definition of a wetland.

b. Creation. Actions performed to intentionally establish a wetland at a location where it did not formerly exist.

c. Enhancement. Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality,

d. Preservation actions taken to ensure the permanent protection of existing high quality wetlands.

"Conservation easement." A legal agreement that the property owner enters into to restrict uses of the land. Such restrictions can include, but are not limited to, passive recreation uses such as trails or scientific uses and fences or other barriers to protect habitat. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property, therefore, providing permanent or long-term protection.

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

"Critical facility." Critical facilities are structures that provide essential services and functions necessary for public safety, health, and disaster recovery. Typical critical facilities include hospitals, fire stations, storage of critical records, and similar facilities.

"Critical root zone." The critical root zone (CRZ) is an area equal to one-foot radius from the base of a tree trunk for each one inch of the tree's diameter at 4.5 feet above grade (also referred to as diameter at breast height). Protecting the CRZ from disturbance is critical to maintaining tree health.

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

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13.01.110.G

"Geologic hazards specialist." A professional geologist or engineering geologist with a degree in the geologic sciences from an accredited college or university with a minimum of four years' experience in geologic practice involving geologic hazards. A qualified geotechnical engineer, licensed as a civil engineer with the state of Washington, with a minimum of four years' experience in landslide evaluation, may also qualify as a geologic hazards specialist.

"Geologically hazardous areas." Areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by WAC 365-190-080(4). Types of geologically hazardous areas include: erosion, landslide, seismic, mine, and volcanic hazards.

~~"Geo-buffer." A zone within a geo-setback area required to be vegetated with either native or non-native vegetation.~~

~~"Geo-setback." The minimum building setback from the applicable geologically hazardous area.~~

"Grading." Excavating, filling, leveling, or artificially modifying surface contours.

13.01.110.H

"Habitat." The specific area or environment in which a particular type of animal lives. An ecological or environmental area that is inhabited by particular species of animal, plant or other type of organism. It is the natural environment in which an organism lives, or the physical environment that surrounds, influences, and is utilized by a species or population.

"Habitat conservation areas." Areas designated as fish and wildlife habitat conservation areas.

"Habitat Corridors." Areas of relatively undisturbed and unbroken tracts of vegetation that connect Biodiversity Areas, other Priority Habitat, and Critical Areas, including shorelines, and serve to protect those areas and allow movement of common urban species.

"Habitats of local importance." Those areas that include a seasonal range or habitat element with which a given species has a primary association, and which, if altered may reduce the likelihood that the species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alterations such as cliffs, talus, and wetlands.

"Hazard trees." Trees that are damaged, diseased, or have fully matured and their health is in decline and that pose a threat to life or property due to their location and increasing potential of falling.

"Hydraulic project approval (HPA)." A permit issued by the Department of Fish and Wildlife for modifications to waters of the state in accordance with Chapter 75.20 RCW.

"Hydric soil." Soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the uppermost level.

"Hydrogeomorphic" or "HGM." A system used to classify wetlands based on the position of the wetland in the landscape (geomorphic setting), the water source for the wetland and the flow and fluctuation of the water once in the wetland.

"Hydroperiod." The seasonal occurrence of flooding and/or soil saturation which encompasses the depth, frequency, duration, and seasonal pattern of inundation.

"Hydrophytic vegetation." Macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the approved federal manual and applicable regional supplements for wetland delineation.

"Hyporheic zone." The saturated located beneath and adjacent to streams that contains some portion of surface water, serves as a filter for nutrients, and maintains water quality.

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13.01.110.M

"Management area." A specified area or zone surrounding documented locations of priority habitats or species, or other identified fish and wildlife conservation area, where specific measures are taken to protect habitat features, provide screening, or conserve vegetation. Washington Department of Fish and Wildlife may have recommended conservation actions for this area, including seasonal limits for construction, tree retention, clearing limits or other measures.

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

"Mine hazard areas." Those areas underlain by or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of sink holes, gas releases, or subsidence due to mine workshops. Underground mines do not presently exist within the City of Tacoma.

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

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

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

c. Rectifying the impact ~~to wetlands~~ by repairing, rehabilitation, or restoring the affected environment ~~to the conditions existing at the time of the initiation of the project~~:

d. ~~Minimizing~~ Reducing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods.

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

f. Compensating for the impact ~~to wetlands~~ by replacing, enhancing, or providing substitute resources or environments.

g. Monitoring the hazard, impact, or other required mitigation and taking appropriate corrective measures ~~remedial action~~ when necessary.

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

"Monitoring." Evaluating the impacts of development proposals on the biological, hydrological, and geological elements of such systems and assessing the performance of required mitigation measures throughout the collection

and analysis of data by various methods for the purposes of understanding and documenting changes in natural ecosystems and features, and includes gathering baseline data.

~~"Mosaic wetlands." Wetlands that should be considered one unit when each patch of wetland is less than 1 acre, and each patch of wetland is less than 100 feet apart, on the average, and the areas delineated as vegetated wetland are more than 50% of the total area of the wetlands and the uplands together, or wetlands, open water, and river bars.~~

13.01.110.N

"Native vegetation." Vegetation comprised of plant species which are indigenous to the area in question and were not introduced by human activities.

"Nonwetlands." Uplands and lowland areas that are neither deepwater aquatic habitats, wetlands, nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only brief periods during the growing season, and if vegetated, they normally support a prevalence of vegetation typically adapted for life only in aerobic soil conditions.

"Normal maintenance and repair." Those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

"Notice on Title." A notification of the presence of a critical area or critical area buffer/management area/setback and the applicability of TMC 13.11 on a form created and approved by the Director and recorded with the Pierce County Auditor.

13.01.110.O

"Off-site compensation." To replace critical areas away from the site on which a critical area has been impacted.

"On-site compensation." To replace critical areas at or adjacent to the site on which a critical area has been impacted.

"Open Space Corridors." Include land useful for recreation, wildlife habitat, trails, and connection of critical areas, are discussed in the City's One Tacoma: Comprehensive Plan, and are mapped in the Plan and by the City's geographical mapping division.

"Ordinary high water mark." A mark that has been found where the presence and action of waters are common, usual, and maintained in an ordinary year long enough to create a distinction in character between water body and the abutting upland.

13.01.110.P

"Parties of record." Individuals, entities and groups who have commented on a proposal in writing or in person or who have asked to be included on a mailing list for a specific proposal.

"Preservation." The removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This term includes activities commonly associated with the protection and maintenance of wetlands through the implementation of appropriate legal and physical mechanisms (such as recording conservation easements and providing structural protection like fences and signs). Preservation does not result in a gain of wetland area and functions (but may result in a gain in functions over the long term).

"Priority habitats." Seasonal range or habitat element with which a given species is primarily associated and which, if altered, may reduce survival potential of that species over the long term. Priority habitats are designated by the Washington Department of Wildlife, Priority Habitat and Species Program, and may include habitat areas of high relative density or species richness, breeding habitat or habitats used as winter range or movement corridors. Habitats of limited availability or with high vulnerability to alteration, such as cliffs, talus, Biodiversity Areas/Corridors and wetlands, may also be included.

"Priority species." Species which are of concern because of their population status and sensitivity to habitat alteration. Priority species are designated by the Washington Department of Wildlife, Priority Habitat and Species Program, and may include endangered, threatened, sensitive, candidate, monitored, or game species.

"Programmatic Restoration Project." Projects where restoration with applicable public access are the primary functions and goals of the project. Advanced mitigation may be proposed and tracked for future development elements that are submitted during the 20-year timeline available through a 5-year extension process. Programmatic restoration projects will provide support and incentives to preserve City Open Space and park areas, recreation areas and trails. These projects will provide partnerships that enhance recreation opportunities. Programmatic restorations projects will allow implementation of new programs/ and activities, and maintenance of native vegetation within critical areas and buffers.

"Protection/Maintenance." Removing a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This includes the purchase of land or easements, repairing water control structures or fences, or structural protection such as repairing a barrier island. This term also includes activities commonly associated with preservation. Preservation does not result in a gain of wetland acres, and may result in a gain of functions.

13.01.110.Q

"Qualified professional." A person who, at a minimum, has earned a degree from an accredited college/university in the relevant scientific or engineering discipline appropriate to the critical area subject and a minimum of two years of related professional work experience~~; or eight years of professional work experience in the relevant critical area subject~~.

a. A qualified professional for watercourses, wetlands, and wildlife habitat conservation areas must have a degree in biology or a related field and relevant professional experience.

i. A qualified professional for wetlands must be a person with professional work experience and training in wetland issues and with experience in performing delineations, analyzing wetland functions and values, analyzing wetland impacts, and recommending wetland mitigation and restoration. Qualifications include:

(1) Bachelor of Science or Bachelor of Arts or equivalent degree in biology, botany, environmental studies, fisheries, soil science, wildlife or related field, and two years of related professional work experience, including a minimum of one year experience delineating wetlands using the Federal Manual and regional supplement, and preparing wetland reports and mitigation plans. Additional education may substitute for one year of related work experience; or

(2) Four years of related professional work experience and training, with a minimum of two years' experience delineating wetlands using the Federal Manual and regional supplement and preparing wetland reports and mitigation plans. The person should be familiar with the approved federal manual and applicable regional supplements for wetland delineation, the 2014 Washington State Wetlands Rating System for Western Washington, Version 2.0 (Ecology Publication #23-06-009), City of Tacoma wetland development regulations and the requirements of this chapter.

b. A qualified professional for preparing geotechnical reports and geotechnical design recommendations for erosion hazard areas must be a civil engineer with geotechnical certification licensed by the state of Washington. Where specified in code, a qualified professional for preparing geotechnical reports and geotechnical design recommendations for landslide hazard areas must be both a geotechnical engineer with a professional civil engineering license and a licensed geologist, licensed by the state of Washington, or geotechnical reports and geotechnical design recommendations must be prepared jointly by a licensed geotechnical engineer with a professional civil engineering license and a licensed geologist, licensed by the state of Washington.

c. A qualified professional for preparing critical aquifer recharge reports must be a professional hydrogeologist or geologist licensed in the state of Washington.

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13.01.110.S

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

"Seismic hazard." Areas subject to severe risk damage as a result of seismic induced settlement, shaking, lateral spreading, surface faulting, slope failure or soil liquefaction. These conditions occur in areas underlain by soils low cohesion or density usually in association with a shallow groundwater table. Seismic hazard areas shall be defined by the Washington Department of Ecology Coastal Zone Atlas (Seismic Hazard Map prepared by GeoEngineers) as: Class U (Unstable), Class UOS (Unstable old slides), Class URS (Unstable recent slides, Class I (intermediate) and Class M (Modified) as shown in the Seismic Hazard Map.

"Setback." The minimum building/structure setback from the applicable critical area or buffer.

"Species." Any group of animals or plants classified as a species or subspecies as commonly accepted by the scientific community.

~~"Species, endangered." Any plant, fish or wildlife species that is threatened with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.~~

~~"Species, priority." Any plant, fish or wildlife species requiring protection measures and/or management guidelines to ensure their persistence as genetically viable population levels as classified by the Department of Fish and Wildlife, including endangered, threatened, sensitive, candidate and monitor species, and those of recreational, commercial or tribal importance.~~

~~"Species, threatened." Any plant, fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.~~

"Stream corridor." Perennial, intermittent or ephemeral waters included within a channel of land and its adjacent riparian zones which serves as a buffer between the aquatic and terrestrial upland ecosystems.

"Streams." An area where open surface water produces a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff structures or other entirely artificial watercourses, unless they are used by fish or are used to convey hydrology from an adjacent wetland or from a naturally occurring watercourse. A channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

"Streams of Local Significance." Streams that contain salmon, steelhead, and bull trout.

"Subclass, wetland." One of the wetland subclasses in the United States Fish and Wildlife Service publication, Classification of Wetlands and Deepwater Habitats of the United States (December 1979). A subclass is based on finer distinctions in life forms and/or substrate materials. Examples of subclasses of vegetation include needle-leafed evergreen, broad-leafed evergreen, needle-leafed deciduous and broad-leafed deciduous.

13.01.110.T

"Threatened species." Any plant, fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

"Toe of slope." A distinct topographic break in slope at the lowermost limit of an area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet.

"Tsunami hazard areas." Coastal areas and large lake shoreline areas susceptible to flooding and inundation as the result of excessive wave action derived from seismic or other geologic events. Currently, no specific boundaries have been established in the City of Tacoma limits for this type of hazard area.

13.01.110.U

"Unavoidable impacts." Impacts to a wetland or stream or associated buffers that will remain after project completion, when it has been demonstrated that no practicable alternatives exist, that extraordinary hardship exists or that the project is in the public interest.

13.01.110.V.

"Volcanic hazard areas." Areas subject to pyroclastic flows,

13.01.110.W

"Waters of the State". Lakes, rivers, ponds, streams, inland water, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington.

"Wetland Mosaic." An area with a concentration of multiple small wetlands, in which each patch of wetland is less than one acre; on average, patches are less than 100 feet from each other and areas delineated as vegetated wetland are more than 50% of the total area of the entire mosaic, including uplands and open water, and there are at least three wetland patches that meet the size and distance thresholds.

"Wetland(s)." Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include ~~small lakes, ponds,~~ swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including but not limited to irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, ~~if routinely maintained for those purposes. Wetlands do not include~~ 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, w~~Wetlands ~~do~~ may include those artificial wetlands intentionally created to mitigate conversion of wetlands.

"Wetlands of Local Significance." Wetlands that are of special concern to the City of Tacoma and require additional protection measures beyond that afforded to them through the buffers required for each wetland category. Wetlands of Local Significance may be nominated through a process described in the Environmental Policy Plan Element of the City of Tacoma Comprehensive Plan

~~"Wetland Specialist." A person with professional work experience and training in wetland issues and with experience in performing delineations, analyzing wetland functions and values, analyzing wetland impacts, and recommending wetland mitigation and restoration. Qualifications include: (1) Bachelor of Science or Bachelor of Arts or equivalent degree in biology, botany, environmental studies, fisheries, soil science, wildlife or related field, and two years of related professional work experience, including a minimum of one year experience delineating wetlands using the Unified Federal Manual and preparing wetland reports and mitigation plans. Additional education may substitute for one year of related work experience; or (2) Four years of related professional work experience and training, with a minimum of two years' experience delineating wetlands using the Unified Federal Manual and preparing wetland reports and mitigation plans. The person should be familiar with the approved federal manual and applicable regional supplements for wetland delineation, the 2014 Washington State Wetlands Rating System for Western Washington (Ecology Publication #14-06-029), City of Tacoma wetland development regulations and the requirements of this chapter.~~

"Water resource inventory area (WRIA)." One of sixty-two (62) watersheds in the state of Washington, each composed of the drainage areas of a stream or streams, as established in Chapter 173-5000 WAC as it existed on January 1, 1997.

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CHAPTER 13.11
CRITICAL AREAS PRESERVATION

Sections:

13.11.100 General Provisions.
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13.11.800 Aquifer Recharge Areas.
13.11.810 Classification.
13.11.815 Applicability.
13.11.820 Standards.
13.11.900 *Repealed.*

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13.11.120 Intent.

A. Critical areas include critical aquifer recharge areas, fish and wildlife habitat conservation areas (FWHCAs), flood hazard areas, geologically hazardous areas, ~~stream corridors,~~ and wetlands. These critical areas serve many important ecological functions. Many of the critical areas in Tacoma have been lost or degraded through past development. Tacoma, as an urban growth area, is experiencing increasing growth and its land resource is diminishing. This increasing growth and diminishing land resource is creating pressure for the development of critical areas. New construction technology is also creating pressure on these sites by making development feasible on sites where it was formerly impractical to build.

B. Because of the ecological benefits of critical areas, their past destruction and historical functional loss, and the increasing pressure to develop them, the intent of this chapter is to ensure that the City's remaining critical areas are preserved and protected – through regulation, supporting protective real estate acquisition, or both - and that activities in or adjacent to these areas are managed. The preservation standards are provisions designed to protect critical areas from degradation. These criteria and standards will secure the public health, safety, and welfare by:

1. Protecting members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, mine hazard, volcanic eruptions, tsunami, flooding or similar events;

2. Maintaining healthy, functioning ecosystems through the protection of ground and surface waters, wetlands, ~~and~~ fish and wildlife and their habitats, and to conserve biodiversity of plant and animal species;

3. Preventing cumulative adverse impacts to c~~C~~ritical a~~A~~reas including the prevention of net loss of critical area function and values~~wetlands~~;~~.~~

4. Providing open space and aesthetic value;

5. Providing migratory pathways for salmon, other fish, and wildlife;

6. Giving special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries;

7. Providing unique urban wilds that serve as natural laboratories for schools and the general public;

8. Avoid~~ing~~ damage to critical areas necessitating public expenditures to correct damaged or degraded critical ecosystems;

9. Alerting appraisers, assessors, owners, potential buyers, or lessees to the potential presence of a critical ecosystem and possible development limitations; ~~and~~

10. Providing City officials with information, direction, and authority to protect critical areas and ecosystems when evaluating development proposals;~~.~~

11. Supporting and encouraging voluntary restoration and projects designed to achieve net ecological gain;

12. Protecting the quality and quantity of water used for drinking; and

13. Support and encourage efforts by City departments, public, tribal, and non-profit conservation entities to acquire real estate interests to protect critical areas located inside and immediately adjacent to City limits and/or properties.

C. The City of Tacoma recognizes the Puyallup Tribe of Indians as a sovereign Tribal government with reserved treaty rights and an important role in the stewardship of natural resources within the region. Consistent with the City's adopted policies, including the One Tacoma Comprehensive Plan and applicable agreements, the City supports coordinated intergovernmental planning and is committed to engaging in early, meaningful, and ongoing government-to-government consultation with the Puyallup Tribe in matters both within the framework of the 1990 Land Claims Settlement and beyond that may affect critical areas and related resources, and to seek opportunities for coordination, where appropriate, in the protection and management of critical areas.

13.11.130 Scope and Applicability.

A. The provisions of this chapter apply to all lands and waters, all land uses and development activities, and all structures and facilities in the City, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the City. This chapter applies to all critical areas outside of the Shoreline District. This chapter specifically applies to any activity which would destroy vegetation; result in a significant change in critical habitat, water temperature, physical, or chemical characteristics; or alter natural contours and/or substantially alter existing patterns of tidal, sediment, or storm water flow on any land which meets the classification standards for any critical area defined herein. In addition, this chapter applies to all public or private actions, permits, and approvals in or adjacent to a critical area and its buffer, management area, or ~~geo-~~setback including, but not limited to, the following:

1. Building permits;
2. Clearing and grading permits;
3. Forest practices permits;
4. Land Use permits;
5. Subdivision and short subdivisions;
6. Binding site plans;
7. Zoning amendments;
8. Creation of tax parcels.

B. No person may commence any development or regulated activity in a critical area or buffer without first obtaining the applicable permits and/or approvals from the City of Tacoma. All project proponents shall perform due diligence prior to commencing any development or regulated activity at the project site. Due diligence includes performing research to determine if the project site contains potential critical areas. Research includes, at a minimum, a review of City of Tacoma online GIS data and may also include applying for a pre-development review/ meeting or hiring a qualified professional to perform pre-development site investigations. The burden is on the project proponent to research, discover, identify, and delineate any critical areas at the project site before or during the application process. The project proponent is responsible for submitting any required applications, along with applicable fees.

C. Critical areas outside a shoreline district that involve a development activity that is reviewed, pursuant to Section 13.05.050 TMC (Development Regulation Agreements), except for projects identified in subsection 13.05.050.B.4 TMC, shall be protected~~considered~~ during the Development Regulation Agreement review process; a separate critical areas permit is not required. Any approval(s) pursuant to Section 13.05.050 TMC shall, to the maximum extent feasible, avoid potential impacts to critical areas, and any unavoidable impacts to critical areas shall be fully mitigated, either on or offsite.

13.11.140 Regulated Uses/Activities.

Pursuant to the requirements of this chapter, a site review or permit shall be obtained prior to undertaking any of the following activities in or adjacent to ~~C~~critical ~~A~~areas and their associated buffer, ~~geo-~~setback, or management area, unless otherwise covered under Sections 13.11.200 and 13.11.210. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Shoreline Permits, Hydraulic Project Approval (HPA) permits, Army Corps of Engineers Section 404 permits, Ecology Section 401 permits, NPDES permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter. Where applicable, the Director will encourage use of information such as permit applications to other agencies or special studies prepared in response to other regulatory requirements to support required documentation submitted for critical areas review.

A. Filling, placing, or dumping any soil, loam, peat, sand, gravel, rock, chemical substance, refuse, trash, rubbish, debris, or dredge material;

B. Excavating, dredging, grading or clearing any soil, loam, peat, sand, gravel, rock, vegetation, trees, or mineral substance;

C. Discharge of hazardous substances, including, but not limited to heavy metals, pesticides, petroleum products, or secondary effluent;

D. Any act which results in draining, flooding, or disturbing the water level or table;

E. Exterior alteration, construction, demolition, or reconstruction of a building, structure or infrastructure, including driving pilings or placing obstructions;

F. Destroying or altering vegetation through clearing, harvesting, shading, pruning, impacting the critical root zone of trees, or planting vegetation that would alter the character of the site; and

G. Any act or use which would destroy natural vegetation; result in significant change in water level, water temperature, physical, or chemical characteristics of the wetland or stream; substantially alter the existing pattern of tidal flow, obstruct the flow of sediment, or alter the natural contours of a site.

* * *

13.11.180 Critical Area Designation and SEPA.

A. Pursuant to ~~WAC 197-11-908 and~~ TMC Section 13.12.930 ~~of the TMC~~, critical aquifer recharge areas (CARAs), fish and wildlife habitat conservation areas (FWHCAs), flood hazard areas, geologically hazard areas, and wetlands, ~~and streams~~ are hereby designated as critical areas. Many of these areas are mapped on Tacoma's Generalized Critical Areas Maps available online and managed by ~~in~~ the Planning and Development Services Department and the City's geographic information services division or as defined by this chapter. Under TMC 13.12.300, the City adopts WAC 197-11-800 by reference. ~~The following SEPA categorical exemptions shall not apply within these areas, unless the changes or alterations are confined to the interior of an existing structure or unless the project does not require a permit under this chapter: Section 13.12.310 of the TMC and the following subsections of WAC 197-11-800(1)(b); (2)(d) excluding landscaping, (e), (f), and (g); (3); 24(a), (b), (c), and (d).~~

B. The scope of environmental review of actions within critical areas shall be limited to: (a) documenting whether the proposal is consistent with the requirements of this chapter; and (b) evaluating potentially significant impacts on the critical area resources not adequately addressed by Growth Management Act Planning documents and development regulations, if any, including any additional mitigation measures needed to protect the critical areas in order to achieve consistency with SEPA and other applicable environmental review laws.

13.11.190 Review Process.

A. The Review Process is used to determine whether a critical area, buffer, management area, or ~~geo-~~setback is present on or adjacent to a proposal, and whether additional review or permitting is required.

Critical areas may be located through the use of information from the United States Department of Agriculture Natural Resource Conservation Service, the United States Geological Survey, the Washington Department of Ecology, the Coastal Zone Atlas, the Washington Department of Fish and Wildlife stream maps and Priority Habitat

and Species maps, Washington DNR Aquatic Lands maps and the Washington Geologic Survey's Geologic Information Portal~~geologic mapping~~, the National Wetlands Inventory maps, Tacoma topography maps, the City's Generalized Wetland and Critical Areas Inventory maps, Department of Health's Source Water Assessment Program (SWAP) map, Environmental Protection Agency's Sole Source Aquifer map, and Pierce County Assessor's maps to establish general locations and/or verify the location of any critical area on site. The City's Generalized Wetland and Critical Area Inventory maps and other above-listed sources are only guidelines available for reference. The City maps are not exhaustive, and other areas meeting the definition or intent will be included. The actual location of ~~critical areas~~wetlands, FWHCAs, and geologically hazardous areas must be determined by a qualified professional as defined under TMC 13.01.110.Q on a site-by-site basis according to the classification criteria.

The City may utilize information from any source referred to above or available in order to establish general locations and/or to verify the location of any critical area. The City may conduct staff review and/or peer review following submittal review procedures under TMC 13.11.230.A.

B. Site Review.

In order to assist customers with potential proposals, City staff will provide an initial site review based on existing information, maps and a potential site visit to identify potential critical areas, and their associated buffers/~~geo~~ setbacks or management areas within 300 feet. The review area may be expanded where priority species or habitat are present. Site reviews are completed on a case by case basis and may require the applicant to submit a critical areas assessment.

Following the Ssite ~~visit and~~ Review Process, a project may proceed without further critical area permitting if the applicant can demonstrate the following:

1. There are no adverse impacts to the critical area or buffer, ~~geo~~ setback, or management area, and

2. Structures and alterations are all located outside the critical area and beyond the required buffers or management areas, and

3. Existing hydrology will be maintained to support critical areas, and

4. The proposed use or activity is consistent with WDFW priority habitats and species management recommendations.

C. In conjunction with the site review process, the Director of Planning and Development Services (the "Director"; see 13.01.110.D) may require additional information on the physical, biological, and anthropogenic features that contribute to the existing ecological conditions and functions to determine whether a formal critical area permit is required.

D. Review, Assessment and Permit Requirements.

1. Review of development activities within the jurisdiction of the Shoreline Management Act, including Puget Sound, Wapato Lake, or any stream where the mean annual flow is 20 cubic feet per second or greater are regulated under provisions of TMC Title 19 and the Tacoma Shoreline Master Program. Upon adoption of the new Shoreline Master Program on October 15, 2013, all code excerpts referring to the regulation of critical areas within the shoreline will no longer be valid and those critical areas shall be regulated under the new shoreline code TMC Title 19

2. Review of development activities outside the jurisdiction of the Shoreline Management Act.

a. Regulated activities are subject to the application submittal requirements of TMC 13.11.230.

b. Regulated activities that require a land use or building/site development permit do not require a separate Critical Areas permit to review for potential impacts to a FWHCA Management Area, Geologically Hazardous Area, ~~or~~ Flood Hazard Area, or Critical Aquifer Recharge Area provided:

(1) There are no other critical areas, such as a wetlands, streams, ~~or~~ Biodiversity Areas, Habitat ~~/~~Corridors, Oregon White Oak, or their associated buffers found on the site that would require a permit under this chapter, and

(2) If a FWHCA Management Area is found on the project site, the applicant complies with applicable WDFW species management recommendation or with an approved Habitat Management Plan (HMP) submitted by the applicant.

(3) If a Geologically Hazardous Area is found on the project site, the applicant complies with applicable prescriptive requirements and minimum standards of TMC 13.11.700 and follows the recommendations of their geotechnical expert, or

(4) If a Flood Hazard Area is found on the project site, the applicant complies with the applicable prescriptive requirements and minimum standards contained within TMC 13.11.600.

(5) If a CARA is present on the project site, the applicant complies with the applicable prescriptive requirements and minimum standards of TMC 13.11.800.

c~~b~~. Regulated activities that do not require a land use or building/site development permit may require a separate Critical Area review and/or permit under this Chapter.

d~~c~~. Per TMC 13.11.160, where multiple critical areas are present the project shall meet the minimum standards and requirements for each critical area including requirements for permitting. A separate critical area permit may be required when impacts cannot be avoided or the project cannot meet the standards of this chapter.

13.11.200 Allowed Activities.

A. Purpose.

The purpose of this section is to allow certain activities that are unlikely to result in critical area impacts. The activities must comply with the protective standards of this chapter and provisions of other local, state, and federal laws. All activities shall use reasonable methods to avoid and minimize impacts. Any incidental damage to, or alteration of, a critical area, ~~geo-~~setback, management area or buffer, shall be restored or replaced at the responsible party's expense.

B. The following activities may occur without City review or approval in compliance with the purpose stated above.

1. The maintenance and repair of legally existing utilities, roads, structures, or facilities used in the service of the public provided such work does not expand the footprint of the facility or right-of-way or alter any regulated critical area or buffer. Activities must be in compliance with the current City Stormwater Management Manual and Regional Road Maintenance Manual and provide all known and reasonable protection methods for the critical area.

2. The maintenance and repair of legally existing roads, structures, or facilities used in the service of the public to provide stormwater services may occur provided such work is in compliance with the current City Stormwater Management Manual and Regional Road Maintenance Manual and provides all known and reasonable protection methods for the critical area, and does not expand further into the critical area.

3. Holding basins and detention ponds that are part of the municipality's~~ies~~ stormwater system are exempt from the permit provisions of this chapter when such holding basin or detention pond is controlled by an engineered outlet.

4. Maintenance of legally existing structures, accessways, trails, promenades, stairways, parking lots, and landscaping provided such work does not expand the foot print of the structure or right-of-way and does not alter any regulated critical area or buffer.

5. Passive recreational activities, educational activities and scientific research including, but not limited to, fishing, bird watching, walking or hiking and non-motorized boating.

6. The following can be removed by hand or hand-held light equipment provided that appropriate methods are used to protect native vegetation. Removal methods may be found in the information and materials published by the Washington State Noxious Weed Control Board ~~Green Tacoma Partnership Habitat Steward Field Guide~~.

a. English Ivy may be removed from plants on which is adhered or rolled up off the ground provided ground disturbance is minimal and does not cause erosion.

b. Regulated noxious weeds as listed on the Pierce County noxious weed list that are required to be eradicated (Class A and Class B) as specified by the Pierce County Noxious Weed Board.

c. Invasive species removal in a critical area or buffer when the total area is 1,000 square feet or less and slopes are less than 25%.

d. Refuse and debris.

7. Native vegetation planting in a critical area buffer or Biodiversity Area/Corridor when the total area is 1,000 square feet or less, slopes are less than 25% and a City approved planting plan is utilized.

8. The following voluntary actions can be conducted by hand or with light equipment by Public Agencies with expertise in critical area restoration and enhancement:

a. Native planting and invasive species removal in a critical area or buffer when the total area is 5,000 square feet or less and slopes are less than 15%.

b. Native planting and invasive species removal in a critical area or buffer when the total area is 2,000 square feet or less and slopes are between 15% and 25%.

9. On-site response, removal or remedial action undertaken pursuant to the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or remedial actions undertaken pursuant to a state Model Toxics Control Act (MTCA) order, agreed order or consent decree, or a Department of Homeland Security order that preempt local regulations in the findings of the order. Any subsequent use or redevelopment of the property may be eligible for modification of requirements in this chapter when they are in conflict with the order, such as re-vegetation that would disturb a protective cap placed to contain contaminated soils.

13.11.210 Activities Allowed with Staff Review.

A. Purpose.

The purpose of this section is to allow City staff review to determine whether potential impacts to a critical area, buffer, management area, or ~~geo~~ setback may occur, without requiring a critical area permit. The staff review will ensure the activity meets the specific criteria below.

B. The following activities require review by City staff. Review and authorization may occur over-the-counter or staff may issue a letter of approval with conditions. Additional information and studies may be requested. Activities must comply with the protective standards of this chapter and provisions of other local, state, and federal laws. Any incidental damage to, or alteration of, a critical area shall be restored or replaced at the responsible party's expense.

1. Emergencies.

Those activities necessary to prevent an immediate threat to public health, safety, or welfare or pose an immediate risk of damage to private property and that require remedial or preventative action in a timeframe too short to allow for normal processing. Emergency actions that create an impact to a critical area or its buffer shall use best management practices to address the emergency and, in addition, the action must have the least possible impact to the critical area or its buffer.

The person or agency undertaking such action shall notify the City within one (1) working day following the commencement of the emergency activity. The City shall determine if the action taken was within the scope of an emergency action and following that determination, may require the action to be processed in accordance with all provisions of this chapter including the application of appropriate permits within thirty (30) days of the impact. The emergency exemption may be rescinded at any time upon the determination by the City that the action was not, or is no longer necessary.

After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary mitigative actions including, but not limited to, restoration and rehabilitation or other appropriate mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved mitigation plan. All mitigation activities must take place within one (1) year following the emergency action and impact to the critical area, or within a timeframe approved by the City and reflected within an approved schedule. Monitoring will be required as specified in the General Mitigation Requirements (Section 13.11.270).

2. Maintenance and repair of legally existing utilities, roads, structures, or facilities used in the service of the public may occur following review where alteration of the critical area or buffer is unavoidable. All activities

must be in compliance with the current City Stormwater Management Manual and Regional Road Maintenance Manual and provide all known and reasonable protection methods for the critical area and shall not expand further into the critical area.

3. ~~Isolated Category III or~~ Category IV wetlands~~, which~~ that have been classified and identified as having a total cumulative area of less than 1,000 square feet, regardless of property lines, are not subject to the avoidance and minimization requirements of the mitigation sequence (TMC 13.11.270), are exempt from the buffer requirements of the Chapter, and they may be filled ~~provision of this Chapter~~ provided they following criteria are met:

a. Are of low habitat function (habitat score less than six ~~20~~ points using the wetland rating system per TMC 13.11.310~~Washington Wetlands Rating System for Western Washington~~).

b. Are ~~hydrologically isolated~~not part of riparian areas or their buffers. ~~and~~

c. ~~are~~ Are not part of a mosaic wetland system (TMC 13.01.110.M), unless the entire mosaic wetland system meets the other criteria in this subsection.

d.~~c.~~ Are not associated with a s~~S~~horeline of the state or their associated buffer.~~, or a wetland that is part of a riparian habitat area, or designated Biodiversity Area/Corridor, and~~

e.~~d.~~ Are not associated with a FWHCA~~critical habitat to local populations of priority species.~~,

f. Impacts from any fill are fully mitigated based on remaining actions in TMC 13.11.270.F(3) through (6), and

g Any wetland fill would also require federal and/or state permits consistent with TMC 13.11.140.

4. Geotechnical investigation activities may be performed, provided that an access plan, protection measures, best management practices, and restoration are utilized to protect and maintain the critical area where possible. These items must be included with the application.

5. Reconstruction or exterior remodeling, of existing structures and accessory structures provided that disturbance of native vegetation is kept to a minimum and any vegetation that is disturbed shall be replaced. This shall not apply to reconstruction which is proposed as a result of structural damage associated with a critical area, such as slope failure in a landslide hazard area or flooding in a flood hazard area.

6. One-time expansion of existing structures and accessory structures, provided that expansion of the developed footprint within the critical area or buffer does not increase by more than 25 percent and that the new construction or related use extends away from the critical area; keeps disturbance of native vegetation to a minimum; and replaces native vegetation that may be disturbed This expansion may also occur in a direction parallel to the critical area if the expansion takes place upon existing impervious surfaces. A Notice on Title must be recorded to be eligible for staff review and approval.

7. Maintenance and repair of existing retaining walls and bioengineered stabilization measures designed to protect property from erosion.

8. Interrupted ~~wetland, stream, FWHCA, or~~ buffers.

a. Where a legally established, pre-existing use of the ~~critical area or~~ buffer of a wetland, stream, or FWHCA exists, those proposed activities that are within the ~~critical area or~~ buffer but are separated from the remaining critical area by a permanent substantial improvement, or are located in an existing permanent substantial improvement, may be allowed provided that the detrimental impact to the critical area does not increase. Interrupted means that the substantial improvement blocks the protective measures provided by a buffer. ~~The permanent substantial improvement must serve to eliminate or greatly reduce the impact of the proposed activity upon the critical area. However, if the impacts do increase, the City shall determine if additional buffer may be required along the impact area of the interruption.~~ Substantial improvements may include developed public infrastructure (roads, railroads, dikes, and levees) and buildings. Substantial improvements may not include paved trails, sidewalks, parking areas, or bulkheads.

The Director shall evaluate whether the interruption will affect the entirety of the buffer. Individual structures may not fully interrupt the buffer function. In such cases, the allowable buffer exclusion should be limited in scope to just the portion of the buffer that is affected. Review may require a functional

analysis report for the type of critical area buffer that is affected. In determining whether a functional analysis is necessary, the City shall consider the hydrologic, geologic, and/or biological habitat connection potential and the extent and permanence of the interruption.

~~b. Where a legally established, pre-existing structure or use is located within a regulated biodiversity area/corridor or buffer and where the area is fully paved and does not conform to the interrupted provision above, the biodiversity area/corridor or buffer will end at the edge of pavement.~~

9. Construction of pedestrian trails within the buffer of a Critical Area, or within a Biodiversity Area or Habitat~~/~~ Corridor is permitted, subject to the following criteria:

a. The trail is constructed of pervious material such as bark chip or equivalent.

b. The trail and associated clearing shall be no more than the minimum width that complies with the Americans with Disabilities Act (ADA).

c. The trail does not cross or alter any regulated drainage features or waters of the state.

d~~e~~. The trail shall be located within the outer quarter (¼) edge of the buffer, where possible, with the exception for limited viewing platforms.

e~~d~~. The trail system discourages pedestrians from using informal trails that are not part of the designated trail system.

f~~e~~. The trail ~~is designed~~alignment and design ~~to~~ minimize tree and vegetation removal and avoid ~~human~~ disturbance to priority species and priority habitat. Trails constructed in Biodiversity Areas or Habitat ~~/~~Corridors shall avoid the most sensitive areas and species and must maintain a contiguous and unfragmented corridor for wildlife movement. Expansion of existing trail systems must demonstrate that the expansion will not result in additional disruption of wildlife movement and will avoid the most sensitive areas and species.

g~~f~~. Low impact trails shall not be later widened or upgraded to impervious trails that encourage activities with greater impacts without additional review and required permitting.

h~~g~~. Informational signs are required at trail heads, at a minimum, and are subject to City approval.

10. Voluntary enhancement or restoration of a critical area or buffer that exceeds the provisions above in 13.11.200.B.6, 7, or 8 may be allowed if the activity meets the requirements of this section.

a. Individual projects

(1) Enhancement activities shall be limited to planting native vegetation, controlling noxious and invasive species and providing minor habitat structures such as nest boxes.

(2) Activities shall not include grading or water control structures.

(3) A planting plan containing information on vegetation species, quantities, and general location of planting areas including the identification of wetlands, streams, and their buffers, is required for review.

(4) Proper erosion control measures are provided.

(5) If equipment, other than hand-held equipment is utilized, list the type of equipment, methods and best management practices to prevent unnecessary impacts.

b. Community Projects

Multi-party projects are encouraged. These projects shall not include new destination facilities or high-intensity recreation facilities as described in 13.06.080.L. The applicants may propose a programmatic approach pertaining to multiple sites and on-going restoration and enhancement activities as well as maintenance. A City approved habitat management template or equivalent must be provided that has been reviewed and approved by all property owners. In addition, the project is subject to the following:

(1) The primary focus is preservation and increase in biological functions through the preservation and improvement of habitat, species diversity and natural features.

(2) Preserves and connects critical areas.

(3) Includes goals, objectives, and measureable performance standards.

(4) Includes a monitoring plan and contingency plan.

(5) Trails shall comply with the provisions in Section 13.11.210.B.9.

(6) Buildings and paved surfaces shall be located outside of wetlands and streams and their buffers. When located in a Biodiversity Area/Corridor, buildings or paved surfaces must be located in the least sensitive area and must maintain a contiguous and unfragmented corridor for wildlife passage.

(7) Picnic Tables, benches, and signage are allowed when they are located to avoid and minimize impacts.

(8) A maintenance plan that describes the proper techniques and methods used for on-going maintenance and preservation. The plan should address maintenance of any buildings and improvements such as picnic areas, as well as restoration and enhancement areas.

(9) The identification of a trained habitat steward who will be responsible for overseeing volunteers, employees, and/or contractors for all aspects of the project.

11. Hazard trees.

The removal of hazard trees from the critical area or buffer/~~geo~~ setback that are posing a threat to public safety, or posing an imminent risk of damage to an existing structure, public or private road or sidewalk, or other permanent improvement, may be allowed following City staff review, or provided that a report from a certified arborist, landscape architect or professional forester is submitted to the City for review and approval. The report must include an evaluation for tree stabilization potential and removal techniques for the hazard tree and procedures for protecting the surrounding critical area and replacement of native trees. Where possible, the hazard tree shall be left as a standing snag and the cut portions shall be left within the critical area as habitat unless removal is warranted due to fire hazard, disease, or pest control.

12. Tree Pruning.

Tree pruning may be allowed provided a report from a qualified professional(s) ~~certified arborist, landscape architect or professional forester regarding the health of the tree~~ is submitted to the City for review and approval. The report must detail the proposed work, compliance with ANSI standards and best management practices, and include an analysis that concludes the pruning will not result in long term damage or degradation of tree health.

~~, and a~~A functional impact analysis~~-~~ from a qualified professional evaluating the functions of the critical area as a result of the pruning may be required.~~, is also submitted to the City for review and approval.~~

No topping, complete removal or significant impacts to the health of the tree or to the critical area/buffer shall be allowed.

13. Watershed restoration projects that conform to the provisions of RCW 89.08.460 shall be reviewed without fee and approved within 45 days per RCW 89.08.490.

14. Fish habitat enhancement projects that conform to the provision of RCW 77.55.181 shall be reviewed without fee and comments provided as specified in RCW 77.55.181.

15. Demolition of structures.

16. Building Setback Reduction. A minor reduction of the standard building setback (TMC 13.11.250.B) to a minimum of five feet may be permitted if adequate protection of the buffer will be maintained as documented by a qualified professional in a critical areas report.

17. Buffer vegetation planting as required by TMC 13.11.270.J.

18. Individual Oregon white oak (OWO)

Limited development within the critical root zone or drip line/extent of canopy of individually regulated Oregon white oak may be allowed when all of the following are met:

(a) Development consists of at-grade structures such as roads, sidewalks, walkways, driveways or parking areas.

(b) The development avoids and minimizes disturbance to the maximum extent feasible.

(c) Development and construction impacts are limited to the outer twenty-five percent of the critical root zone or extent of canopy, whichever is greater.

(d) A report by a qualified professional is provided that includes an analysis of the impacts the proposed development would have the OWO, best management practices to minimize impacts, and concludes that no significant impacts to OWO health would occur.

13.11.220 Application Types.

A. This chapter allows three types of Critical Area applications, which result in the issuance of an administratively appealable decision consistent with Chapter 13.05. After the appeal period expires, the Director's approved decision becomes the official permit. Programmatic Restoration Projects processed under either the Minor Development Permit or the Development Permit may qualify for additional time extensions according to 13.05.120. See TMC 13.11.190.D. for when a critical areas permit is required in addition to any other required land use or development permit.

B. The three types of permits are as follows:

1. Verification. Critical Area Verification.

An applicant may request verification of a wetland, or stream, or FWHCA on the subject site or within 300 feet of the subject site without submitting plans for a specific project. A verification request may include presence, a boundary determination through wetland delineation, ~~or~~ an Ordinary High Water Mark determination, or a FWHCA determination. A verification request may also include the jurisdictional status of a critical area.

2. Minor Development Permit.

A Minor Development permit may be issued when an applicant cannot meet the minimum buffer requirements or where the Director determines that the proposal will result in temporary, minor, or de-minimis impacts to the buffer or critical area. The Director will consider the size of the area affected, the sensitivity of the critical area and/or presence of priority species and habitat when determining whether the impact is temporary, minor, or de-minimis. The project must comply with the following:

a. The project will not result in a permanent impact to the critical area that would require compensatory mitigation; and

b. Mitigation is provided to restore the site to pre-development conditions, including the maintenance of pre-development hydrological conditions and vegetation conditions.

c. For buffer modification, the project meets the following:

(1) Buffer averaging as allowed within Sections 13.11.330 and 13.11.430.~~; or~~

~~(2) Buffer reduction as allowed within Section 13.11.330.~~

d. For FWHCA Biodiversity Areas~~/Corridors~~, the project meets the following:

(1) The project will meet the minimum standards in Section 13.11.550.E.1.

3. Development Permit.

A decision will be issued where~~,~~ the Director determines that avoidance and minimization have not eliminated all impacts and compensatory mitigation will be required as a result of the proposal.

a. The applicant must meet the requirements of one of two ~~three~~ legal tests; No Practicable Alternatives~~,~~ ~~Public Interest~~ or Reasonable Use, and

b. Demonstrate Mitigation Sequencing, and

c. Provide mitigation as required in accordance with this Chapter.

13.11.230 Application Submittal Requirements.

A. The purpose of information submittal and review is to require a level of study sufficient to protect critical areas and/or the public from hazards. All information submitted shall be reviewed as to its validity and may be rejected as incomplete or incorrect. Additional information or electronic copies of all information may be requested for review and to ensure compliance. ~~In the event of conflicts regarding information submitted, t~~The Director may, at the applicant's expense, obtain ~~expert services to verify information~~peer review services from a qualified professional.

B. The following items are required for permit review and approval, where applicable depending upon the critical area, the project and permit type, and as determined necessary by City staff.

1. A Joint Aquatic Resource Permit Application and vicinity map for the project.

2. A surveyed site plan that includes the following:

a. Parcel line(s), north arrow, scale and two foot contours.

b. Location and square footage for existing and proposed site improvements including, utilities, stormwater and drainage facilities, construction and clearing limits, and off-site improvements. Include the amounts and specifications for all draining, excavation, filling, grading or dredging.

c. The location and specifications of barrier fencing, silt fencing and other erosion control measures.

d. Base flood elevation, floodplain type and boundary and floodways, if site is within a floodplain.

e. Critical Areas including all surveyed, delineated wetland boundaries, and the ordinary high water mark of any stream, and their buffers, and all Fish and Wildlife Conservation Areas (FWHCA), and any FWHCA Management Areas, as well as floodplain boundary, and top and toe of slopes related to geologically hazardous areas. Critical areas and buffers may be documented with a professional survey or an equivalent professional method using GPS with sub-meter accuracy. The allowance for the use of GPS in preliminary FWHCA, wetland, and stream delineations during the permit process does not preclude the City's ability to require the critical area to be documented with a professional survey for purposes of verifying buffer distances from structures and critical area boundaries associated with development approvals, or other applicable requirements such as Notice on Title.

f. The square footage of the existing critical areas and buffers located on-site and the location and square footage of any impacted areas.

g. Locations of all data collection points used for the field delineation and general location of off-site critical areas and any buffer that extends onto the project site. Include location and dominant species for significantly vegetated areas and general location for habitat types.

h. The location and square footage of impact areas, mitigation areas and remaining critical areas and buffers, ~~geo-~~setbacks and/or management areas; including areas proposed for buffer modification.

3. Critical Areas report prepared by a qualified professional as defined in 13.01.110.Q. The analysis shall be commensurate with the sensitivity of the critical area, relative to the scale of potential impacts and consistent with best available science. Critical Areas reports are valid for no more than five years, unless verification by a qualified professional can demonstrate that no substantial changes have occurred to the critical area. The report must include the following where appropriate:

a. Delineation, characterization and square footage for critical areas on or within 300 feet of the project area and proposed buffer(s). Delineation and characterization is based on the entire critical area. The review distance may be expanded for priority species. When a critical area is located or extends off-site and cannot be accessed, estimate off-site conditions using the best available information and appropriate methodologies.

(1) Wetland Delineations will be conducted in accordance with the approved federal manual and applicable regional supplements.

(2) The wetland characterization shall include physical, chemical, and biological processes performed as well as aesthetic, and economic values and must use a method recognized by local or state agencies. Include hydrogeomorphic and Cowardin wetland type.

(3) Ordinary high water mark determination shall be in accordance with the National Ordinary High Water Mark Field Determination Manual for Rivers and Streams by the U.S. Army Engineer Research and Development Center (ERDC/CRREL TR-25-1), Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State (Ecology Publication 16-06-029), or other agency approved methodology. ~~methodology from the Department of Ecology.~~

(4) Priority species and habitat identification shall be prepared according to professional standards and guidance from the Washington Department of Fish and Wildlife. Depending on the type of priority species, the review area may extend beyond 300 feet.

b. Field data sheets for all fieldwork performed on the site. The field assessment shall identify habitat elements, rare plant species, hydrologic information including inlet/outlets, water depths, and hydro-period patterns based on visual cues, and/or staff/crest gage data.

c. Provide a detailed description of the project proposal including off-site improvements. Include alterations of ground or surface water flow, clearing and grading, construction techniques, materials and equipment, and best management practices to reduce temporary impacts.

d. Assess potential direct and indirect physical, biological, and chemical impacts as a result of the proposal. Provide the square footage for the area of impact with the analysis. The evaluation must consider cumulative impacts.

e. Identification of priority species/habitats and any potential impacts. Incorporate Washington State Department of Fish and Wildlife and/or US Department of Fish and Wildlife management recommendations where applicable. When required, plan shall include at a minimum the following:

(1) Special management recommendations which have been incorporated and any other mitigation measures to minimize or avoid impacts, including design considerations such as reducing impacts from noise and light.

(2) Ongoing management practices which will protect the priority species and/or habitat after development, including monitoring and maintenance programs.

f. A hydrologic report or narrative demonstrating that pre and post development flows to wetlands and streams will be maintained. Demonstrating compliance with the City of Tacoma Stormwater Management Manual can be used to satisfy this requirement.

g. Runoff from pollution generating surfaces proposed to be discharged to a critical area shall receive water quality treatment in accordance with the current City's Stormwater Management Manual, Wetland Protection Guidelines, where applicable. Water quality treatment and monitoring may be required irrespective of the thresholds established in the manual. Water quality treatment shall be required for pollution generating surfaces using all known, available and reasonable methods of prevention, control and treatment.

h. Studies of potential flood, erosion, geological or any other hazards on the site and measures to eliminate or reduce the hazard.

i. An assessment of native vegetation to include habitat types (i.e. coniferous forest, mixed coniferous-deciduous forest, scrub-shrub, meadow), species richness, and dominate species. Provide percent cover for ground, shrub, and tree canopy layers. Describe vertical structure. This can be done using a foliage height diversity index such as MacArthur and MacArthur (1961). Include an estimate for non-native species present at each layer. Include an assessment of existing vegetation in any on-site wetland or stream buffer consistent with the vegetative buffer standards in TMC 13.11.270.J.3. If vegetated buffer standards are not being met, include a vegetative buffer plan consistent with TMC 13.11.270.J.4 and 5.

j. Provide the species and size of trees. At a minimum the average diameter at breast height (DBH) for each species and the location of any madrone greater than 12 inches and conifers greater than 30 inches must be

provided. Describe the coniferous component as dominant, codominant or sub-dominant. A tree survey may be required to identify the location of trees of local significance or significant tree groves.

k. Describe habitat elements that are present such as duff layer, cliffs, downed wood, and snags.

l. For Biodiversity Areas ~~/~~and Habitat Corridors provide the overall size of the Biodiversity ~~a~~Area including off-site vegetated areas. Provide the average width for Habitat ~~c~~Corridors, and map delineated Biodiversity Areas and Habitat Corridors.

m. For Oregon white oak woodlands/stands and/or individual trees, provide information and a delineation consistent with the classification in TMC 13.11.510.B.1.b and protection standards in TMC 13.11.520.D.

4. A Compensatory mitigation plan shall be provided for all permanent impacts to critical areas and their buffers/management areas and will conform to the general mitigation requirements listed under Section 13.11.270 and any specific requirements identified in this chapter for the critical area. The plan shall include the following:

a. The applicant must demonstrate that they meet one of ~~three~~two legal tests provided in 13.11.240.

b. Mitigation sequencing. The applicant shall demonstrate that an alternative design could not avoid or reduce impacts and shall provide a description of the specific steps taken to minimize impacts.

c. Assessment of impacts including the amount, existing condition and anticipated functional loss. Include probable cumulative impacts.

d. The amount and type of mitigation. Include goals, objectives, and clearly defined and measurable performance standards. Include contingency plans that define the specific course of action if mitigation fails. The Director may waive the requirement that a mitigation plan be prepared by a qualified professional when mitigation is limited to standard planting or enhancement activities. The waiver shall not be granted for creation or restoration activities.

e. A description of the existing conditions and anticipated future conditions for the proposed mitigation area(s) including future successional community types for years 1, 5, 10 and 25, future wildlife habitat potential, water quality and hydrologic conditions. Compare this to the future conditions if no mitigation actions are undertaken.

f. Specifications of the mitigation design and installation including construction techniques, equipment, timing, sequencing, and best management practices to reduce temporary impacts.

g. A plant schedule including number, spacing, species, size and type, source of plant material, watering schedule and measures to protect plants from destruction;

h. Monitoring methods and schedule for a minimum of five to ten years as determined by the Director depending on the type and sensitivity of the mitigation action.

i. A maintenance schedule to include ongoing maintenance and responsibility for removal of non-native, invasive vegetation and debris after monitoring is complete;

j. A hydrologic report including any mitigative measures for alterations of the hydroperiod. The City may require additional pre- and post-development field studies and/or monitoring to establish water levels, hydroperiods, and water quality. Water quality shall be required for pollution generating surfaces using all known, available, and reasonable methods of prevention, control, and treatment.

k. When mitigation includes creation or restoration of critical areas, particularly wetlands or streams, surface and subsurface hydrologic conditions including existing and proposed hydrologic regimes shall be provided. Describe the anticipated hydrogeomorphic class and illustrate how data for existing hydrologic conditions were utilized to form the estimates of future hydrologic conditions. Future hydrologic conditions shall consider the effects of climate change to reduce risk to compensatory mitigation projects.

l. Existing topography must be ground-proofed at two foot contour intervals in the zone of any proposed wetland or stream creation or rehabilitation actions. Provide cross-sections of existing wetland and/or streams that are proposed to be impacted and cross-section(s) (estimated one-foot intervals) for the proposed areas of creation and/or rehabilitation.

m. A bond estimate for required vegetation planting and/or ~~the compensatory~~ mitigation using a bond quantity sheet provided by the City, or a minimum of three bond estimates per TMC 13.11.290.

n. An evaluation of potential adverse impacts on adjacent property owners resulting from the proposed mitigation and measures to address such impacts.

5. When the critical area is limited to a Geologically Hazardous Area described in TMC 13.11.720, the purpose of the information submitted is to obtain a level of study sufficient to protect the public from hazards. The information and proposed mitigation will demonstrate that there is no significant risk to the public health and safety through compliance with the applicable standards of TMC 13.11.730 and that any risk that cannot be effectively mitigated is avoided.

6. Programmatic Development Permit. In addition to the requirements above an application shall also include a Management Plan for the area using an approved template format or equivalent. The following information shall be included in the document;

a. Explanation of the voluntary restoration and enhancement components including phasing.

b. Identification of the qualified habitat steward, or other qualified professional, who will be responsible for overseeing restoration and enhancement activities.

c. Explanation of training provided to individuals involved in activities to ensure an understanding of how to perform in accordance with the terms of the permit.

7. Reasonable Use Application. When an application is made utilizing the reasonable use legal test in TMC 13.11.240(B) the application shall include the applicable items in TMC 13.11.230.B.1 through 4 above and the following:

a. A critical areas report pursuant to TMC 13.11.230(B), which shall include the following additional components:

(1) An analysis of whether any other reasonable use with less impact on the critical area and critical area buffer is feasible. This may include:

(a) A description of the restrictive regulation's economic impact on the property;

(b) An explanation of how the regulations interfere with reasonable investment-backed expectations of the property;

(c) Documentation of alternative development concepts (e.g., site layout, building footprint, development density or intensity, and access configuration) explored, including the reasons each alternative was determined to be infeasible or would result in equal or greater impacts to the critical area or critical area buffer;

(2) Demonstration that site design and construction staging of the proposal shall have the least impact to the critical area and critical area buffer;

(3) A description of protective measures that will be undertaken, such as siltation curtains, compost berms and other siltation prevention measures, and a schedule of the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;

(4) An illustration of how the proposal minimizes to the greatest extent possible net loss of critical area functions;

(5) An analysis of whether the improvement is located away from the critical area and the critical area buffer to the greatest extent possible; and

(6) Such other information or studies as the Director may reasonably require.

13.11.240 Legal Test(s).

A. No Practicable Alternatives.

An alternative is considered practicable if the site is available and the project is capable of being done after taking into consideration cost, existing technology, infrastructure, and logistics in light of overall project purposes. The No Practicable Alternatives test may be used by public agencies and utilities if application of critical areas regulations would prohibit a development proposal. In addition, if the application of these regulations would prevent critical area or buffer restoration in excess of the allowances in TMC 13.11.220, the no practicable alternatives test may be considered. No practicable alternatives need be considered if the restoration project, public agency or utility~~applicant~~ can demonstrate all of the following:

1. The project cannot be reasonably accomplished using one or more other sites in the general region that would avoid or result in less adverse impacts to the Critical Area;

2. The goals of the project cannot be accomplished by a reduction in the size, scope, configuration or density as proposed, or by changing the design of the project in a way that would avoid or result in fewer adverse effects on the Critical Area; and

3. In cases where the applicant has rejected alternatives to the project as proposed, due to constraints on the site such as inadequate zoning, infrastructure or parcel size, the applicant has attempted to remove or accommodate such constraints, unless the applicant can demonstrate that such attempt would be futile.

B. Reasonable Use.

A Reasonable Use exists when the standards of this chapter deny all reasonable economic use of the property. ~~To demonstrate Reasonable Use, the applicant must demonstrate all of the following:~~

1. To demonstrate Reasonable Use, the applicant must demonstrate all of the following:

a. There is no reasonable economic use or value with less impact on the Critical Area;

b~~2~~. There are no feasible on-site alternatives to the proposed activity or use (e.g., reduction in density or use intensity, scope or size, change in timing, phasing or implementation, layout revision or other site planning considerations) that would allow reasonable economic use with less adverse impact;

c~~3~~. The proposed activity or use will be mitigated to the maximum practical extent and result in minimum feasible alteration or impairment of functional characteristics of the site, including contours, vegetation, fish and wildlife habitat, groundwater, surface water and hydrological conditions;

d~~4~~. The proposed activity or use complies with all local, state, and federal laws and will not jeopardize the continued existence of endangered, threatened, sensitive or priority habitat or species; and

e~~5~~. The inability to derive reasonable economic use is not the result of any action, such as but not limited to, in segregating or dividing the property in a way that makes the property unable to be developed after the effective date of the ordinance codified in this chapter.

f. The granting of the exception will not confer on the applicant any special privilege that is denied by this chapter to other lands, buildings, or structures under similar circumstances.

2. Allowed Use and Maximum Disturbance Limits. For purposes of this section, "site" means the subject property and required disturbance on adjacent parcels and right-of-way. The maximum amount of site area that may be disturbed by structure siting, construction, and all land alteration associated with the proposed development activity, including but not limited to clearing and grading, utility installation, and installation of decks, driveways, paved areas, and landscaping, shall not exceed the following limits:

a. The maximum amount of disturbance shall be no more than 10 percent of the lot area or 2,500 square feet, whichever is greater.

b. The amount and location of allowable disturbance shall be that which will have the least impact on the critical area and the critical area buffer given the characteristics and context of the subject property, critical area, and buffer.

c. Required public improvements within the right-of-way (for example, required curb, gutter and sidewalk improvements) are not counted in the maximum amount of disturbance. The City shall allow or require modifications to the public improvement standards that minimize impact to the critical area and buffer and any impacts associated with required public improvements shall be mitigated by the applicant.

d. The portion of a driveway located within an improved right-of-way is not counted in the maximum amount of disturbance. However, a driveway or any other private improvement located in an unimproved right-of-way shall be counted in the maximum amount of disturbance up to 30 feet in length. The portion of the driveway exceeding 30 feet in length may be exempt from the maximum allowable site disturbance area provided that the driveway length is the minimum necessary to provide access to the structure.

e. On sites where the approved disturbance area is not immediately adjacent to a public or private road and an extended driveway is required, the driveway area necessary to connect the developable area to the access point may be excluded from the maximum amount of disturbance area.

~~C. Public Interest.~~

~~In determining whether a proposed use or activity in any Critical Area is in the public interest, the public benefit of the proposal and the impact to the Critical Area must be evaluated by the Director. The proposal is in the public interest if its benefit to the public exceeds its detrimental impact on the Critical Area. In comparing the proposal's public benefit and impact, the following should be considered:~~

~~1. The extent of the public need and benefit;~~

~~2. The extent and permanence of the beneficial or detrimental effects of the use or activity;~~

~~3. The quality and quantity of the Critical Area that may be affected;~~

~~4. The economic or other value of the use or activity to the general area and public;~~

~~5. The ecological value of the Critical Area;~~

~~6. Probable impact on public health and safety, fish, plants, and wildlife; and~~

~~7. The policies of the Comprehensive Plan.~~

13.11.250 General Standards.

A. General permit standards.

No regulated activity or use shall be permitted in or adjacent to a Critical Area or buffer, management area, or ~~geo-~~ setback without prior approval and without meeting the provisions of this section.

1. The applicant has taken appropriate action to first, avoid adverse impacts, then minimize impacts and finally, compensate or mitigate for unavoidable impacts;

2. The result of the proposed activity is no net loss of Critical Area functions or values;

3. The existence of plant or wildlife species appearing on the federal or state endangered, sensitive, or threatened species list will not be jeopardized;

4. The proposal will not lead to significant degradation of groundwater or surface water quality; and

5. The proposal complies with the remaining standards of this chapter, which include those pertaining to compensation and the provision of bonds.

6. The alteration is the minimum necessary to allow reasonable use.

B. Building Setback. Buildings and other structures shall be set back at least 10 feet from the edge of biodiversity areas and wetland or stream buffers to ensure adequate width for buffer vegetation (including critical root zones and tree branching), construction staging, maintenance and repair of primary buildings and accessory structures, and use of improvements without disturbing the critical area buffer or critical area. Category IV wetlands that meet the criteria of TMC 13.11.210.B.3.b. are exempt from this requirement. The following may be allowed in the building setback area:

1. Landscaping, paths, and trails;

2. Uncovered decks, less than 18 inches above grade;

3. Ordinary building projections such as cornices, eaves, sills, or chimneys if such overhangs do not extend more than 24 inches into the setback area;

4. Ground surface modifications, such as driveways and patios.

C~~B~~. Low-impact uses and activities consistent with the critical area buffer/management area/~~geo-~~setback may be permitted within a buffer/management area/~~geo-~~setback that has not been reduced depending upon the sensitivity of critical area and intensity of activity or use. These may include pedestrian trails, viewing platforms, utility easements and storm water management facilities such as grass-lined swales that are used to sustain existing hydrologic functions of the critical area.

D~~C~~. Yard Reduction. In order to accommodate for critical areas and/or the required buffer zone/~~geo-~~setback, the Director may reduce the front and/or rear yard setback requirements on individual lots. The front and/or rear yard shall not be reduced by more than 50 percent. In determining whether or not to allow the yard reduction, the Director shall consider the impacts of the reduction on adjacent land uses.

E. Driveway/Access and Parking. In order to accommodate for critical areas and/or the required buffer zone/setback, the Director may approve alterations to the driveway/access standards and parking requirements of TMC 13.06.

~~D. As an incentive, the buffer area between a wetland or stream and regulated activity may be reduced or averaged, not less than ¾ of its standard regulated buffer width, depending upon the intensity of use and the wetland category or stream type, if the wetland or stream and its buffer area are dedicated to the public by deeding the property to the City, with City approval. The Director shall determine whether the dedication is of benefit to the City for protection of natural resources.~~

13.11.260 Residential Density Credits.

A. For residential development proposals on lands containing fish and wildlife habitat conservation areas (FWHCAs), erosion hazard areas, landslide hazard areas or steep slopes, the density that would have been allowed in the critical area and buffer but for the provisions of this chapter is generally transferred to the remainder of the site not in the critical area or buffer. For residential development proposals on lands containing wetland or stream buffers, the density that would have been allowed in the buffer but for the provisions of this chapter is generally transferred to the remainder of the site not in the critical area or buffer. For wetlands and streams, density credits do not apply to the portion of the site occupied by the critical area. The allowable number of dwelling units shall be determined using the following formula, table, 125 percent maximum density rule and setback provisions.

B. The formula for determining the number of dwelling units allowed after the application of density credits is as follows:

Dwelling units allowed on site = (CA x DC + DA)/MLS, where:

CA = Critical acreage: The amount of land on the project site which is located in the critical area and required buffer and in which no regulated activity is allowed. For wetlands~~,~~ and streams, ~~and FWHCAs~~ the critical acreage only includes the amount of land which is located in the required buffer and in which no regulated activity is allowed.

DC = Density credit: The percentage of the density that would have been allowed in the critical area and/or required buffer but for the provisions of this chapter that is allowed to be transferred to the remainder of the site. The density credit is based on the percentage of the site in the critical area and/or buffer and is determined using the table in subsection C below.

DA = Developable acreage: The amount of land on the project site which is not located in the critical area or the required critical area buffer.

MLS = Minimum lot size: The minimum amount of land required for a dwelling unit in a specific zoning district.

C. Table of density credits.

Percentage of Site in Density Critical Area and/or Buffer Credit

1 – 10%	100%
11 – 20%	90%
21 – 30%	80%
31 – 40%	70%
41 – 50%	60%
51 – 60%	50%
61 – 70%	40%
71 – 80%	30%
81 – 90%	20%
91 – 99%	10%

D. The 125 percent maximum density rule provides that the maximum number of dwelling units cannot exceed 125 percent of the allowed number of dwelling units without a density credit on the developable acreage of the site.

E. The minimum lot size under this provision shall be 3,000 square feet, unless a smaller lot size is permitted in the district. Front and Rear setbacks may be reduced by 50 percent. ~~The Small Lot standards of Section 13.06.020.J shall apply.~~

F. The density credits can only be transferred within the same development proposal site.

13.11.270 General Mitigation Requirements.

A. Unless otherwise provided in this Title, ~~if alteration to a Critical Area, or its buffer/management area/geo-setback is unavoidable,~~ all adverse impacts resulting from a development proposal or alteration shall be mitigated using the best available science, so as to result in no net loss of critical area functions and values and to ensure public health and safety. In making a determination as to whether such a requirement will be imposed, and if so, the degree to which it would be required, the Director may consider the following:

1. The long-term and short-term effects of the action and the reversible or irreversible nature of the impairment to or loss of the Critical Area;

2. The location, size, and type of and benefit provided by the original and altered Critical Area;

3. The effect the proposed work may have upon any remaining critical area or associated aquatic system;

4. The cost and likely success of the compensation measures in relation to the magnitude of the proposed project or violation;

5. The observed or predicted trend with regard to the gains or losses of the specific type of critical area; and

6. ~~The extent to which the applicant has demonstrated a good faith effort to incorporate measures to minimize and avoid impacts within the project.~~Mitigation planting, when applicable, must follow best practices for density and composition.

B. Mitigation projects shall not result in adverse impacts to adjacent property owners.

C. Unless it can be demonstrated that off-site in-kind mitigation is ecologically preferable, preference ~~Mitigation~~ shall be given to mitigation that is in-kind and on-site, when possible, and sufficient to maintain the functions and values of the critical area.

D. The Director may determine that higher mitigation ratios or mitigation performance standards may be required when the likely success of mitigation is low due to site conditions, difficulty of the type of mitigation, or sensitivity of the critical area.

E. Mitigation shall not be implemented until after permit approval of the Director and shall be in accordance with all reports and representations made therein.

F. Mitigation Sequencing.

When an alteration to a critical area or its buffer/management area/~~geo~~ setback is proposed, such alteration shall be avoided, minimized, or compensated for in the following order of preference.

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

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

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

4. Reducing or eliminating the impact over time by preservation and maintenance operations.

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

6. Monitoring the required mitigation and taking remedial action where necessary.

G. Mitigation for Lost or Affected Functions.

Compensatory mitigation shall address the functions affected by the proposed project or alteration to achieve functional equivalency or improvement and shall provide similar critical area or buffer/management area/~~geo~~ setback functions as those lost, except when:

1. The lost critical area or buffer/management area/~~geo~~ setback provides minimal functions as determined by a site-specific functional assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limited~~ing~~ within a watershed through an existing ~~formal Washington state~~ watershed ~~assessment~~ plan or ~~protocol~~ a local or regional study that characterizes watershed processes; or

2. Out of kind replacement of critical area type or functions will best meet watershed goals formally identified by the City, such as replacement of historically diminished critical areas.

H. Type and Location of Mitigation.

Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in-kind and on-site, or in-kind and within the same stream reach, subbasin, or drift cell (if estuarine wetlands are impacted). Mitigation action shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

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

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

3. Off-site locations shall be in the same sub-drainage basin unless established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site.

I. Mitigation and vegetation planting plans shall include a monitoring program. The monitoring period shall be a minimum of five to ten years. Monitoring period length will be determined by the Director depending on the type and sensitivity of the mitigation action. A monitoring report shall be submitted as required to document milestones, successes, problems, and contingency actions of the compensation project relative to stated performance standards. The project shall be monitored for a period necessary to establish that performance standards have been met.

J. Vegetated Buffer Standards

1. General – The entire wetland buffer width of TMC 13.11.320 and stream buffer width of TMC 13.11.420, referred to hereafter as the "buffer," located on a site proposed for any development shall be vegetated pursuant to the requirements of this section, or as required by a critical areas permit, whichever is greater.

2. When Vegetative Buffer Standard Applies.

a. The complete vegetative buffer standard shall be installed either when:

(1) The total new net impervious area on the entire subject property exceeds 1,000 square feet, or

(2) The cost of new or replacement improvements exceeds 50 percent of the assessed or appraised value of the existing improvements on the entire subject property, whichever is greater.

b. A partial vegetative buffer shall be installed when:

(1) The total new net impervious area is between 50 square feet and 1,000 square feet on the subject property.

(a) The buffer shall be vegetated at a minimum 1:1 ratio (new net impervious area is equal to the total square feet of buffer vegetation) meeting the vegetated buffer standard at the proportional rate of the standard;

(b) The location of the vegetation planting in the buffer shall be in the area of most ecological benefit as approved by the Planning Director;

(2) When a new net impervious surface on the subject property totals less than 50 square feet, no vegetation is required to be planted in the buffer; and

c. For public parks and schools, for net new impervious improvements, the buffer shall be vegetated at a minimum 1:1 ratio (i.e., net square footage of vegetated buffer area must be planted to meet the standards to match the net new square footage of added impervious surfaces) meeting the vegetated buffer standard at the proportional rate of the standard, in a location and of dimensions approved by the Planning Director. An exemption from planting is allowed when the cumulative net new impervious surface on the subject property is equal to or less than 50 square feet within a 24-month period

d. For activities allowed with staff review, improvements and uses subject to development standards pursuant to TMC 13.11.210, vegetative buffer requirements will be determined as part of the review.

3. Vegetative Buffer Standard – The following vegetative buffer standards shall be met:

a. Native cover of at least 80 percent on average throughout the buffer area. Additionally, stratum of native plant species (trees, shrubs, groundcover) each must compose at least 20 percent areal cover:

(1) Multi-age forest canopy (combination of existing and new vegetation);

(2) Shrubs; and

(3) Woody groundcover (such as kinnikinnick, salal and sword fern) or unmowed herbaceous groundcover;

b. At least three (3) native species, each making up a minimum of 10 percent coverage (for diversity);

c. Less than 10 percent invasive weeds cover using Pierce County noxious weed list, State Noxious weed list and Pierce County non-regulated species ; and

d. Removal of debris, lawn and any illegal fill as determined by the City.

4. Additional Standards.

a. All existing improvements and structures in a buffer must be removed when the vegetative buffer installation is required pursuant to subsection (3)(a) of this section;

b. All activities in the buffer must cease, except those permitted under TMC 13.11.200.B.5. and TMC 13.11.210.B.1.;

c. Native vegetation appropriate for wetlands and streams shall be used based on Director approval. Other vegetation may be proposed if appropriate for the site and approved by the Director;

d. Existing healthy native vegetation may count towards meeting the requirements if the overall standard is met;

e. Installation shall be done by hand unless use of mechanical equipment is specifically authorized due to site conditions. By hand includes any handheld equipment that is gas or electric powered; and

5. Process – The Director shall determine whether an existing buffer meets the standards in subsection (3) of this section as part of the critical area review of the required critical areas permit or development permit (if no critical areas permit is required) based on information in the critical areas report.

6. Submittal of Vegetative Buffer Plan – Timing and Contents.

a. When an existing buffer does not meet the standards in subsection (3) of this section, the applicant shall submit a vegetative buffer plan with the critical areas or development permit application;

b. The vegetative buffer plan shall be prepared by a qualified critical area professional.

c. The Director shall approve the plan only if it meets the vegetative buffer standard in this section; and

d. If a modification is proposed to a wetland or stream (TMC 13.11.330 or 13.11.430) then a detailed final planting plan shall be submitted with the development permit application.

7. Maintenance, Monitoring and Sureties – A maintenance and monitoring program pursuant to TMC 13.11.270 shall be submitted with the applicable critical areas application. The sureties pursuant to TMC 13.11.290 for the vegetative buffer shall be submitted prior to issuance of a building or site development permit or before commencement of an activity. The maintenance/monitoring program shall be prepared by a qualified critical areas professional.

8. Protection and Maintenance of Vegetative Buffer – Critical areas and buffers shall be placed in recorded critical area easements or tracts pursuant to TMC 13.11.280 and shall be maintained in perpetuity.

K. Approved Programmatic Mitigation

Where the mitigation sequencing requirements of F.1. through F.6. above have been met and on-site mitigation has been demonstrated to be infeasible or in addition to federal mitigation requirements resulting in excess mitigation, the Director may allow for programmatic mitigation.

1. Wetland Mitigation Banks.

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

(1) The bank is certified under state rules;

(2) The Director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

(3) The proposed use of credits shall be consistent with terms and conditions of the bank's certification.

b. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.

c. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

2. In-Lieu Fee (ILF) Mitigation.

a. Credits from an approved in-lieu fee program may be used when all the following apply:

(1) The Director determines that it would provide appropriate compensation for the proposed impacts.

(2) The proposed use of credits is consistent with the terms and conditions of the approved ILF program instrument.

(3) Projects using ILF credits shall have debits associated with the proposed impacts calculated by the applicant's qualified professional using the credit assessment method specified in the approved instrument for the ILF program.

b. To aid in the implementation of off-site mitigation, the City may develop a program which prioritizes wetland areas for use as mitigation and/or allows payment in lieu of providing mitigation on a development site. This program shall be developed consistent with state and federal rules. The program should address:

(1) The identification of sites within the City that are suitable for use as off-site mitigation. Site suitability shall take into account wetland functions, potential for wetland degradation, and potential for urban growth and service expansion, and

(2) The use of fees for mitigation on available sites that have been identified as suitable and prioritized.

~~I. Wetland Mitigation Banks.~~

~~1. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:~~

~~a. The bank is certified under state rules;~~

~~b. The Director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and~~

~~c. The proposed use of credits shall be consistent with terms and conditions of the bank's certification.~~

~~2. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.~~

~~3. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.~~

~~J. In-Lieu Fee.~~

~~To aid in the implementation of off-site mitigation, the City may develop a program which prioritizes wetland areas for use as mitigation and/or allows payment in lieu of providing mitigation on a development site. This program shall be developed and approved through a public process and be consistent with state and federal rules. The program should address:~~

~~1. The identification of sites within the City that are suitable for use as off-site mitigation. Site suitability shall take into account wetland functions, potential for wetland degradation, and potential for urban growth and service expansion, and~~

~~2. The use of fees for mitigation on available sites that have been identified as suitable and prioritized.~~

L~~K~~. Timing of Compensatory Mitigation.

It is preferred that compensation projects will be completed prior to activities that will disturb the on-site critical area. If not completed prior to disturbance, compensatory mitigation shall be completed immediately following the disturbance and prior to the issuance of final certificate of occupancy. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

The Director may authorize a one-time temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified professional as to the rationale for the delay (i.e. seasonal planting requirements, fisheries window).

ML. Critical Area Enhancement as Mitigation.

Impacts to critical area functions may be mitigated by enhancement of existing significantly degraded critical areas, but should be used in conjunction with restoration and/or creation where possible. Applicants proposing to enhance critical areas or their buffers must include in a report how the enhancement will increase the functions of the degraded critical area or buffer and how this increase will adequately mitigate for the loss of critical area and function at the impact site. An enhancement proposal must also show whether any existing critical area functions will be reduced by the enhancement action.

NM. Innovative Mitigation.

The Director may approve innovative mitigation projects that are based on best available science including but not limited to activities such as advance mitigation and preferred environmental alternatives. Innovative mitigation proposals must offer an equivalent or better level of protection of critical area functions and values than would be provided by the strict application of this chapter. Such mitigation proposals must demonstrate special consideration for conservation and protection measures for anadromous fisheries. The Director shall consider the following for approval of an innovative mitigation proposal:

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

2. The applicant demonstrates that long-term protection and management of the habitat area will be provided;

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

4. Mitigation according to TMC 13.11.270.E is not feasible due to site constraints such as parcel size, stream type, wetland category, or excessive costs;

5. A wetland of a different type is justified based on regional needs or functions and values;

6. The replacement ratios are not reduced or eliminated; unless the reduction results in a preferred environmental alternative; and

7. Public entity cooperative preservation agreements such as conservation easements are applied.

13.11.280 Conditions, Notice on Title, and Appeals.

A. The Director shall have the authority, in accordance with Chapter 13.05, to attach such conditions to the granting of any permit under this chapter deemed necessary to mitigate adverse impacts and carry out the provisions of this chapter. In addition, such conditions may include, but are not limited to, the following:

~~1. Placement of Notice on Title on the subject parcels;~~

~~In addition to provisions of Chapter 13.05, the owner of any property upon which approval under Title 13, Tacoma Municipal Code, or Chapter 2.02, Building Code, of the TMC, is sought with a critical area or critical area buffer/management area/geo-setback verified on site through a Critical Area or building permit, shall record with the Pierce County Auditor a notice of presence of the critical area and buffer/management area/geo-setback with the exception of protected information. Such recording shall contain notice of the critical area and buffer/management area/geo-setback and the applicability of this chapter to said property. Such notification shall be in a form as specified by Planning and Development Services. The notice shall be notarized and the applicant must submit proof that the notice has been legally recorded before the final approval for development is issued. The notice shall run with the land and failure to record such notice shall be in violation of this chapter.~~

21. Limitations on minimum lot size;

32. Provisions for additional vegetative buffer zones depending on the intensity of the use or activity;

43. Requirements that structures be elevated on piles, limited in size or located with additional setback requirements;

~~5~~4. Dedication of utility easements;

~~6~~5. Modification of waste disposal or water supply facilities;

~~7~~6. Imposition of easement agreements or deed restrictions concerning future use including conservation easements within fish and wildlife habitat conservation area (FWHCA), wetland, stream, geologically hazardous areas, flood hazard areas, or other natural area tracts and subdivision of lands;

~~8~~7. Limitation of vegetation removal;

~~9~~8. Setting minimum open space requirements;

~~10~~9. Erosion control and storm water management measures, including restrictions on fill and other activities in the Critical Area or buffer;

1~~1~~0. Development of a plan involving the creation or enhancement of a Critical Area or restoration of a damaged or degraded Critical Area to compensate for adverse impacts;

1~~2~~1. Permanent Signs may be required on each lot or FWHCA, wetland, stream or natural area tract, and shall be prepared in accordance with the approved City of Tacoma template for signs. Additional custom signs may be required for areas with sensitive species that require specific protection measures;

1~~3~~2. Fencing is required when the Director determines that a fence will prevent future impacts to a protected critical area or other natural habitat area. Fencing installed as part of a proposed activity shall not interfere with species migration, including fish runs, nor shall it impede emergency egress; and

1~~4~~3. Subdivisions. With the exception of CARAs, ~~T~~the subdivision and short subdivision of land in Critical Areas and associated buffers/management area/~~geo~~ setbacks are subject to the following and Section 13.04.310:

a. Land that is located partially within a Critical Area or its buffer/~~geo~~ setback may be subdivided provided that an accessible and contiguous portion of each new lot is located outside the Critical Area and its buffer/~~geo~~ setback.

b. Access roads and utilities serving the proposed subdivision may be permitted within the Critical Area and associated buffers/~~geo~~ setbacks only if the Director determines that no other feasible alternative exists and the project is consistent with the remaining provisions of this chapter.

c. A protection covenant such as a Conservation Easement shall be recorded with the Pierce County Assessor's Office for critical areas or natural area tracts that are created as part of the permitting process.

B. Placement of Notice on Title on the subject parcels;

In addition to provisions of Chapter 13.05, the owner of any property upon which approval under TMC Title 13 or TMC Chapter 2.02, Building Code, is sought with a critical area or critical area buffer/management area/setback verified on site through a Critical Area, site development, or building permit, shall record with the Pierce County Auditor a notice of presence of the critical area and buffer/management area/setback with the exception of protected information. Such recording shall contain notice of the critical area and buffer/management area/setback and the applicability of this chapter to said property. Such notification shall be in a form as specified by Planning and Development Services. The notice shall be notarized and the applicant must submit proof that the notice has been legally recorded before the final approval for development is issued. The notice shall run with the land and failure to record such notice shall be in violation of this chapter.

C. Compensatory mitigation as a condition.

As a condition of a permit or as an enforcement action under this chapter, the City shall require, where not in conflict with a reasonable economic use of the property, that the applicant provide compensatory mitigation to offset, in whole or part, the loss resulting from an applicant's or violator's action or proposal.

D~~C~~. Appeals.

An appeal of a decision regarding a critical area, except for staff decisions regarding exemptions which are not subject to an administrative appeal, may be made in accordance with the provisions of Chapter 13.05 and Chapter 1.23 of the Tacoma Municipal Code.

13.11.290 Sureties.

The City will accept performance and monitoring and maintenance sureties in the form of bonds or other sureties in a form accepted in writing by the City. Sureties shall be posted prior to issuance of any development permits including, but not limited to, clearing and grading permits and building permits.

(1) Performance Surety.

Except for public agencies, applicants receiving a permit involving compensation for mitigation are required to post a cash performance bond or other acceptable security to guarantee compliance with this chapter prior to beginning any site work. The value of the surety shall be based on the average of three contract bids that establish all costs of compensation including costs relative to performance, monitoring, maintenance, and provisions for contingency plans. The amount of the surety shall be set at 150 percent of the average expected cost of the compensation project and include all review fees. The surety shall guarantee that work and materials used in construction are free from defects. All sureties shall be approved by the City Attorney. Without written release, the surety cannot be terminated or cancelled. The Director shall release the surety after documented proof that all plantings, structures and improvements have been shown to meet the requirements of this chapter.

(2) Monitoring and Maintenance Surety.

Except for public agencies, an applicant receiving a permit involving compensatory mitigation shall be required to post a cash maintenance bond or other acceptable security prior to beginning any site work guaranteeing that structures and improvements required by this chapter will perform satisfactorily for a minimum of five years after they have been constructed and approved. The value of the surety shall be based on the average or median of three contract bids that establish all costs of compensation, including costs relative to performance, monitoring, maintenance, and provision for contingency plans. The amount of the surety shall be set at 150 percent of the average expected cost of the compensation project and include all review fees. All sureties shall be on a form approved by the City Attorney. Without written release, the surety cannot be cancelled or terminated. The Director shall release the surety following a determination that the performance standards established for measuring the effectiveness and success of the project have been met.

13.11.300 Wetlands.

The 300 section contains the regulations for wetlands, including the following:

13.11.310 Wetland Classification.
13.11.320 Wetland Buffers.
13.11.330 Wetland Buffer Modifications.
13.11.340 Wetland Standards.
13.11.350 Wetland Mitigation Requirements.
13.11.360 *Repealed*.

13.11.310 Wetland Identification and Classification.

A. Wetlands shall be delineated in accordance with the approved federal delineation manual and applicable regional supplements described in WAC 173-22-035 and based on field investigation and a survey per TMC 13.11.230. Wetland delineations are valid for five years unless a significant change has occurred to the wetland.

B~~A~~. Wetlands shall be classified Category I, II, III, and IV, in accordance with the criteria from the Washington State Wetland Rating System for Western Washington: 2014 Update, Version 2.0 (Ecology Publication No. 23-06-009), as amended~~2014 Washington State Wetlands Rating System for Western Washington, Washington Department of Ecology Publication No. 14-06-029, published October 2014.~~. Wetland ratings are valid for five years provided the Ecology Wetland Rating Document is not updated resulting in changes.

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

Category I wetlands include the following types of wetlands: Estuarine wetlands, ~~Natural Heritage wetlands~~Wetlands of High Conservation Value, Bogs, Mature and Old-growth Forested wetlands; wetlands in

Coastal Lagoons; and wetlands that perform ~~many~~ functions at high levels, scoring~~very well and that score between 23 27 or more~~ points or more using the 2014 Washington Wetlands Rating System for Western Washington.

2. Category II wetlands are those that are difficult to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection.

Category II wetlands include the following types of wetlands: Estuarine wetlands~~, Interdunal wetlands,~~ and wetlands that perform functions well and score ~~between~~ 20-22 points.

3. Category III wetlands are those that perform functions moderately well and score ~~between~~ 16-19 points~~, and interdunal wetlands between 0.1 and 1 acre in size~~. These wetlands have generally been disturbed in some way and are often less diverse or more isolated from other natural resources in the landscape than Category II.

4. Category IV wetlands are those that have the lowest levels of functions, ~~(between 9-15~~scoring less than 16 points~~),~~ and are often heavily disturbed. These are wetlands that may be replaced, and in some cases may be improved.

~~5. In addition, wetlands that require special protection and are not included in the general rating system shall be rated according to the guidelines for the specific characteristic being evaluated. The special characteristics that should be taken into consideration are as follows:~~

~~a. The wetland has been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species. In this case, "documented" means the wetland is on the appropriate state or federal database.~~

~~b. The wetland has been documented as a habitat for State listed Threatened or Endangered plant or animal species. In this case "documented" means the wetland is on the appropriate state database.~~

~~c. The wetland contains individuals of Priority Species listed by the WDFW for the State.~~

~~d. The wetland has been identified as a Wetlands of Local Significance.~~

C. Wetlands of Local Significance are designated based on their ecological functions and community value and include the following sites:

1. Tacoma Nature Center Wetlands (Snake Lake Wetland)

2. China Lake

2. Delong Park

3. Wapato Lake Wetlands

4. McKinley Park

5. Puget Creek Park

13.11.320 Wetland Buffers.

A. General.

A buffer area shall be provided for all uses and activities adjacent to a wetland area to protect the integrity, function, and value of the wetland. Buffers adjacent to wetlands are important because they help to stabilize soils, prevent erosion, act as filters for pollutants, enhance wildlife diversity, and support and protect plants and wildlife. A permit may be granted if it has been demonstrated that no adverse impact to a wetland will occur and a minimum buffer width will be provided in accordance with this section. The buffer shall be measured horizontally from the delineated edge of the wetland. The buffer shall be vegetated with the exception of areas that include development interruptions as described within this chapter. Wetlands that meet the applicable criteria under TMC 13.11.210.B.3 are exempt from buffer requirements.

~~B. Minimum Requirement.~~

~~1. Wetlands.~~

~~Wetland buffer widths shall be established according to the following tables which are based on wetland classification, habitat function, land use intensity, and local significance:~~

B. Standard Buffer Widths.

1. The standard buffer widths in Table 1 have been established based on best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for western Washington.

2. The buffer widths in Table 1 presume the buffer is densely vegetated with a native plant community appropriate for the ecoregion, consisting of an average of 80 percent native cover composed of trees, shrubs and groundcover plants. If the existing buffer is sparsely vegetated or vegetated with invasive species, the buffer must be enhanced, monitored, and maintained through an approved mitigation plan per TMC 13.11.270.J.

Table 1. Standard Buffer Widths				
Category of wetland	**Habitat score 3-5 points**	**Habitat score 6-7 points**	**Habitat score 8-9 points**	**Buffer width based on special characteristics**
Category I (based on functions)	100	150	300	n/a
Category II (based on functions)	100	150	300	n/a
Category III	80	150	300	n/a
Category IV	50	50	50	n/a
Wetlands of Local Significance	n/a	n/a	n/a	300
Category I: Bogs and Wetlands of High Conservation Value	n/a	n/a	300	250
Category I: Forested	100	150	300	n/a
Category I: Estuarine and Coastal Lagoons	n/a	n/a	n/a	200
Category II: Estuarine and Coastal Lagoons	n/a	n/a	n/a	150

Note: n/a is used in this table to indicate that wetlands of the corresponding habitat score or special characteristic do not exist under the WA state wetland rating system.

~~**Table 1. Examples to minimize disturbance***~~		
~~**Disturbance element**~~	~~**Minimum measures to minimize impacts**~~	~~**Activities that may cause the disturbance**~~
~~Lights~~	~~Direct lights away from wetland~~	~~Parking Lots, Warehouses, Manufacturing, High Density Residential~~
~~Noise~~	~~Place activity that generates noise away from the wetland~~	~~Manufacturing, High Density Residential~~
~~Toxic runoff~~	~~Route all new untreated runoff away from wetland, Covenants limiting use of pesticides within 150 feet of wetland~~	~~Parking Lots, Roads, Manufacturing, residential Areas, Application of Agricultural Pesticides, Landscaping~~
~~Change in water regime~~	~~Infiltrate or treat, detain and disperse into buffer new runoff from surface~~	~~Any impermeable surface, lawns, tilling~~
~~Pets and Human disturbance~~	~~Fence around buffer,~~ ~~Plant buffer with "impenetrable" natural vegetation appropriate for region~~	~~Residential areas~~
~~Dust~~	~~Best Management Practices for dust~~	~~Tilled fields~~
~~*Washington State Department of Ecology and Washington State Department of Fish and Wildlife's Wetlands in Washington State; Volume 2: Guidance for Protecting and Managing Wetlands, Buffer Alternative 3~~		

Table 2.	
Level of Function	Habitat Score in Rating System
High (H)	8 9
Medium (M)	65 7
Low (L)	3 54

Table 3. Buffer width for all wetlands*	
Wetland Category	Buffer Width (feet)
Category I	H and M 200 L 175
Category II	H and M 150 L 100
Category III	H,M,L 75
Category IV	H,M,L - 50
*Best Available Science Review, City of Tacoma, Critical Areas Preservation Ordinance, Tacoma, Washington, June 15, 2004, prepared by GeoEngineers and modified by CAPO Focus Group, 2012.	

Table 4. Wetlands of local significance*	
Site	Buffers (feet)
Snake Lake	300
China Lake	300
Delong Park	300
Wapato Lake	300
McKinley Park	300
Puget Creek Park**	300
*Best Available Science Review Recommendation from City of Tacoma Critical Areas Task Force June 2004 and modified by CAPO Focus Group 2012. ** Inclusion recommended by CAPO Focus Group, 2012.	

13.11.330 Wetland Buffer Modifications.

A. Buffer Requirements.

The standard buffer widths in Table 1 2 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for western Washington. The use of the standard buffer widths requires the implementation of the measures in Table 1, where applicable, to minimize the impacts of the adjacent land uses. The applicant shall demonstrate mitigation sequencing when using buffer averaging or buffer reduction.

B. Buffer Increases.

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

a. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored or documented priority species or habitats, or essential or

outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or

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

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

d. The adjacent land contains an identified connective corridor that should not be bisected.

C. Buffer Averaging.

The widths of buffers may be averaged if this will improve the protection of wetland functions, or if it is the only way to allow for use of the parcel. Averaging may not be used in conjunction with the provisions for buffer reductions.

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

a. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a dual-rated wetland with a Category I area adjacent to a lower rated area, and

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

c. The buffer is increased adjacent to the high-functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower-functioning or less sensitive portion; and

d. The total area of the buffer after averaging is equal to the area required without averaging; and

e. The buffer at its narrowest point is never less than ¾ of the required width.

2. Averaging to allow a reasonable use of a legal lot of record may be permitted when all of the following are met:

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

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

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

d. The buffer at its narrowest point is never less than ¾ of the required width.

D. Buffer Reduction.

~~Buffer widths can be reduced according to the following criteria:~~

~~1. The buffer for Category I and Category II wetlands that score moderate (5–7 points) or high for habitat (8–9 points) points or more may be reduced to the low habitat buffer; or up to no less than 60 feet for Category III wetlands or 40 feet for Category IV wetlands, if the following criteria are met;~~

~~a. A relatively undisturbed vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife. The corridor must be protected for the entire distance between the wetland and the Priority Habitat via some type of legal protection such as a conservation easement, or~~

~~b. The remaining buffer area on site shall be enhanced and/or restored by removing invasive species that do not perform needed functions and replanting with an appropriate plant community.~~

1. The reduced buffer widths in Table 2 below may be used when the following criteria are met:

a. The impact minimization measures in Table 3 are implemented, where applicable.

b. A habitat corridor is provided for wetlands that score six or more habitat points and are within 300 feet of another qualifying feature. See TMC 13.11.520.E for habitat corridor standards.

c. The habitat corridor is permanently protected for the entire distance between the wetland and the shoreline or other legally protected critical area by a conservation easement, deed restriction, or other legal site protection mechanisms.

d. Presence or absence of the shoreline or other legally protected critical area must be confirmed by a qualified professional.

e. For wetlands that score five or fewer habitat points, only the measures in Table 3 are required.

2. The reduced buffer widths in Table 2 presume the buffer is densely vegetated with a native plant community appropriate for the ecoregion, consisting of an average of 80 percent native cover composed of trees, shrubs and groundcover plants. If the existing buffer is sparsely vegetated or vegetated with invasive species, the buffer must be enhanced through an approved mitigation plan and monitored and maintained in perpetuity.

Table 2. Reduced Buffer Widths

Category of wetland	Habitat score 3-5 points	Habitat score 6-7 points	Habitat score 8-9 points	Buffer width based on special characteristics
Category I (based on functions)	75	110	225	n/a
Category II (based on functions)	75	110	225	n/a
Category III	60	110	225	n/a
Category IV	40	40	40	n/a
Wetlands of Local Significance	n/a	n/a	n/a	225
Category I: Bogs and Wetlands of High Conservation Value	n/a	n/a	225	190
Category I: Forested	75	110	225	n/a
Category I: Estuarine and Coastal Lagoons	n/a	n/a	n/a	150
Category II: Estuarine and Coastal Lagoons	n/a	n/a	n/a	110

Table 3. Impact Minimization Measures

Examples of disturbance	Activities and uses that cause disturbances	Examples of measures to minimize impacts
Lights	• Parking lots • Commercial/Industrial • Residential • Recreation (e.g., athletic fields) • Agricultural buildings	• Direct lights away from wetland • Only use lighting where necessary for public safety and keep lights off when not needed • Use motion-activated lights • Use full cut-off filters to cover light bulbs and direct light only where needed • Limit use of blue-white colored lights in favor of red-amber hues • Use lower-intensity LED lighting • Dim light to the lowest acceptable • intensity
Noise	• Commercial • Industrial • Recreation (e.g., athletic fields, bleachers, etc.) • Residential • Agriculture	• Locate activity that generates noise away from wetland • Construct a fence to reduce noise impacts where appropriate along adjacent wetland buffer boundary • Plant a strip of dense shrub vegetation adjacent to wetland buffer

Table 3. Impact Minimization Measures		
Toxic runoff	• Parking lots • Roads • Commercial/industrial • Residential areas • Application of pesticides • Landscaping • Agriculture	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft. of wetland • Apply integrated pest management (These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.)
Stormwater runoff	• Parking lots • Roads • Residential areas • Commercial/industrial • Recreation • Landscaping/lawns • Other impermeable surfaces, compacted soil, etc.	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized or sheet flow from lawns that directly enters the buffer • Infiltrate or treat, detain, and disperse new runoff from impervious surfaces and lawns
Pets and human disturbance	• Residential areas • Recreation	• Use privacy fencing along adjacent wetland buffer boundary. • Plant dense native vegetation to delineate buffer edge and to discourage disturbance • Place wetland and its buffer in a separate tract • Place signs around the wetland buffer every 50-200 ft., and for subdivisions place signs at the back of each • residential lot • When platting new subdivisions, locate greenbelts, stormwater facilities, and other lower-intensity uses adjacent to wetland buffers
Dust	• Tilled fields • Roads	• Use best management practices to control dust

E. Buffer Averaging or Buffer Reduction beyond the minimum standards indicated above may be allowed to allow a reasonable use of a legal lot of record when all of the following criteria are met:

a. There are no feasible alternatives to the site design that could be accomplished with the standard buffer averaging or buffer reduction provision above; and

b. The averaged or reduced buffer will not result in degradation of the wetland's functions and values as demonstrated by a report from a qualified wetland expert, and

~~c. The remaining buffer area on site shall be enhanced and/or restored by removing invasive species that do not perform needed functions and replanting with an appropriate plant community, and~~

c~~d~~. The project shall meet the requirements of one of the two~~three~~ legal tests; No Practicable Alternatives~~,~~ ~~Public Interest,~~ or Reasonable Use.

13.11.340 Wetland Mitigation Requirements.

A. The applicant shall adhere to the mitigation sequencing requirements of TMC 13.11.270.F. and avoid, minimize, and compensate for all impacts that degrade the functions and values of wetlands and their buffers. Unless otherwise provided in this Title, if alteration to the wetland or its buffer is unavoidable, all adverse impacts resulting from a development proposal or alteration shall be mitigated using the best available science, so as to result in no net loss of critical area functions and values.

B. All wetland mitigation will comply with applicable mitigation requirements specified in 13.11.270, including, but not be limited to, mitigation plan requirements, monitoring and bonding.

C. Preference of Wetland Mitigation Actions.

Methods to achieve compensation for wetland functions shall be approached in the following order of preference:

1. Restoration (re-establishment and rehabilitation): The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions and environmental processes to a former or degraded wetland. ~~of wetlands on upland sites that were formerly wetlands.~~ Restoration is divided into two categories:

   a. Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions and environmental processes to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland area and functions. Example activities could include removing fill, plugging ditches, or breaking drain tiles to restore a wetland hydroperiod, which in turn will lead to restoring wetland biotic communities and environmental processes.

   b. Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions and environmental processes to a degraded wetland. Rehabilitation results in a gain in wetland function but does **not** result in a gain in wetland area. The area already meets wetland criteria, but hydrological processes have been altered. Rehabilitation involves restoring historic hydrologic processes. Example activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

2. Creation (Establishment): The manipulation of the physical, chemical, or biological characteristics of a site to develop a wetland on an upland where a wetland did not previously exist. Establishment results in a gain in wetland area and functions. An example activity could involve excavation of upland soils to elevations that will produce a wetland hydroperiod and hydric soils by intercepting groundwater, and in turn supports the growth of hydrophytic plant species. ~~of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native introduced species. This should only be attempted when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is being designed.~~

   a. If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the Director may authorize establishment of a wetland and buffer upon demonstration by the applicant's qualified professional that:

      (1) The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that establishment of a wetland at the site will not likely cause hydrologic problems elsewhere;

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

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

      (4) The proposed wetland would not be established at the cost of another high-functioning habitat (i.e., ecologically important uplands).

3. Preservation (Protection/Maintenance): The removal of a threat to, or preventing the decline of, wetlands by an action in or near those wetlands. This term includes activities commonly associated with the protection and

maintenance of wetlands through the implementation of appropriate legal and physical mechanisms such as recording conservation easements and providing structural protection like fences and signs. Preservation does not result in a gain of aquatic resource area or functions but may result in a gain in functions over the long term. Preservation of a wetland and associated buffer can be used only if:

a. The Director determines that the proposed preservation is the best mitigation option;

b. The proposed preservation site is under threat of undesirable ecological change due to permitted, planned, or likely actions that will not be adequately mitigated under existing regulations;

c. The area proposed for preservation is of high quality or critical for the health and ecological sustainability of the watershed or sub-basin. Some of the following features may be indicative of high-quality sites:

(1) Category I or II wetland rating (per TMC 13.11.310.B).

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

(3) The presence of habitat for threatened or endangered species (state, federal, or both).

(4) Provides biological and/or hydrological connectivity to other habitats.

(5) Priority sites identified in an adopted watershed plan.

~~3~~4. Enhancement~~: of significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.~~ The manipulation of the physical, chemical, or biological characteristics of a wetland to heighten, intensify, or improve specific wetland function(s). Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in the gain of selected wetland function(s) but may also lead to a decline in other wetland function(s). Enhancement does not result in a gain in wetland area. Enhancement activities could include planting vegetation, controlling non-native or invasive species, and modifying site elevations to alter hydroperiods in existing wetlands.

Applicants proposing to enhance wetlands and/or associated buffers shall demonstrate how the proposed enhancement will increase the wetland and/or buffer functions, how this increase in function will adequately compensate for the impacts, and how existing wetland functions at the mitigation site will be protected.

D. Mitigation ratios.

1. The ratios contained within Table 4~~5~~ shall apply when direct wetland impacts are proposed. Other types of impacts (e.g., long-term temporary, conversions) shall be mitigated using the recommended ratios in Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 2) (Ecology Publication 21.06-003 or as revised)~~to all Creation, Re-establishment, Rehabilitation, and Enhancement compensatory mitigation.~~

2. Impacts to wetland buffers shall be mitigated at a minimum ratio of one-to-one (1:1). Compensatory buffer mitigation shall replace those buffer functions lost from development.

~~2~~3. Increased replacement ratios. The Director may increase ~~the~~ compensatory wetland or buffer mitigation ratios under the following circumstances:

a. Uncertainty exists as to the probable success of the proposed restoration or creation;

b. A significant period of time will elapse between impact and replication of wetland functions;

c. Proposed mitigation will result in a lower category wetland or reduced function relative to the wetland being impacted; or

d. The impact was an unauthorized impact.

Table 45. Wetland Mitigation Rratios ~~for projects in Western Washington that do not alter the hydro-geomorphic setting of the site***~~				
Category and Type of Wetland	Re-establishment or Creation	Rehabilitation	~~1:1 Re-establishment or Creation (R/C) and Enhancement (E)~~ Preservation	Enhancement ~~only~~
All Category IV	1.5:1	3:1	~~1:1 R/C and 2:1 E~~6:1	6:1
All Category III	2:1	4:1	~~1:1 R/C and 2:1 E~~8:1	8:1
Category II Estuarine	~~Case-by-case~~3:1 (re-establishment only)	~~4:1 rehabilitation of an estuarine wetland~~6:1	~~Case-by-case~~12:1	Limited circumstances (Case-by-case)
Category II Coastal lagoon~~Category II Interdunal~~	3:1 (re-establishment only)~~2:1 Compensation has to be interdunal wetland~~	6:1~~4:1 compensation has to be interdunal~~	12:1~~1:1 R/C and 2:1 E~~	Not considered an option~~8:1~~
All other Category II	3:1	6~~8~~:1	~~1:1 R/C and 4:1 E~~12:1	12:1
Category I Forested	6:1	12:1	~~1:1 R/C and 10:1 E~~24:1	24:1
Category I based on score for functions	4:1	8:1	~~1:1 R/C and 6:1 E~~16:1	16:1
Category I ~~Natural Heritage site~~Wetlands of High Conservation Value	~~Not considered possible~~Consult with WA DNR	Consult with WA DNR~~6:1~~	~~Case-by-case~~24:1	Consult with WA DNR~~Case-by-case~~
Category I Coastal lagoon	~~Not considered possible~~4:1 (re-establishment only)	8~~6~~:1	16:1~~Case-by-case~~	~~Case-by-case~~Not considered an option
Category I Bog	Not considered possible	~~6:1~~Not considered possible	~~Case-by-case~~24:1	~~Case-by-case~~Not considered possible
Category I Estuarine	~~Case-by-case~~4:1 (re-establishment only)	~~6~~8:1	~~Case-by-case~~16:1	Limited circumstances (Case-by-case)

Notes:
1. Ratios for rehabilitation, preservation, and enhancement may be reduced when combined with 1:1 replacement through re-establishment or creation, in accordance with Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 2) (Ecology Publication 21.06-003 or as revised).
2. Preservation sites must meet the criteria listed in TMC 13.10.340.C.3.
~~*Natural heritage site, coastal lagoons, and bogs are considered irreplaceable wetlands, and therefore no amount of compensation would replace these ecosystems. Avoidance is the best option. In the rare cases when impacts cannot be avoided, replacement ratios will be assigned on a case-by-case basis. However, these ratios will be significantly higher than the other ratios for Category I wetland.~~
~~**Rehabilitation ratios area based on the assumption that actions judged to be most effective for that site are being implemented.~~
~~**Rehabilitation ratios area based on the assumption that actions judged to be most effective for that site are being implemented.~~
~~***Washington State Department of Ecology and Washington State Department of Fish and Wildlife's Wetlands in Washington State; Volume 2: Guidance for Protecting and Managing Wetlands, Buffer Alternative 3~~

E. Compensatory Mitigation Plan Requirements.

When a project involves wetland or buffer impacts, a compensatory mitigation report shall be required, meeting the following minimum standards:

1. Preparation by qualified professional~~Wetland Specialist~~. A compensatory mitigation report for wetland or buffer impacts shall be prepared by a qualified professional~~Wetland Specialist~~ as specified in 13.01.110.Q~~W~~.

2. A Wetland Delineation Report must accompany or be included in the compensatory mitigation report.

* * *

13.11.400 Streams and Riparian Habitats.

The 400 section contains the regulations for streams, a type of Fish and Wildlife Habitat Conservation Area per WAC 365-190-130, including the following:

13.11.410 Stream Classification.
13.11.420 Stream Buffers.
13.11.430 Stream Buffer Modification.
13.11.440 Stream Standards.
13.11.450 Stream Mitigation Requirements.

13.11.410 Stream Classification.

A. Streams shall be generally classified in accordance with the Washington State Water Typing System set forth in WAC 222-16-030 to describe Type "S," "F," "Np" and "Ns" streams. Additional criteria typing for ~~"F1", and "F2" and~~ "Ns1" and "Ns2" streams are included within this section.

~~General descriptions of the water typing system are~~Water types are classified as follows:

1. Type "S" w~~W~~aters include streams and waterbodies that are designated "shorelines of the state" as defined in chapter 90.58.030 RCW. ~~means all streams or rivers, within their bankfull width, inventoried as "shorelines of the state" or "shorelines of statewide significance" under the Tacoma Shoreline Management Program (TMC Title 19) or 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" w~~W~~aters include streams and waterbodies that are known to be used by fish, or meet the physical criteria to be potentially used by fish. Fish streams may or may not have flowing water all year; they may be perennial or seasonal. ~~means segments of natural waters other than Type S Waters, which are within the bankfull widths of defined channels 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 or as further described within WAC 222-16-030. Type "F1" Water means~~

~~segments of natural waters containing salmonid fishes. Type "F2" Water means segments of natural water containing fish that are not salmonids.~~

3. Type "Np" ~~W~~waters include streams that have flow year-round and may have spatially intermittent dry reaches downstream of perennial flow. Type Np streams do not meet the physical criteria of a Type F stream. This also includes streams that have been proven not to contain fish using methods described in Forest Practices Board Manual Section 13. ~~means all segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall or as further described within WAC 222-16-030.~~

4. Type "Ns" w~~W~~aters include streams that do not have surface flow during at least some portion of the year, and do not meet the physical criteria of a Type F stream. ~~means all segments of natural waters within the bankfull widths of the defined channels that are not Type S, F, or Np Water. These are seasonal, nonfish 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.~~ "Ns1" ~~W~~waters must be physically connected by an above ground channel system to Type, F, or Np Waters. "Ns2" ~~W~~waters may not be physically connected by an above ground channel system to Type, F, or Np Waters.

B. Streams of Local Significance are known to contain salmon, steelhead, and/or bull trout and include the following:

1. Puyallup River

2. Hylebos Creek

3. Puget Creek

4. Wapato Creek

5. Swan Creek

13.11.420 Stream Buffers.

A. General.

A buffer area shall be provided for all uses and activities adjacent to a stream to protect the integrity and function of the stream. Buffers adjacent to streams are important because they help to stabilize soils, prevent erosion, act as filters for pollutants, enhance wildlife diversity, and support and protect plants and wildlife. The buffer shall be measured horizontally from the edge of the ordinary high water mark. When a channel migration zone is present, the stream buffer area width shall be measured from the outer edge of the channel migration zone.

B. Minimum Requirement.

1. Streams. Stream buffer widths shall be established according to the following table which is based on stream classification:

Table 5~~6~~. Stream Types	
Stream Type	**Buffer (feet)**
Type S ~~or Streams of local significance~~	150
Streams of Local Significance	200
Type F~~1~~ (~~Salmonids~~Fish)	150
~~Type F2 (Non-Salmonids)~~	~~100~~
Type Np (Non-~~-~~fish Perennial)	100
Type Ns1 (Non-fish Seasonal; c~~C~~onnected to S, F, or Np)	100~~75~~
Type Ns2 (Non-fish Seasonal; ~~N~~not connected to S, F, or Np)	~~25~~100
~~**Streams of local significance**~~	
~~**Name**~~	~~**Buffer (feet)**~~

~~Puyallup River~~	~~150~~200
~~Hylebos Creek~~	~~150~~200
~~Puget Creek~~	~~150~~200
~~Wapato Creek~~	~~150~~200
~~Swan Creek~~	~~150~~200

2. The buffer widths in Table 5 presume the buffer is densely vegetated with a native plant community appropriate for the ecoregion, consisting of an average of 80 percent native cover composed of trees, shrubs and groundcover plants. If the existing buffer is sparsely vegetated or vegetated with invasive species, the buffer must be enhanced, monitored, and maintained through an approved mitigation plan per TMC 13.11.270.J.

13.11.430 Stream Buffer Modification.

A. Stream Buffer Increase.

The required buffer widths shall be increased as follows;

~~1. When the Director determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;~~

1~~2~~. When the frequently flooded area exceeds the stream~~recommended~~ buffer width, the buffer area may extend to the outer edge of the frequently flooded area, where appropriate;

~~3. When a channel migration zone is present, the stream buffer area width shall be measured from the outer edge of the channel migration zone~~;

2~~4~~. When the habitat area is in an area of high blowdown potential, the stream buffer area width shall be expanded an additional fifty feet on the windward side; or

3~~5~~. When the habitat area is within an erosion or landslide area, or buffer, the buffer area width shall be the recommended ~~distance~~width based on stream type, or extend to the edge of~~r~~ the erosion or landslide hazard area (see TMC 13.11.720.A.) or buffer, whichever is greater.

B. Stream Buffer Averaging ~~and Reduction~~.

The Director may allow the recommended stream buffer width to be averaged or reduced in accordance with a stream habitat analysis report only if:

1. The stream buffer areas that are reduced through buffer averaging will not reduce stream or habitat functions, including those of nonfish habitat;

2. The stream buffer areas that are reduced will not degrade the habitat, including habitat for anadromous fish;

3. The total area contained in the stream buffer of each stream on the development proposal site is not decreased;

4. The recommended stream buffer width is not reduced by more than twenty-five (25%) percent in any one location;

5. The stream buffer areas that are reduced will not be located within another critical area or associated buffer; and

6. The stream buffer areas that are reduced and required mitigation are supported by best available science.

7. When averaging the stream buffer, the proposal will provide additional habitat protection by including more highly functioning areas and reducing the buffer only in the low functioning areas.

~~8. When reducing the stream buffer, with an existing buffer that is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the remaining buffer shall be planted to create the appropriate plant community.~~

13.11.440 Stream Standards.

A. Type F~~1~~, ~~F2,~~ Np, and Ns1, and Ns2 streams may be relocated or placed in culverts provided it can be demonstrated that:

1. There is no other feasible alternative route with less impact on the environment;

2. Existing location of the stream would prevent a reasonable economic use of the property;

3. No significant habitat area will be destroyed;

4. The crossing minimizes interruption of downstream movement of wood and gravel;

5. The new channel or culvert is designed and installed to allow passage of fish inhabiting or using the stream and complies with WDFW requirements;

6. The channel or culvert also complies with the City of Tacoma current Stormwater Management Manual;~~.~~

7. The applicant will, at all times, keep the channel or culvert free of debris and sediment to allow free passage of water and fish;

8. Roads in riparian habitat areas or buffers shall not run parallel to the water body;

9. Crossing, where necessary, shall only occur as near to perpendicular with the water body as possible;

10. Road bridges are designed according to 2013 Washington Department of Fish and Wildlife Water Crossing Design Guidelines, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossing, 2000.

* * *

13.11.510 Classification.

A. Fish and Wildlife Habitat Conservation Areas are areas identified as being of critical importance to the maintenance of fish and wildlife species. All Fish and Wildlife Habitat Conservation Areas (FWHCAs) are hereby designated as Critical Areas subject to the provisions of this Chapter, except for Shorelines of the State that are managed under the City's Shoreline Master Program. FWHCAs may also include other Critical Areas such as Geologically Hazardous Areas, Stream Corridors, Wetlands, and these Critical Areas' associative buffers.

B. The City seeks to identify and map the location of FWHCAs taking into account Washington Department of Fish and Wildlife (WDFW) mapping and other sources of information. However, WDFW and City maps are not complete and other areas meeting the definition will be included.

Fish and Wildlife Habitat Conservation Areas (FWHCAs) include:

1. Lands and waters containing ~~S~~state Priority Habitats and Species. Priority H~~h~~abitat and S~~s~~pecies are classified by WDFW and are documented in the WDFW Priority Habitats and Species List (as amended). Additional criteria for classifying areas as Biodiversity Area and Oregon White Oak Habitat are provided below.

~~a. As of the date of this ordinance, the following State terrestrial Priority Habitat, and Species, and Features are known to be located in the City of Tacoma:~~

~~(1) Great blue herons;~~
~~(2) Mountain quails;~~
~~(3) Pigeon guillemots;~~
~~(4) Purple martins;~~
~~(5) Seabird colonies;~~
~~(6) Waterfowl concentrations;~~
~~(7) Wood ducks;~~
~~(8) Pacific (Western) pond turtle~~
~~(9) Marbled Murrelet~~
~~(10) Western grebes~~
~~(11) Orcas (Killer whale);~~

~~(12) Seals and sea lions;~~
~~(13) Anadromous fish (including Bull Trout);~~
~~(14) Reticulate sculpins~~
~~(15) Wetlands~~
~~(16) Streams and riparian areas~~
~~(17) Oregon White Oak Woodlands~~
~~(18) Old Growth/Mature Forest~~
~~(19) Biodiversity Areas and Corridors~~
~~(20) Cliffs~~
~~(21) Snags and Logs~~

a~~b~~. In classifying an area as a Biodiversity Area ~~or Corridor~~, the city will assess the functions and values of the existing habitat in the context of adjacent properties and the collective ecosystem services. An area which is already developed with legally established, pre-existing uses which serve to eliminate or greatly reduce the propensity of wildlife to use the area as habitat ~~or a corridor~~ will not be classified as a Biodiversity Area ~~or Corridor~~. The following will be considered:

(1) The presence of rare or uncommon plant species and associations designated by the City or identified by federal and state agencies such as the Department of Natural Resources Heritage Program.

(2) The presence of a vertically diverse assemblage of native vegetation containing multiple~~y~~ layers of vegetation such as herbaceous, shrub, and/or tree canopy layers, snags, or downed wood, and/or areas that are horizontally diverse with a mosaic of habitats and microhabitats. Native vegetation should be dominant (for example, more than half of the total vegetation present in a sample plot~~based on percentage of cover at each layer~~).

(3) The Biodiversity Area~~/Corridor~~ shall be a minimum size of two acres.

(4) The needs and requirements of species known or likely to occur must be considered as well as the ability of the habitat to provide wildlife access or movement.

(5) The following developments or uses may be considered as an elimination or significant reduction in the ability of an area to serve as a corridor for wildlife use. The permanence and extent of the use or development shall be considered.

(a) Multilane paved road(s) with two or more travel lanes in each direction and their maintained rights-of-way.

(b) Permanent wildlife-impassible fence(s) and other permanent barriers that prevent wildlife movement.

(c) Areas where legally established structures and impervious surfaces are present for more than 65% of the area.

(6) The following are examples of uses that may not reduce or eliminate the use of the area by wildlife or as a corridor.

(a) Gravel road(s) and driveways

(b) Trails used for passive recreation

(c) Wildlife-passible fence(s)

(d) Unmaintained rights-of-way

b~~c~~. In classifying priority Oregon White Oak (OWO) Habitat, the following will be considered:

(1) Priority OWO Woodlands/Stands. Stands of Oregon white oak or oak/conifer/native tree associations where the stand has at least three live oak trees of 6-inch minimum diameter, located within 118 feet of each other, and as determined using the procedure in Appendix 1 of WDFW Best management practices for mitigating impacts to Oregon white oak habitat, dated January 2, 2024 (or as revised in updated guidance).

(a) OWO woodlands/stands can be interrupted by development features that significantly reduce the connectivity of the woodland/stand such as:

(i) Multilane paved road(s) with two or more travel lanes in each direction and their maintained rights-of-way.

(ii) Areas where legally established structures and impervious surfaces are present for more than 65% of the area.

(2) Individual OWO trees having a diameter at breast height (DBH) of 6 inches or more.

2. Natural ponds under 20 acres and their submerged aquatic beds that provide critical fish or wildlife habitat.

3. Waters of the State, which are defined in WAC Title 222, Forest Practices Rules and Regulations. Waters of the State must be classified using the system in WAC 222-16-030. In classifying waters of the state as FWHCAs the following may be considered:

(a) Species present which are endangered, threatened, sensitive, or priority;

(b) Species present which are sensitive to habitat manipulation;

(c) Historic presence of priority species;

(d) Existing surrounding land uses that are incompatible with salmonid habitat;

(e) Presence and size of riparian ecosystem;

(f) Existing water rights; and

(g) The intermittent nature of some of the higher classes of Waters of the State.

4. Lakes, ponds, streams and rivers planted with game fish, including those planted under the auspices of a federal, state, local, or tribal program and waters which support priority fish species as identified by the Washington Department of Fish and Wildlife.

5. Areas with which State or Federally designated endangered, threatened, and sensitive species have a primary association.

6. Habitats and species of local importance that have been identified as sensitive to habitat manipulation. Areas identified must represent either high-quality native habitat or habitat that has a high potential to recover and is of limited availability, highly vulnerable to alteration, or provides landscape connectivity that contributes to the integrity of the surrounding landscape. In designating habitat and species of local importance, the following characteristics will be considered:

(a) Local population of native species that are in danger of extirpation or vulnerable and in decline.

(b) The species or habitat has recreation, tribal, or other special value.

(c) Long-term persistence of the species is dependent on protection, maintenance, or restoration of nominated habitat.

(d) Protection by other county, state, or federal policies and laws is not adequate to prevent degradation of the species or habitat.

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

7. ~~Area critical for habitat connectivity~~Habitat Corridors, which are relatively undisturbed areas and unbroken tracts of vegetation that connect Biodiversity Areas, other Priority Habitat, and Critical Areas. Habitat corridors may ~~-~~include~~ing~~ ~~-~~Open Space Corridors. ~~designated in the City's comprehensive plan.~~

8. State natural area preserves and natural resource conservation areas.

13.11.520 Standards.

A. General Standards.

1. No development, including temporary clearing and grading, shall be allowed within a Fish and Wildlife Habitat Conservation Area with which state or federally endangered, threatened or sensitive species have a primary association without approval from the City of Tacoma and~~/or~~ WDFW.

2. Preservation of FWHCAs are necessary to improve the likelihood that species will survive and or reproduce. Alteration of FWHCAs may reduce this likelihood. Activities allowed in FWHCAs shall be consistent with the species located there and all applicable state and federal regulations regarding that species. In determining allowable activities for FWHCAs that are known or that become known, the provisions of the Washington State Hydraulic Code, WDFW's Management Recommendations for Washington Priority Habitats and Species, best available science, and recommendations by other state or federal agencies with expertise for the species or habitat shall be reviewed. Development in these areas shall be in accordance with the requirements of the underlying zone, ~~and~~ any overlapping critical area classification, and the modification allowances in TMC 13.11.550.

3. In accordance with TMC 13.11.160.B., where a designated FWHCA geographically coincides with another critical area, all appropriate critical area standards and associated buffer/management area/~~geo~~ setback requirements shall apply as described within this Chapter.

4. Condition.

a. The following developments or uses may be considered as an elimination or significant reduction in the ability of an area to serve as a biodiversity area or habitat corridor for wildlife use. The permanence and extent of the use or development shall be considered.

(1) Multilane paved road(s) with two or more travel lanes in each direction and their maintained rights-of-way.

(2) Permanent wildlife-impassible fence(s) and other permanent barriers that prevent wildlife movement.

(3) Areas where legally established structures and impervious surfaces are present for more than 65% of the area.

(4) Open Space Corridors that have significant development designated for recreation activities that would conflict with wildlife presence or access.

b. The following are examples of uses that may not reduce or eliminate the use of the area by wildlife or as a corridor.

(1) Gravel road(s) and driveways

(2) Trails used for passive recreation

(3) Wildlife-passible fence(s)

(4) Unmaintained rights-of-way

B. FWHCA Management Areas Standards.

1. FWHCA management areas are used to protect and manage activities in or adjacent to areas with a specific priority species. The location and dimensions of FWHCA Management Areas are dependent on the species and habitat and as defined by specific management recommendations established by the Washington Department of Fish and Wildlife and/or other state/federal agencies. While the standards for protection are species specific and established by other agencies, the FWHCA Management Areas remain subject to all applicable standards of this chapter.

If a proposal meets the standards of this chapter and demonstrates that they are meeting the management recommendations for the priority species and their management area, then a separate Critical Area permit may not be necessary (See TMC 13.11.190.D).

2. Typical standards may include seasonal restrictions for activities and required buffer widths from nesting sites. A Habitat Management Plan approved by WDFW may be required.

C. Biodiversity Area~~s and Corridors~~ Standards.

1. In managing Biodiversity Areas ~~and Corridors~~, the intent is to maintain rare and uncommon plant species and associations, ~~and~~ large patches dominated by~~of~~ native vegetation that provide habitat and general ecological services, and connecting corridors for animal movement ~~as well as general ecological services~~. Preservation of Biodiversity Areas ~~and Corridors~~ is necessary to minimize the impacts of development to wildlife and conserve the City's most diverse areas. The following standards apply:

a. Preserve existing native vegetation on the site to the maximum feasible extent, prioritizing the most valuable and sensitive environmental assets by developing the least impactful area.

b. Maintain biodiversity functions to prevent habitat degradation and fragmentation and preserve habitat for priority and common urban species, as supported by the Best Available Science.

c. The applicant shall avoid all actions that degrade the functions and values of a Biodiversity Area ~~and Corridor~~. When impacts cannot be avoided, they should be minimized and mitigated by limiting overall vegetation clearance, maintaining corridors, protecting the most sensitive environmental features, and clustering development that does occur.

D. Oregon White Oak Habitat Standards.

1. The protected area of an OWO woodland/stand is determined by a polygon connecting the outer limits of the critical root zone or canopy coverage used in the calculation in TMC 13.11.510.B.1.b(1), whichever is greater.

2. The protected area of individual OWO trees is the critical root zone or the extent of canopy, whichever is greater.

E. Habitat Corridor Standards.

1. The following habitats shall be considered for connection within 300 feet of the subject habitat feature (e.g., wetland, stream, Biodiversity Area, etc.):

a. A legally protected, relatively undisturbed and vegetated area (e.g., Priority Habitats, compensatory mitigation sites, wildlife areas/refuges, national, county, and state parks where they have management plans with identified areas designated as Natural, Natural Forest, or Natural Area Preserve), or

b. An area that is the site of a Watershed Project identified within, and fully consistent with, a Watershed Plan as defined by RCW 89-08-460, or

c. An area where development is prohibited according to the provisions of the local shoreline master program, or

d. An area with equivalent habitat quality that has conservation status in perpetuity, in consultation with WDFW, or

e. Other critical areas, including but not limited to wetlands, riparian areas, and FWHCAs, or

f. Areas that meet the habitat corridor definition in TMC 13.01.100.H.

2. The standard habitat corridor width is 100 feet or more.

* * *

13.11.550 FWHCA Modification.

A. All proposed modification in a FWHCA shall be in accordance with the standards of this Chapter, except where allowed through 13.11.200 or 13.11.210.

B. Modification and mitigation will comply with applicable General Standards of TMC 13.11.250 and mitigation requirements specified in 13.11.270, including, but not limited to, mitigation sequencing, mitigation plan requirements, monitoring and bonding.

C. Where a designated FWHCA geographically coincides with another Critical Area, modification and mitigation will comply with applicable requirements described within this chapter for each type of critical area and/or as recommended by state or federal agencies.

D. Habitat Management Plan.

If the critical area review process as described in this chapter (13.11.190) determines that the proposed project will adversely impact a FWHCA, a Habitat Management Plan shall be prepared as part of a development proposal, the following standards shall apply.

1. The Habitat Management Plan shall be prepared in coordination with the WDFW or federal agencies where appropriate and by a qualified professional. The professional must have an education and professional work experience relevant to the species and habitat being evaluated (See TMC 13.01.110 Qualified Professional).

2. The Habitat Management Plan may be included as part of a larger critical areas report and shall include all applicable requirements as listed in TMC 13.11.230 and, at a minimum, the following:

a. Analysis and discussion on the project's effects on the FWHCA;

b. An assessment and discussion on special management recommendations which have been developed for species or habitat located on the site by any federal or state agency;

c. A discussion of mitigation sequencing and proposed mitigation measures which could avoid or minimize impacts;

d. Assessment and evaluation of the effectiveness of mitigation measures proposed; and

e. Assessment and evaluation of ongoing management practices which will protect the FWHCA after development of the project site, including proposed monitoring and maintenance programs.

f. For Biodiversity Areas ~~and Corridors~~ a detailed description of vegetation on and adjacent to the project area is required and may include a surveyed site plan with the specific location and species name of trees with a 12-inch or greater Diameter at Breast Height (DBH).

E. The following shall apply for proposed modifications within or affecting Biodiversity Areas ~~and Corridors~~.

1. In determining which areas are least sensitive to development impacts, the following criteria shall apply:

a. A minimum of 65% of the Biodiversity Area ~~and Corridor area~~ shall be left in an undisturbed natural vegetated state. The undisturbed area set aside shall contain all other Priority Habitats, Priority Species, and Critical Areas and Buffers that may be present, per applicable standards.

(1) Legally created existing parcels 5,000 square feet in size or smaller must maintain an minimum of 40% of the Biodiversity Area ~~and Corridor~~ in an undisturbed natural vegetated state.

b. A contiguous ~~Biodiversity~~ Habitat Corridor with a width of 300-feet shall be retained connecting onsite and offsite Priority Habitats and Critical Areas including shorelines, as well as significant trees per the definition below. The minimum 300 feet shall be a contiguous area that enters and exits the property.

(1) Where a legally created existing parcel cannot accommodate the 300 foot width corridor due to parcel size or configuration, then the maximum feasible width shall be provided in conjunction with maintaining the designated minimum undisturbed gross site area for the size of parcel.

(2) Habitat corridor connections may be required to be wider when additional width is supported by the Best Available Science to support the function and values of species or habitat present.

c. Retain exceptional trees, significant tree groves, and rare or uncommon plant species or habitat types as identified by the City or by state or federal agencies. ~~Conifers and Madrone are considered exceptional trees.~~

(1) Significant tree groves. Significant tree groves means a group of 8 or more trees 12- inches diameter or greater that form a continuous canopy. Trees that are less than 12-inch in diameter that are part of a grove's continuous canopy are also considered to be ~~exceptional~~ significant and cannot be removed if their removal may damage the health of the grove. Street trees shall not be included in determining whether a group of trees is a grove.

(2) Retain exceptional trees. "Exceptional tree" means a tree or group of trees that because of its unique historical, ecological, or aesthetic value constitutes an important community resource, and is determined as such by the Director according to standards and procedures promulgated by the Department of Planning and Development. Conifers greater than 30 inches DBH, and Madrone greater than 12 inches DBH are considered exceptional trees.

d. Development must be clustered and located in the least sensitive areas and must use Low Impact Development practices where feasible.

2. Proposals that meet the minimum standards in 1 above may be reviewed under a Minor Development permit. See TMC 13.11.220.B.2. Other proposals will require review under a Development Permit and must also demonstrate the following:

a. The project cannot meet the minimum standards in 1 above due to site constraints such as parcel size or other physical conditions and the inability is not the result a self-created hardship.

3. In planning the development of the site, consideration shall also be given to ongoing and future management needs such as vegetation maintenance, generally favoring setting aside a large, connected, contiguous areas as feasible.

4. Buffer Averaging or reduction as described within section ~~TMC 13.11.250.D.,~~ TMC 13.11.330, and TMC 13.11.430 for wetlands and streams can be utilized to average or reduce portions of buffers to accommodate development.

a. The standards for preservation of 65% of the gross site area and minimum 300 foot corridor width still apply.

5. Habitat Corridor width averaging. The width of the corridor may be averaged to allow for reasonable use of the property when the following are met:

a. The averaged corridor width will not result in degradation of the ~~Biodiversity~~ Habitat Corridor or its ability to facilitate wildlife movement;

b. The corridor width is increased adjacent to the high-functioning or more sensitive areas and decreased adjacent to lower-functioning or less sensitive portion;

c. The corridor at its narrowest point is never less than ¾ of the required width; and

d. The total area of the corridor is equal to the area required without averaging.

F. For proposed modifications to Oregon White Oak Habitat, WDFW management recommendations shall apply. Alternative mitigation may be considered on a case-by-case basis only after it has been demonstrated that compliance with the best available science and applicable guidance issued by WDFW is infeasible.

G~~F~~. Innovative mitigation per TMC 13.11.270.L~~M~~.

When the project cannot meet the minimum standards of this section or the project proponent can demonstrate that a different method will achieve equivalent or better protections for the critical area, it will be reviewed per the standards in 13.11.270.L~~M~~.

H~~G~~. Protection covenant such as a conservation easement shall be recorded with Pierce County Assessor's Office for critical areas that are identified as part of the review process per 13.11.280 (Conditions, Notice on Title, and Appeals).

I~~H~~. If mitigation is performed off-site, a conservation easement or other legal document must be provided to the City to ensure that the party responsible for the maintenance and monitoring of the mitigation has access and the right to perform these activities.

13.11.560 Biodiversity Area ~~and Corridor~~ Mitigation Requirements.

A. Mitigation must compensate for the adverse impacts and achieve equivalent or higher ecological functions including, vegetation diversity and habitat complexity and connectivity.

B. Enhancement or Restoration requires the following ratios:

Onsite Mitigation	Offsite Mitigation
1.5:1 Enhancement or Restoration	3:1 Enhancement or Restoration
Exceptional trees = 2:1	Exceptional trees = 4:1

C. The protection covenant or conservation easement recorded with Pierce County Assessor's Office shall include all mitigation areas including those located off-site.

D. The following shall be incorporated to minimize disturbance:

1. Minimize light disturbance by directing lights away from critical areas.

2. Place activities that generate noise furthest from critical areas.

3. Limit disturbance from humans and pets with "impenetrable" natural vegetation between the development and critical areas.

4. Design infrastructure to minimize impacts through such steps as designing narrower streets or integrating LID approaches.

5. Seasonal restriction of construction activities.

* * *

13.11.620 Standards.

A. All development proposals shall comply with Title 2 Building and Development Code regarding Flood Hazard and Coastal High Hazard Areas, and Title 12 for general and specific flood hazard protection. Development shall not reduce the base flood water storage ability. Construction, grading, or other regulated activities which would reduce the flood water storage ability must be mitigated by creating compensatory storage on- or off-site. Compensatory storage provided off-site for purposes of mitigating habitat shall comply with all applicable wetland, stream, and fish and wildlife habitat conservation area requirements. Compensatory storage provided off-site for purposes of providing flood water storage capacity shall be of similar elevation in the same floodplain as the development. Compensatory storage is not required in Coastal A and V Zone flood hazard areas or in flood hazard areas with a mapped floodway but containing no functional salmonid habitat on the site. For sites with functional connection to salmonid bearing waters that provide a fish accessible pathway during flooding, compensatory storage areas shall be graded and vegetated to allow fish refugia during flood events and their return to the main channel as floodwater recede without creating flood stranding risks. Base flood data and flood hazard notes shall be shown on the face of any recorded plat or site plan, including, but not limited to, base flood elevations, flood protection elevation, boundary of floodplain, and zero rise floodway.

B. Proposals for development within a floodplain shall comply with the Endangered Species Act (ESA). Floodplain development shall include an assessment of the impact of the alteration on water quality and aquatic and riparian habitat. At the discretion of the Director, the assessment may be conducted by City staff under the provisions of TMC 13.11.190.B. If the PDS Director, or designee, determines that an application is required under TMC 13.11.220 for impacts identified by staff or an applicant provided assessment, the applicable provisions of TMC 13.11.100 and 13.11.200 shall apply. The assessment shall be:

1. Conducted by a qualified professional;

2. Prepared in accordance with Regional Guidance for Floodplain Habitat Assessment and Mitigation, FEMA Region X, 2010. The assessment shall determine if the project would adversely affect any one or more of the following:

a. the primary constituent elements identified when a species is listed as threatened or endangered;

b. Essential Fish Habitat designated by the National Marine Fisheries Service;

c. Fish and Wildlife Habitat Conservation Areas;

d. vegetation communities and habitat structures;

e. water quality;

f. water quantity, including flood and low flow depths, volumes and velocities;

g. the river or stream channel's natural planform pattern and migration process, if applicable;

h. spawning substrate, if applicable; and

i. floodplain refugia, if applicable.

C. Projects with adverse effects shall demonstrate compliance with the mitigation sequencing requirements of 13.11.270.F.

D. Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the level of the base flood elevation (100-year) at the site or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

* * *

13.11.710 Designation.

A. Geologically hazardous areas are critical areas susceptible to severe erosion, landslide activity, or other geologic events.

The more severe hazard areas may not be suitable for placing structures or locating intense activities or uses due to the inherent threat to public health and safety. Vegetation removal during construction and development on or above the slope alters surface runoff and groundwater infiltration patterns that can lead to increased slope instability. Erosion, excavation, or wave action at the toe or base of the slope can also lead to increased slope instability.

B. Designation of Geologically Hazardous Areas. Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. Areas susceptible to one or more of the following types of geo-hazards shall be designated as a geologically hazardous area. Further descriptions of these areas can be found in TMC 13.11.720.~~:~~

1. Erosion hazard;
2. Landslide hazard;
3. Seismic hazard;
4. Mine hazard;
5. Volcanic hazard; and
6. Tsunami hazard.

13.11.715 Applicability.

Geologically Hazardous Areas are subject to all applicable provisions of this chapter and the following:

A. When the Geologically Hazardous Area, buffer, and/or ~~geo-~~setback cannot be avoided by locating the development activity outside of the Geologically Hazardous Area, buffer, and/or setback, the risk to public health and safety may be minimized by engineering, design, or modified construction practices.

B. When technology cannot reduce the risk to acceptable levels the Geologically Hazardous Area and setback must be avoided.

C. When other critical areas are present, the standards specific to those critical areas also apply.

13.11.720 Classification.

A. Classification of specific hazard areas.

1. Erosion Hhazard Aareas.

Erosion hazard areas generally consist of areas where the combination of slope and soil type makes the area susceptible to erosion by water flow, either by precipitation or by water runoff. Concentrated stormwater runoff is a major cause of erosion and soil loss. Erosion hazard critical areas include the following:

a. Areas with high probability of rapid stream incision, stream bank erosion or coastal erosion, or channel migration.

b. Areas defined by the Washington Department of Ecology Coastal Zone Atlas as one of the following soil areas: Class U (Unstable) includes severe erosion hazards and rapid surface runoff areas, Class Uos (Unstable old slides) includes areas having severe limitations due to slope, Class Urs (Unstable recent slides), and Class I (Intermediate).

c. Any area characterized by slopes greater than 15 percent; and the following types of geologic units as defined by draft geologic USGS maps: m (modified land), Af (artificial fill), Qal (alluvium), Qw (wetland deposits), Qb (beach deposits), Qtf (tide-flat deposits), Qls (landslide deposits), Qmw (mass-wastage deposits), Qf (fan deposits), Qvr and Qvs series of geologic material types (Vashon recessional outwash and Steilacoom Gravel), and Qvi (Ice-contact deposits).

d. Slopes steeper than 25% and a vertical relief of 10 or more feet.

e. Areas classified as having severe or very severe erosion potential by the Natural Resources Conservation Service, United States Department of Agriculture.

2. Landslide Hazard Areas.

Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope, slope aspect, structure, hydrology, or other factors. Landslide hazard areas are identified as any area ~~with all three of~~meeting the following ~~characteristics~~:

a. Any slope area with the combination of the following three characteristics:

(1) Slopes steeper than 15~~25~~ percent and a vertical relief of ten (10) or more feet.

(2)~~b.~~ Hillsides intersecting geologic contacts ~~that contain impermeable soils (typically silt and clay) frequently inter-bedded with permeable granular soils (predominantly sand and gravel), or impermeable soils overlain~~ with relatively permeable sediment~~soils~~ overlying a relatively impermeable sediment or bedrock; and~~.~~

(3)~~c.~~ Springs or groundwater seepage.

b~~d~~. Any area which has exhibited movement during the Holocene epoch (from 10,000 years ago to present) or that are underlain or covered by mass wastage debris of that epoch.

c~~e~~. Any area potentially unstable due to rapid stream incision stream bank erosion or undercutting by wave action.

d~~f~~. Any area located on an alluvial fan presently subject to, or potentially subject to, inundation by debris flows or catastrophic flooding~~deposition of stream transported sediments~~.

e~~g~~. Any area where the slope is greater than the angle of repose of the soil; that is, the slope relies on cohesion for stability.

f~~h~~. Any shoreline designated or mapped as Class U (Unstable), Uos (Unstable old slides), Urs (Unstable recent slides), or I (Intermediate) by the Washington Department of Ecology Coastal Zone Atlas.

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

h. Slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking.

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

j. Any area within the City mapped by the most up to date Pierce County landslide inventory prepared by the Washington State Department of Natural Resources (DNR) and LIDAR imagery.

k. Landslide Hazard sub-classifications: Landslide hazard areas shall be classified into categories which reflect each landslide hazard areas past landslide activity and the potential for future landslide activity based on an analysis of slope instability. Landslide hazard areas shall be designated as follows:

(1) Active Landslide Areas.

A composite of the active landslides and/or unstable areas, including that portion of the top of slope and slope face subject to failure and sliding as well as toe of slope areas subject to impact from down slope run-out, identified and mapped during a geological assessment of a site. An active landslide hazard area exhibits one or more of the following:

(a) Areas of historical landslide movement on a site which have occurred in the past century including areas identified on the Washington Department of Ecology Washington State Coastal Atlas Map as Urs (unstable recent slide).

(b) Any landslide or areas susceptible to landslides as identified in the most up to date Pierce County landslide inventory by Washington State DNR or as updated.

(c) Unstable areas that exhibit geological and geomorphologic evidence of past slope instability or landsliding or possess geological indicators (stratigraphy, ground water conditions, etc.), that have been determined through a geotechnical report to be presently failing or may be subject to future landslide activity. The impact of the proposed development activities must be considered in defining the extent of the active areas.

(d) Interim areas are located between areas identified through a geotechnical report as an active landslide hazard area. Interim areas will be considered part of the active landslide hazard area if the required top of slope or toe of slope landslide hazard area buffer encompasses the area.

(2) Inactive Landslide Areas.

Areas that have been identified as potential landslide hazard areas, but, through the geological assessment process per Section 13.11.730.J, meet one of the following conditions:

(a) No indicators exist that indicate the potential for future landslide activity to occur.

(b) A slope stability analysis has indicated that there is no apparent landslide potential.

(c) Adequate engineering or structural measures have been provided in a geotechnical report that mitigates the potential for a future landslide to occur as a result of current or past development activity. The engineering or structural measures must provide a minimum factor of safety of 1.5 static conditions and 1.2 for dynamic conditions. Analysis of dynamic (seismic) conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code, or as recommended by the geotechnical engineer based on site specific conditions that require alternative values. The engineering or structural measures must be completed, inspected and accepted for the area to be deemed stable. Construction sequencing recommendations must be provided by the geotechnical professional when a proposed development will be constructed concurrently with the engineering or structural measures.

(d) A geotechnical report has been prepared and the results of that report indicate that an area is not a landslide hazard area.

3. Seismic hazard areas.

Seismic hazard areas shall include areas subject to severe risk of damage as a result of seismic induced settlement, shaking, lateral spreading, surface faulting, slope failure, or soil liquefaction. These conditions occur in areas underlain by soils of low cohesion or density usually in association with a shallow groundwater table. ~~Seismic hazard areas shall include areas subject to severe risk of damage as a result of seismic induced settlement, shaking, lateral spreading, surface faulting, slope failure, or soil liquefaction. These conditions occur in areas underlain by soils of low cohesion or density usually in association with a shallow groundwater table. Seismic hazard areas shall be as defined by the Washington Department of Ecology Coastal Zone Atlas (Seismic Hazard Map prepared by GeoEngineers) as: Class U (Unstable), Class Uos (Unstable old slides), Class Urs (Unstable recent slides), Class I (Intermediate), and Class M (Modified) as shown in the Seismic Hazard Map.~~

4. Mine Hazard Areas.

Mine hazard areas are those areas underlain by or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of probable sink holes, gas releases, or subsidence due to mine workings. ~~Underground mines do not presently exist within City limits.~~

Note: An underground structure, consisting of a partially completed underground railroad tunnel, exists within City limits, as defined in the mine hazard areas map. The tunnel was constructed in 1909 and discontinued that same year due to excessive groundwater flows within the tunnel. The dimensions of the tunnel are presently unknown, and it was reportedly backfilled with wood, sand, and gravel in 1915.

5. Volcanic Hazard Areas.

Volcanic hazard areas are areas subject to pyroclastic flows, lava flows, debris avalanche, and inundation by debris flows, lahars, mudflows, or related flooding resulting from volcanic activity. The most likely types of volcanic hazard within the City are mudflows, lahars, or flooding relating to volcanic activity. The boundaries of the volcanic hazard areas within the City are shown in the volcanic hazard map.

6. Tsunami hazard areas.

Tsunami hazard areas and seiche waves include~~are~~ coastal areas and large lake shoreline areas susceptible to flooding and inundation as the result of excessive wave action derived from seismic, atmospheric, or other geologic events. Currently, no specific boundaries have been established in the City limits for this type of hazard area.

13.11.730 General Standards.

The standards in this section apply only to geologically hazardous areas. The following definitions apply to this section:

~~"Geo-setback" is the minimum building setback from the applicable geo-hazard area.~~

~~"Geo-buffer" is a zone within a geo-setback area required to be vegetated with either native or non-native vegetation.~~

A. Standard Buffers.

1. Determining erosion hazard area and landslide hazard area buffer widths:

a. The buffer width shall be measured on a horizontal plane from a perpendicular line established at the edge of the erosion or landslide hazard area limits (from the top and toe of slope).

b. An undisturbed buffer of existing vegetation shall be required for a hazard area to protect existing native vegetation. The required buffer width is either the greater amount of the following two distances, or the minimum distance recommended by the geotechnical professional measured from the edge of the hazard area. In the case of a buffer reduced below these two distances, the standards of the buffer modification section shall apply:

(1) 50 feet from all edges of the erosion hazard area limits; or

(2) A distance of one-third the height of the slope if the regulated activity is at the top of the slope and a distance of one-half the height if the regulated activity is at the bottom of the slope.

2. Buffer Modification:

a. Modifications to the erosion and/or landslide hazard area buffer consistent with TMC 13.11.730.C. as applicable may be considered at the approval by the Director if the modification is found to meet TMC 13.11.730.I.

b. A minimum 10-foot buffer shall be maintained and the proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code.

c. All uses and development must meet the standards in TMC 13.11.730.D.

B. Small Project Waiver.

1. The Director may approve new accessory structures which are not designed for human occupancy, such as storage or utility space, or additions to existing principal structures in a landslide hazard or erosion hazard buffer without submittal of a geotechnical report if no construction occurs over or within any other critical area or buffer, and if the applicant demonstrates that the proposal meets the following criteria:

a. The new accessory structure or addition to an existing principal structure is on a lot that has been in existence as a legal building site prior to October 31, 1992;

b. The development is consistent with TMC 13.11.145;

c. The new accessory structure is less than 1,000 square feet of floor area for existing residences;

d. Addition to existing residences, including decks have a maximum 250 square feet footprint of building, deck or roof area and are not closer to the top or toe of the slope than the existing residence;

e. The installation of fences where they do not impede emergency access;

f. Removal of noxious or invasive weeds, provided such areas are protected from erosion with either native vegetation or other approved erosion protection;

g. It is not practicable to build the accessory structure or addition to an existing principal structure for the intended purpose outside of the landslide or erosion hazard area buffer;

h. The location of the accessory structure or addition to an existing principal structure minimizes the impact on the steep slope erosion hazard area and/or buffer; and

i. In landslide hazard areas the Director may require a soils report prepared by a qualified geotechnical engineer or geologist licensed by the State of Washington demonstrates that it is safe to construct the new accessory structure or the addition to an existing structure.

2. Director's Decision:

a. The Director shall require the use of fencing with a durable and visible protective barrier during the construction to protect the remainder of the hazard area and buffer.

b. The Director shall require additional measures to protect the remainder of the hazard area and buffer from the impacts of approving new accessory structures or additions to existing principal structures.

C. General Regulations.

1. The following regulations apply to all geologically hazardous areas:

a. New development, modification to existing structures, or the creation of new lots that would cause foreseeable risk from geological conditions to people or improvements during the life of the development shall be prohibited.

b. New development, modification to existing structures, or the creation of new lots that would require structural stabilization over the life of the development shall be prohibited, except where:

(1) stabilization is necessary to protect a permitted use; and

(2) no alternative location is available; and

(3) no net loss of ecological functions will result; and

(4) stabilization measures shall conform to all provisions included in TMC 2.19.050-.070.

c. All developments shall be required to comply with the building code requirements of the TMC.

d. All proposed modifications to any geological hazard area or buffer shall remain subject to mitigation sequencing and any unmitigated impacts resulting from a modification are required to be compensated for consistent with TMC 13.11.230.B.4, TMC 13.11.270.F, and TMC 13.11.290.

e. Mitigation sequencing shall not apply where staff has determined through a site-specific evaluation that there is not a significant geologic hazard risk and no other critical area exists.

f. Any alteration shall not adversely impact other critical areas.

g. Stabilization structures or measures to protect existing primary residential structures may be permitted where no alternatives, including relocation or reconstruction of existing structures, are found to be feasible, and less expensive than the proposed stabilization measure provided they are designed and constructed consistent with the provisions of TMC 2.19.050-.070.

h. Any development, encroachment, filling, clearing, or grading, timber harvest, building structures, impervious surfaces, and vegetation removal within geologically hazardous areas and associated buffers shall be prohibited except as specified in TMC 13.11.730.D.-I.

D. Erosion and Landslide ~~h~~Hazard areas - Standards.

1. In addition to the general regulations set forth in subsection C. above, development and activities within an erosion or landslide hazard critical area or their associated buffers shall incorporate the following additional standards in design of the proposal as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

a. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography; Terracing of the land, however, shall be kept to a minimum to preserve natural topography where possible.

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

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

d. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining walls;

e. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;

f. Where change in grade outside the building footprint is necessary the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with these criteria;

g. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining structures that are designed to the same life and performance criteria as the adjacent structure;

h. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;

i. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and

j. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of this Program.

2. The development shall not increase surface water discharge or sedimentation onsite or to adjacent properties beyond pre-development conditions. Note that point discharges onto adjacent properties is not permitted without approved easements. Dispersed flows meeting pre-developed flows will be permitted provided other development standards can be met.

3. Development shall be designed to minimize impervious lot coverage. All development shall be designed to minimize impervious lot coverage and should incorporate understructure parking and multi-level structures within the existing height limit.

4. Roads, walkways, and parking areas should be designed parallel to topographic contours with consideration given to maintaining consolidated areas of natural topography and vegetation.

5. Removal of vegetation shall be minimized and only that which is needed to accommodate a permitted structure. Any replanting that occurs shall consist of trees, shrubs, and ground cover that is compatible with the existing surrounding vegetation, meets the objectives of erosion prevention and site stabilization, and does not require permanent irrigation for long-term survival.

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

7. Structures and improvements shall be clustered where possible. Driveways and utility corridors shall be minimized through the use of common access drives and corridors where feasible. Access shall be in the least sensitive area of the site.

8. Active Landslide Hazard – Standards.

a. Any new development, encroachment, filling, clearing or grading, impervious surfaces, and vegetation removal is prohibited within an Active Landslide Hazard Area and buffers except as specified in the following specific instances:

(1) Stormwater Conveyance. Stormwater conveyance shall be allowed when it is conveyed through a high-density polyethylene stormwater pipe with fused joints and when no other stormwater conveyance alternative is available. The pipes shall be located on the surface of the ground and be properly anchored so that it will continue to function in the event of an underlying slide.

(2) Utility Lines. Utility lines will be permitted when no other conveyance alternative is available. The line 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. Utility lines may be permitted when it can be show that no other route alternative is available.

(3) Trails. Trails shall be allowed when all of the following conditions have been met:

(a) The removal or disturbance of vegetation, clearing or grading shall be prohibited during the wet season (November 1 through May 1);

(b) The proposed trail shall not decrease the existing factor of safety within the active landslide hazard area, or any required buffer;

(c) The proposed trail cannot be located outside of the active landslide hazard area or its associated buffer due to topographic or site constraints;

(d) The proposed trail is for non-vehicular use only, and is no wider than 4 feet;

(e) Trails shall not be sited within active landslide hazards or their associated buffers when there is such a high risk of landslide activity that use of the trail would be hazardous;

(f) Trails shall be designed and constructed using an engineered drainage system or other methods to prevent the trail from channeling water.

b. No small projects waivers as described in TMC Section 13.11.730.B. are allowed in active landslide hazard areas and their buffers.

~~1. Structures and improvements shall be required to maintain a minimum 50-foot geo-setback from the boundary of all erosion hazard areas (Note: where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops greater than 10 feet or more vertically within a horizontal distance of 25 feet). No geo-setback shall be required where the vertical relief of the slope is 10 feet or less. The geo-setback may be reduced to 30 feet where the vertical relief of the slope is greater than 10 feet but no more than 20 feet.~~

~~The 30-foot or 50-foot geo-setback may be reduced to a minimum of 10 feet for the following conditions:~~

~~a. Construction of one-story detached accessory structures (garages, sheds, playhouses of similar structures not used for continuous occupancy) with less than 1,000 square feet of floor area, whichever is greater for existing residences.~~

~~b. Addition to existing residences, including decks that have a maximum 250 square feet footprint of building, deck or roof area, whichever is greater, and are not closer to the top or bottom of the slope than the existing residence.~~

~~c. Installation of fences where they do not impede emergency access.~~

~~d. Clearing only up to 2,000 square feet during May 1 to October 1, if determined by the Building Official to not cause significant erosion hazard.~~

e. Grading up to 5 cubic yards during April 1 to October 1 over an area not to exceed 2,000 square feet, if determined by the Building Official that such grading will not cause a significant erosion hazard.

f. Removal of noxious or invasive weeds, provided such areas are protected from erosion with either native vegetation or other approved erosion protection.

g. Forest practices regulated by other agencies.

h. The construction of public or private utility corridors; provided it has been demonstrated that such construction will not significantly increase erosion risks.

i. Trimming and limbing of vegetation for the creation and maintenance of view corridors, removal of site distance obstructions as determined by the City Traffic Engineer, removal of hazardous trees, or clearing associated with routine maintenance by utility agencies or companies; provided that the soils are not disturbed and the loss of vegetative cover will not significantly increase risks of landslide or erosion. See TMC 13.11.200 and 210.

j. The construction of approved public or private trails; provided they are constructed in a manner which will not contribute to surface water runoff.

k. Remediation or critical area restoration project under the jurisdiction of another agency.

l. Where it can be demonstrated through an erosion hazard analysis prepared by a geotechnical specialist that there is no significant risk to the development proposal or adjacent properties, or that the proposal can be designed so that any erosion hazard is significantly reduced, the geo-setback may be reduced as specified by the geotechnical specialist. This geo-setback may be increased where the Building Official determines a larger geo-setback is necessary to prevent risk of damage to proposed and existing development. The development must also comply with the Specific Development Standards for Erosion and Landslide Hazard Areas. The erosion hazard analysis shall provide the following information:

(1) Alternative setbacks to the erosion hazard area.

(2) Recommended construction techniques for minimizing erosional damage.

(3) Location and methods of drainage and surface water management.

(4) Recommended time of year for construction to occur.

(5) Permanent erosion control (vegetation management and/or replanting plan) to be applied at the site.

m. In addition to the erosion hazard analysis, a Construction Stormwater Pollution Prevention Plan shall be required that complies with the requirements in the currently adopted City Stormwater Management Manual. Clearing and grading activities in an erosion hazard area shall also be required to comply with the City amendments to the most recently adopted International Building Code.

2. Erosion hazard areas that are also landslide hazard areas shall be required to comply with all standards for landslide hazard areas as well.

B. Landslide hazard areas.

1. Structures and improvements shall be required to maintain a minimum 50-foot geo-setback from the boundary of all landslide hazard area. (Note: where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops greater than 10 feet or more vertically within a horizontal distance of 25 feet). No geo-setback shall be required where the vertical relief of the slope is 10 feet or less. The geo-setback may be reduced to 30 feet where the vertical relief of the slope is greater than 10 feet but no more than 20 feet.

The 30-foot or 50-foot geo-setback may be reduced to a minimum of 10 feet for the following conditions:

a. Construction of one-story detached accessory structures (garages, sheds, playhouses of similar structures not used for continuous occupancy) with less than 1,000 square feet of floor area, whichever is greater.

b. Addition to existing residences, including decks that have a minimum 250 square feet footprint of building, deck or roof area, whichever is greater, and are not closer to the top or bottom of the slope than the existing residence.

c. Installation of fences where they do not impede emergency access.

d. Clearing only up to 2,000 square feet during May 1 to October 1, if determined by the Building Official to not cause significant landslide hazard.

e. Grading up to 5 cubic yards during April 1 to October 1 over an area not to exceed 2,000 square feet, if determined by the Building Official that such grading will not cause a landslide hazard.

f. Removal of noxious or invasive weeds, provided such areas are protected from erosion with either native vegetation or other approved erosion protection.

g. Forest practices regulated by other agencies.

h. Slopes modified by an engineered cut or fill engineered retaining wall system, where setbacks, if any, were established by the previous engineered design.

i. Steep slopes resulting for right-of-way improvements (streets, alleys, sidewalks, etc) may be exempted by the Building Official if improvements will not decrease slope stability on said property or adjacent properties.

j. The construction of an approved public surface water conveyance, provided it will result in minimum vegetation removal and soil disturbance on the slope.

k. The construction of approved public or private trails; provided they are constructed in a manner which will not contribute to surface water runoff.

l. The construction of public or private utility corridors; provided it has been demonstrated that such construction will not significantly increase landslide risks.

m. Trimming and limbing of vegetation for the creation and maintenance of view corridors, removal of site distance obstructions as determined by the City Traffic Engineer, removal of hazardous trees, or clearing associated with routine maintenance by utility agencies or companies; provided that the soils are not disturbed and the loss of vegetative cover will not significantly increase risks of landslide or erosion. See TMC 13.11.200 and 210.

n. Remediation, critical area restoration, or mining and quarrying where local regulation is pre-empted by state or federal law.

o. Where it can be demonstrated through a geotechnical analysis prepared by a geologic hazards specialist that there is no significant risk to the development proposal or adjacent properties, or that the proposal can be designed so that any landslide hazard is significantly eliminated, the geo-setback may be reduced as specified by the geotechnical engineer. The geo-setback may be reduced to no less than 10 feet where slopes are 40 percent or greater. This geo-setback may be increased where the Building Official determines a larger geo-setback is necessary to prevent risk of damage to proposed and existing development. The development must also comply with all applicable Development Standards. The geotechnical analysis report shall include the following:

(1) A description of the extent and type of vegetative cover.

(2) A description of subsurface conditions based on data from site-specific explorations.

(3) Descriptions of surface runoff and groundwater conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements.

(4) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm.

(5) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down-slope properties.

(6) A study of the slope stability, including an analysis of proposed cuts, fills, and other site grading; and the effect construction and placement of structures will have on the slope over the estimated life of the structures.

~~(7) Recommendations for building site limitations, specifically, a recommendation for the minimum geo-buffer and minimum setback.~~

~~(8) Recommendations for proposed surface and subsurface drainage, considering the soil and hydrology constraints of the site.~~

~~C. Specific Standards for Erosion and Landslide Hazard Areas.~~

~~1. The development shall not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions. Note that point discharges onto adjacent properties is not permitted without approved easements. Dispersed flows meeting pre-developed flows will be permitted provided other development standards can be met.~~

~~2. The development shall not decrease slope stability on adjacent properties.~~

~~3. Such alterations shall not adversely impact other critical areas.~~

~~4. The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the International Building Code.~~

~~5. Structures and improvements shall minimize alterations to the natural contour of the slope, and the foundation shall be tiered where possible to conform to existing topography. Terracing of the land; however, shall be kept to a minimum to preserve natural topography where possible. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation.~~

~~6. Development shall be designed to minimize impervious lot coverage. All development shall be designed to minimize impervious lot coverage and should incorporate understructure parking and multi-level structures within the existing height limit.~~

~~7. Roads, walkways, and parking areas should be designed parallel to topographic contours with consideration given to maintaining consolidated areas of natural topography and vegetation.~~

~~8. Removal of vegetation shall be minimized and only that which is needed to accommodate a structure. Any replanting that occurs shall consist of trees, shrubs, and ground cover that is compatible with the existing surrounding vegetation, meets the objectives of erosion prevention and site stabilization, and does not require permanent irrigation for long-term survival.~~

~~9. The proposed development shall not result in greater risk or need for increased geo-buffers on neighboring properties.~~

~~10. Structures and improvements shall be clustered where possible. Driveways and utility corridors shall be minimized through the use of common access drives and corridors where feasible. Access shall be in the least sensitive area of the site.~~

E~~D~~. Seismic ~~h~~Hazard ~~a~~Areas - Standards.

1. A ~~hazard analysis~~geotechnical report consistent with the requirements of TMC 13.11.730.J shall be prepared~~will be required~~ for structures and improvements in a seismic hazard area. All developments shall be required to comply with the requirements of the most recently adopted edition of the International Building Code. The following types of projects will not require a ~~seismic hazardous analysis~~geotechnical report;

a. Construction of new buildings with less than 1,000~~2,500~~ square feet footprint of floor or roof area, whichever is greater, and which are not designed for human occupancy, such as storage or utility spaces, and are not residential structures or spaces used as places of employment or public assembly.

b. Additions to existing residences, including decks that have a maximum 250 square feet footprint of building, deck or roof area, whichever is greater.

c. Installation of fences where they do not impede emergency access.

~~d. The exceptions above may not apply to areas that are also landslide hazard areas.~~

2. The exceptions above may not apply to areas that are also landslide hazard areas.~~The hazard report shall include the following:~~

~~a. Known and mapped faults within 200 feet of the project area.~~

~~b. Analysis of the potential impacts of seismic activity on the site.~~

~~c. Evaluation of the physical properties of the subsurface soils and their liquefaction potential, and mitigation measures.~~

~~3. All developments shall be required to comply with the requirements of the most recently adopted edition of the International Building Code.~~\

F~~E~~. Volcanic H~~h~~azard A~~a~~reas - Standards.

~~Development in volcanic hazard areas shall comply with the zoning and Building Code requirements of the TMC. New developments in volcanic hazard areas shall be required to submit an evacuation and emergency management plan, with the exception of the following:~~

1. New developments in volcanic hazard areas shall be required to submit an evacuation and emergency management plan, with the exception of the following:

a. Construction of new buildings with less than 1,000~~2,500~~ square feet of floor area or roof area, whichever is greater, and which are not designed for human occupancy, such as storage or utility spaces, and are not residential structures or used as places of employment or public assembly;

b.~~2.~~ Additions to existing residences, including decks that have a maximum 250 square feet footprint of building, deck or roof area, whichever is greater; and

c.~~3.~~ Installation of fences where they do not impede emergency egress.

G~~F~~. Mine H~~h~~azard A~~a~~reas - Standards.

Essential~~Critical~~ facilities, as defined by the currently adopted version of International Building Code, are not permitted in the area of the former railroad tunnel. Other development within 50 feet of the mapped location of the former railroad tunnel shall be required to perform a hazard analysis that includes the information specified in Section 13.11.730.J. Mine hazards discovered and others not identified here may be required to perform a hazard analysis.~~identifies the following:~~

~~1. Location of the development relative to the former tunnel.~~

~~2. Evaluation of the potential effects of tunnel subsidence on the proposed structures.~~

~~3. Recommendations for mitigation of any potential subsidence.~~

H~~G~~. Tsunami H~~h~~azard A~~a~~reas - Standards.

Development in tsunami and seiche hazard areas shall comply with the zoning and Building Code requirements of the TMC. There are no other specific development standards for tsunami hazard or seiche hazard areas.

I. Approval of Geologic Hazard Area Modification.

Modifications to geologic hazard critical areas and their associated buffers shall only be approved if the Director determines that the modification:

1. Will not increase the threat of the geological hazard to adjacent properties over conditions that would exist if the provision of this part were not modified;

2. Will not adversely impact other critical areas;

3. 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.

4. Has been evaluated to meet life safety standards under anticipated conditions by a qualified geotechnical engineer or geologist, licensed in the State of Washington;

5. The applicant provides a geotechnical report prepared by a qualified professional demonstrating that modification of the critical area or critical area buffer will have no adverse impacts on stability of any

adjacent slopes, and will not impact stability of any existing structures. Geotechnical reporting standards shall comply with the requirements of TMC 13.11.730.J.

6. Any modification complies with recommendations of the geotechnical report with respect to best management practices, construction techniques or other recommendations;

7. The proposed modification to the geologic hazard area or its associated buffer with any associated mitigation does not significantly impact habitat associated with species of local importance, or such habitat that could reasonably be expected to exist during the anticipated life of the development proposal if the area were regulated under this part.

J. Geologic Hazard Assessment and Geotechnical Report Requirements.

1. The following are general requirements for a geologic hazard assessment and geotechnical report. Depending on the scope and scale of the project, additional information may be required. It is the responsibility of the qualified geotechnical professional to address all factors, which in their opinion, are relevant to the site.

a. Project information and report purpose:

(1) Site address;

(2) Vicinity Map; and

(3) Purpose (e.g. feasibility, permit application, final design).

b. Site and project description:

(1) Site plan showing existing and proposed structures and site improvements, property lines, and existing contour lines based upon the best available data;

(2) Site plan shall show crest (top) and toe of slope, limit of recommended buffer, and recommended setback limits as determined by a geotechnical engineer;

(3) Surface conditions, including adjacent properties, structures, and rights-of-way;

(4) Description of existing and/or proposed sewer drainage facilities (sanitary and stormwater) on or adjacent to site when these facilities affect or are affected by the proposed work;

(5) Description of proposed structural and site improvements;

(6) Floor and foundation grades; and

(7) Anticipated excavation depths.

c. Geology and geologic hazards:

(1) Review of available literature, geologic maps;

(2) Preliminary geologic hazard assessment (e.g. landslide-prone areas, peat settlement prone areas, liquefaction hazard areas); and

(3) Landslide history, including review of GeoMap NW, DNR landslide inventory maps or City files.

d. Field explorations and laboratory testing:

(1) Exploration logs;

(2) Field and laboratory testing results.

e. Subsurface description:

(1) Subsurface conditions;

(2) Geologic profile and site development cross-sections; and

(3) Groundwater evaluation and levels.

f. Analyses:

(1) Include soil properties, layering, and geometry;

(2) Describe assumptions, analysis methods, results and interpretation.

g. Conclusions and recommendations:

(1) Conceptual siting of structures and general recommendations;

(2) Earthquake engineering;

(3) Slope stability assessment including (1) existing conditions, construction phase, and post-construction phase and (2) areas affected beyond the site as appropriate;

(4) Foundation support recommendations (e.g. type, allowable bearing pressures, deep foundation capacities, settlement estimates);

(5) Temporary excavation and/or shoring recommendations, impacts on adjacent properties including utilities and ROW;

(6) Lateral earth pressure and resistance recommendations;

(7) Grading and earthwork including site preparation, compaction requirements, fill specifications, sequencing of earthwork operations, wet weather considerations;

(8) Temporary and permanent surface and subsurface drainage requirements, temporary and permanent dewatering, off site effects;

(9) Temporary and permanent erosion control; and

(10) Other recommendations as needed.

h. Plan review and minimum risk standards:

(1) In landslide-prone critical areas, the following will be required with all permit applications:

(a) A statement that the most recent plans and specifications submitted to the City have been reviewed and conform to the recommendations of the analysis and report and, provided that those conditions and recommendations are satisfied during the construction and use, the areas disturbed by construction or activity will be stabilized and remain stable and will not increase the potential for soil movement; and the risk of damage to the proposed development and from the development to adjacent properties from soil instability will be minimal.

(2) In other areas designated by the Director as having high risk potential, the following shall be submitted:

(a) A statement that the most recent plans and specifications submitted to the City have been reviewed and conform to the recommendations of the analysis and report, and provided that the conditions and recommendations are satisfied, the construction and development or activity will not increase the potential for soil movement; and the risk of damage to the proposed development and from the development to adjacent properties from soil instability will be minimal.

2. Additional reporting requirements in erosion or landslide hazard areas. The following are additional submittal requirements to those listed in Section a. above for a site located within an erosion or landslide hazard area.

a. An evaluation of the erosion potential on the site during and after construction shall be submitted. It shall include recommendations for mitigation including retention of vegetation buffers and revegetation. The geotechnical engineer shall provide a statement identifying buffer areas at the top or toe of a slope based on geotechnical site constraints and the impacts of proposed construction methods on the stability of the slope, consistent with the minimum buffer requirements of this Program.

b. The geotechnical engineer shall submit a statement in the soils report that the geotechnical elements of seismic design have been evaluated in accordance with the criteria and ground motions prescribed by the current version of the International Building Code for new structures or ASCE-31/41 for existing buildings. Slope stability analyses for erosion or landslide hazard areas shall be evaluated in accordance with the most current version of the International Building Code. The plan set for the project shall be reviewed by the geotechnical engineer for consistency with these design criteria.

c. The geotechnical engineer shall make a recommendation as to which portion of the site is the most stable and the preferred location of the structure. The limits of the area of grading activity shall be identified in the recommendations.

d. In general, no excavation will be permitted in erosion or landslide hazard areas during the typically wet winter months. When dirt disturbing activities, such as excavation or grading, is proposed, including the maintenance of open temporary slopes during the wet season as defined in TMC 2.19 or the City's Stormwater Management Manual, technical analysis shall be provided to assure that no environmental harm or safety issues would result. The technical analysis shall be submitted for approval by the Director and shall, at a minimum, consist of plans showing mitigation techniques and a letter from the geotechnical engineer.

K. In addition to the information provided pursuant to the requirements of this Program, the Director may require third-party review if the professional opinions of an applicant's representative and the Department's reviewers cannot be reconciled. Third-party review requires the applicant's geotechnical and/or additional technical studies to be reviewed by an independent third party, selected by the Director and paid for by the applicant. The third-party review shall be conducted by a qualified professional geotechnical engineer.

13.11.800 Critical Aquifer Recharge Areas.

The 800 section contains the regulations for critical aquifer recharge areas (CARAs), including the following:

13.11.805 Purpose and Intent
13.11.810 Classification.
13.11.815 Applicability
13.11.820 Standards.

13.11.805 Purpose and Intent.

CARAs are defined under WAC 365-190-100 as areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water or is susceptible to reduced recharge.

The Central Pierce County Sole Source Aquifer serves as a significant source of drinking water for the City of Tacoma and surrounding areas. For future growth, supplemental supply, and emergency response, this resource will continue to be extremely important to the City of Tacoma.

The accidental or improper release of hazardous substances through spillage, leaks, or discharges from local industry has been identified as a cause of historical groundwater contamination in the aquifer system.

This section intends to establish procedures that reduce risks to public health and safety, as well as potential impacts to the groundwater supply. These procedures shall insure that within the aquifer, properties that have stormwater infiltration facilities and properties that store hazardous substances meet appropriate performance standards, and those properties are maintained and inspected.

13.11.810 Classification.

Classification of recharge areas as critical areas shall be based upon the susceptibility of the aquifer to degradation and contamination. High susceptibility is indicative of land uses which produce contaminants that may degrade groundwater and low susceptibility is indicative of land uses which will not. The following criteria should be considered in designating areas with critical recharging effects:

A. Availability of adequate information on the location and extent of the aquifer;

B. Vulnerability of the aquifer to contamination that would create a significant public health hazard. When determining vulnerability, depth of groundwater, macro and micro permeability of soils, soil types, presence of a potential source of contamination and other relevant factors should be considered; and

C. The extent to which the aquifer is an essential source of drinking water.

D. The Central Pierce County Sole Source Aquifer (Central Pierce County SSA), mapped by U.S. Environmental Protection Agency, extends through a majority of the City of Tacoma. It is an essential source of drinking water. The zoning allows the establishment of various land uses that could produce contaminants that may degrade groundwater and the area contains existing high-impact uses. Therefore, the City classifies the Central Pierce County SSA as a Critical Aquifer Recharge Area. For the purposes of this section, the boundaries of the Central Pierce County SSA are delineated on the map referenced in Figure 1 below. The map also reflects the boundaries of the South Tacoma Groundwater Protection District (STGPD). The STGPD, as the area with the most concentrated high-impact uses, is mapped and further regulated under TMC 13.06.070.D. If conflicts between the STGPD and these regulations occur, the more restrictive shall apply.

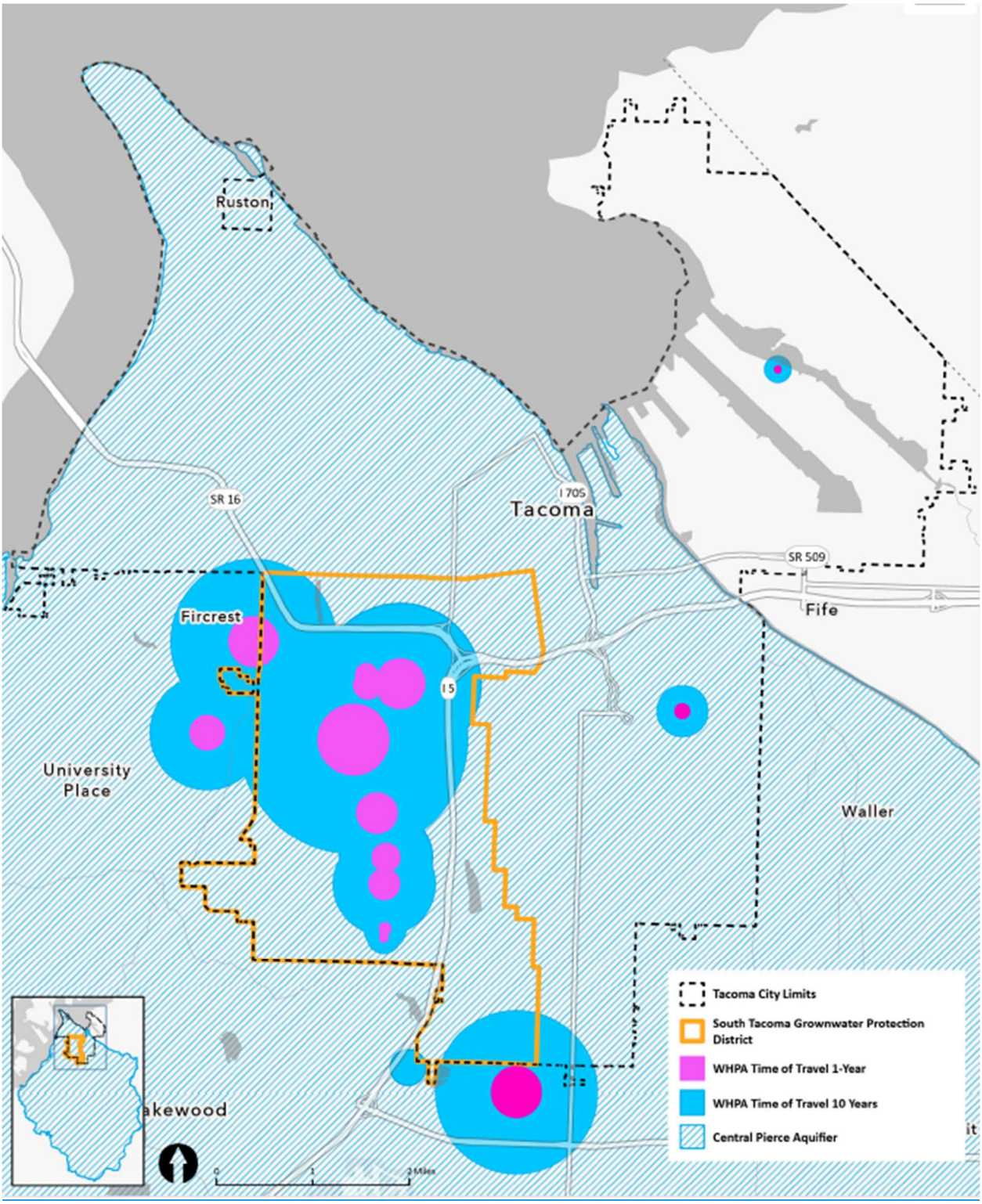

Figure 1. Central Pierce County SSA, Wellhead Protection Areas and Time of Travel Zones

13.11.815 Applicability

A. Applicability.

1. The mandates of this chapter shall apply to new and existing developments and facilities, and to the alteration and/or expansion of existing uses, when such uses are listed in the "High Impact Use Table" and are located within the Central Pierce County SSA.

2. All property within the Central Pierce County SSA, shall comply with the requirements of this chapter and any additional requirements of the zoning district where the property is presently located or may be located in the future. In the event of conflict, the stricter provisions shall control.

3. Standards for development in aquifer recharge areas in the STGPD shall be in accordance with the provisions in Chapter 13.06.070.D, South Tacoma Groundwater Protection District.

4. Standards for development in aquifer recharge areas outside of the STGPD shall be in accordance with this section. Definitions contained within Chapter.13.06.070.D are applicable to this section.

13.11.820 Standards.

~~Standards for development in aquifer recharge areas shall be in accordance with the provisions in Chapter 13.06.070.D09, South Tacoma Groundwater Protection District, of the TMC and other local, state, and federal regulations.~~

A. High Impact Uses

1. The High Impact Use Table below identifies the new, expanded, or altered land uses and activities that are restricted or prohibited within the Central Pierce County SSA at large with additional restrictions or prohibitions for land uses and activities located within Wellhead Protection Areas (WPAs) 1-Year and 10-Year Time of Travel Zones (TTZ). The Director of Planning and Development Services, or designee, shall consult the North American Industry Classification System ("NAICS") Manual for assistance in reviewing and making use interpretations pursuant to this subsection.

High Impact Use Table abbreviation:

P: Permitted use, subject to requirements of this title
N: Prohibited use

High Impact Use Table

Regulated Uses and Activities[1]	Wellhead Protection Areas		Remaining SSA (outside WHPAs)
	1-Year TTZ	10-Year TTZ	
Agricultural Uses	N	N	P
Animal slaughter and fat rendering facilities	N	N	N
Asphalt plants/cement and concrete plants	N	N	N
Boat refinishing	P	P	P
Cemeteries and funeral facilities	N	P	P
Chemical manufacture and reprocessing.	N	N	N

Chemical storage facilities (not include fuel)	N	N	N
Chemical/hazardous waste reprocessing and disposal	N	N	N
Coal Facility	N	N	N
Creosote/asphalt manufacture or treatment.	N	N	N
Drycleaner facilities	N	N	P
Electroplating activities	N	N	N
Fire training center	N	N	N
Greenhouse – commercial/nursery – wholesale/retail	N	P	P
Hazardous waste treatment, transfer, storage, or disposal facilities including radioactive wastes ("Designated Facility" per Ecology's Chapter 173-303 WAC et seq.).	N	N	N
Infiltration of reclaimed water	N	N	N
Landfill—demolition (inert), municipal sanitary waste, solid waste, wood waste, hazardous waste	N	N	N
Machine shops, fabricating, metal processing with etchers and chemicals	N	P	P
Manufacture of Class 1A or 1B flammable liquids as defined in the Fire Code.	N	N	N
Mining and quarrying	N	N	N
Metal recycling/auto wrecking facilities	N	N	N
Pesticide/fertilizer storage facilities	N	N	N
Petroleum and petroleum products refinery, including reprocessing and petroleum fuel facilities.	N	N	N
Pulp and Paper Mill	N	N	N
Railroad yards-cargo transfer areas	N	P	P
Sewage lift stations	N	P	P
Smelting	N	N	N

Solid waste processing/handling/transferring/recycling	N	P	P
Storage Tanks – above ground (hazardous substances)	N	P	P
Storage Tanks – underground (hazardous substances)	N[2]	N[2]	P
Vehicle and boat repair/service/garages/body shops	N	P	P
Wood products preserving	N	N	N

Footnotes:

1. In addition to use restrictions under the base zoning, the above uses are subject to additional limitations or prohibitions within the CARA.

2. An exception may be granted for underground storage tanks associated with Essential Public Facilities, as described in RCW 36.70.A.200(1). Such uses require compliance with performance standards in 13.06.070.D.

2. Pre-existing Nonconforming Uses and Structures

An established use or existing structure that was lawfully permitted prior to adoption of this ordinance, but that does not comply with the provisions of this chapter, may continue subject to TMC Chapter 13.06.010.L. Continued operation is permitted as long as the use or structure does not result in contamination of the site or the groundwater, as determined by the TPCHD regulations and other applicable environmental regulations and agencies.

3. Permanent or temporary storage of hazardous substances on sites with pervious surfaces, the disposal of hazardous substances, and the disposal of solid waste is prohibited, unless such discharge or disposal is specifically in accordance with a valid discharge permit, is approved for discharge into the City's municipal wastewater system pursuant to Chapter 12.08 of the Tacoma Municipal Code as may be amended or is conducted in compliance with the requirements of a solid waste handling permit issued by the TPCHD.

B. Exemptions

The following facilities shall be exempt from all provisions of this chapter:

1. Any handling, storing, disposing, or generating of 220 pounds (100 kilograms) or less of a hazardous substance per month or batch.

2. Farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel and heating oil tanks for non-commercial purposes. Any small quantity of hazardous substances intended solely for personal use.

3. Gasoline or diesel tanks attached to private or commercial motor vehicles and used directly in the propulsion of that vehicle, including tank trucks in transit.

4. A pipeline facility (including gathering lines) regulated under: (1) the Natural Gas Pipeline Safety Act of 1968 reauthorized in 1996 as the Accountable Pipeline Safety and Partnership Act as may be amended from time to time, or (2) the Hazardous Liquid Pipeline Safety Act of 1979 as may be amended from time to time; or which is an interstate pipeline facility regulated under State laws comparable to the provisions of law referred to in (1) and (2) above.

5. The City's municipal sewer system, in accordance with Chapter 12.08 of Tacoma Municipal Code as may be amended from time to time.

6. Any municipal solid waste landfill or other regulated solid waste handling activities, when permitted and operated in compliance with Chapter 173- 351 WAC et seq. or 173-350 WAC et seq. as adopted locally by the Tacoma-Pierce County Health Department Board of Health, and as may be amended from time to time.

7. The application of fertilizer, plant growth retardants and pesticides in accordance with label directions and requirements of the Washington State Department of Agriculture.

C. Hazardous substance storage and management.

Owners and operators of regulated high impact uses shall:

1. Store hazardous substances in containers that are in good condition.

2. Label containers in a manner that adequately identifies the major risk(s) associated with their contents. Labels shall not be obscured, removed, or otherwise unreadable.

3. Remove or destroy labels from empty containers no longer used for hazardous substance storage, and label such containers as "Empty" or otherwise provide a clear indication that the containers are not useable.

4. Use containers made of, or lined with, materials that will not react with, and are otherwise compatible with the hazardous substance being stored.

5. Always have containers closed except when it is necessary to add or remove hazardous substances.

6. Maintain a minimum 30-inch separation between rows of containers holding hazardous substances and ensure that each row of drums is no more than two drums deep.

7. Provide and maintain containment systems for container storage areas that are capable of collecting and holding spills and leaks with sufficient capacity to contain 10 percent of the volume of all containers, or 100 percent of the volume of the largest container, whichever is greater.

8. Store all hazardous substance containers in a covered area where they will not be degraded by the weather or exposed to stormwater.

9. At closure of the facility, all hazardous substances must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous substances or residues must be decontaminated or removed.

10. Ensure that business practices and stormwater infiltration facility maintenance minimizes potential releases of hazardous substances to the environment.

D. All High Impact Uses shall follow the applicable regulations and permit requirements of the Tacoma Pierce County Health Department, including the General Guidance and Performance Standards as applicable, the Tacoma Fire Department, and other regulatory agencies.

E. Above ground and underground storage tanks shall comply with the performance standards in TMC 13.06.070.D.10 and TMC 13.06.070.D.11, as applicable.

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MOTION FOR COUNCIL CONSIDERATION
ORDINANCE NO. 29114

July 7, 2026

I move to amend Ordinance No. 29114, Exhibit A to add a new subsection 4 to Tacoma Municipal Code 13.11.820.A to read as follows:

> "4. Tideflats Manufacturing/Industrial Center. High Impact Uses shall be allowed in the Tideflats Manufacturing/Industrial Center consistent with the base zoning of the Seaport zoning districts, subject to compliance with the development standards set forth in the South Tacoma Groundwater Protection District Overlay for hazardous substance storage and management."

This amendment would: remove conflicts between the draft ordinance and the adopted Tideflats Subarea Plan regarding the uses allowed in the critical aquifer recharge area ("CARA") by allowing the same uses in the CARA that are allowed in the recently adopted Tideflats Subarea Plan. The Tideflats Subarea Plan was a multi-year, multi-agency process that created new zoning districts and carefully considered allowed uses.

Council Member Sadalge
No. 2

MOTION FOR COUNCIL CONSIDERATION
ORDINANCE NO. 29114

July 7, 2026

I move to amend Ordinance No. 29114, Exhibit A by amending Tacoma Municipal Code 13.11.240.B.2.a to clarify the definition of reasonable use of property, to read as follows:

> "a. The maximum amount of disturbance shall be no more than 10 percent of the critical area and buffer area on the lot ~~area~~ or 2,500 square feet, whichever is greater."

This amendment would: clarify the metrics to be applied by the City in analyzing reasonable use of critical area private property. When a property is mostly or fully within a critical area or buffer, Washington State law requires allowance of reasonable use of the property so long as impacts to the critical area and/or buffer are mitigated. The draft critical areas code provides language on how much disturbance is allowed and this amendment is proposed to clarify this language.

Council Member Sadalge
No. 3

MOTION FOR COUNCIL CONSIDERATION
ORDINANCE NO. 29114

July 7, 2026

I move to amend Ordinance No. 29114, Exhibit A by making three amendments to Tacoma Municipal Code 13.11.270.J. to clarify the general mitigation requirements for vegetated buffers around wetlands and streams, to read as follows:

TMC 13.11.270

Subsection J.3.d: "Removal of debris, lawn, and any illegal fill placed after 1990, as determined by the City."

Subsection J.4.a: "Except as allowed under 13.11.200 and 13.11.210, a~~A~~ll existing improvements and structures in a buffer must be removed when the vegetative buffer installation is required pursuant to subsection (~~3~~2)(a) of this section;"

Subsection J.8: Protection and Maintenance of Vegetative Buffer – Critical areas and buffers shall be placed in recorded critical area easements or tracts, or be noticed on title, pursuant to TMC 13.11.280 and shall be maintained in perpetuity.

This amendment would: clarify the mitigation requirements for vegetated buffers around wetlands and streams by defining illegal fill based on the date of the Growth Management Act, allowing improvements permitted under other critical area code sections to remain in the buffer, such as trails and utilities, and requiring vegetated buffers to be protected using critical area tracts, parcels, or conservation easements including notice on title.

Council Member Hines
No. 4

MOTION FOR COUNCIL CONSIDERATION
ORDINANCE NO. 29114

July 7, 2026

I move to amend Ordinance No. 29114, Exhibit A by making amendments to Tacoma Municipal Code ("TMC") 13.11.200 and 210 to streamline the process for permitting low-impact utility work in improved City right-of-way adjacent to critical areas or buffers, to read as follows:

TMC 13.11.200

Subsection B.1: The maintenance and repair of legally existing utilities, roads, structures, or facilities used in the service of the public, and the installation of utility lines, pipes, and associated equipment within developed right-of-way, provided such work does not expand the developed footprint of the facility or right-of-way or alter any regulated critical area or buffer. Activities must be in compliance with the current City Stormwater Management Manual and Regional Road Maintenance Manual and provide all known and reasonable protection methods for the critical area.

TMC 13.11.210

Subsection B.9: i. Co-location of minor accessory utilities with pedestrian trails may be allowed so long as all other criteria of this section are met.

This amendment would: streamline the installation of minor utilities, which have temporary impacts or no impacts on critical areas as Allowed Activities and Activities Allowed with Staff Review, which already include activities such as the maintenance and repair of existing utilities.