

1 **APPENDIX B – JCC 18.22 Critical Areas Ordinance**

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3 The Jefferson County Critical Areas Regulations, codified as Chapter 18.22 of the Jefferson
4 County Code (JCC), is incorporated by reference into this Program with exceptions as listed in
5 Article 1. The Critical Areas Ordinance (CAO) adopted March 17, 2008 and further amended
6 May 11, 2009 is appended here as a courtesy reference. Any subsequent Unified Development
7 Code (Title 18 JCC) amendments that change JCC 18.22 will only change this Program after a
8 formal amendment to this SMP is approved by the County and the state Department of Ecology.

JCC Chapter 18.10 Definitions

18.10.030 C definitions.

“Channel migration zone” (or CMZ) means an area within the lateral extent of likely stream channel movement that is subject to risk due to stream bank destabilization, rapid stream incision, stream bank erosion and shifts in the location of stream channels. “Channel migration zone” means the Historic Channel Migration Zone (which is the footprint of the active channel documented through historical photographs and maps), the Avulsion Hazard Zone (which is an area with the potential for movement of the main river channel into a new location), and the Erosion Hazard Area (which is an area outside the Historic Channel Migration Zone and the Avulsion Hazard Zone, and includes an Erosion Setback for a 100-year period of time and a Geotechnical Setback to account for slope retreat to a stable angle of repose). “Channel migration zone” does not include Disconnected Migration Areas, which are areas that have been disconnected from the river by legally existing artificial structure(s) that restrain channel migration (such as levees and transportation facilities build above or constructed to remain intact through the 100-year flood elevation), that are no longer available for migration by the river. “Channel migration zone” may exclude areas that lie behind a lawfully established flood protection facility that is likely to be maintained by existing programs for public maintenance consistent with designation and classification criteria specified by public rule. When a natural geologic feature affects channel migration, the channel migration zone width will consider such natural constraints. “High Channel Migration Hazard” (or high risk CMZ) for the Big Quilcene, Little Quilcene, Dosewallips, Duckabush, and Lower Hoh Rivers means those non-disconnected portions of the channel that are likely to migrate within a 50-year timeframe. For the Big Quilcene, Little Quilcene, Dosewallips, and Duckabush Rivers, “Moderate Channel Migration Hazard” (or moderate risk CMZ) means those non-disconnected portions of the channel that are likely to migrate within a 50- to 100-year timeframe; and “Low Channel Migration Hazard” (or low risk CMZ) means those non-disconnected portions of the channel that are likely to migrate beyond a 100-year timeframe. For the Lower Hoh River, “Moderately High Hazard” (or moderately high risk CMZ) means those non-disconnected portions of the channel that are likely to migrate within a 50- to 100-year timeframe, “Moderate Hazard” means those non-disconnected portions of the channel that are likely to migrate beyond a 100-year timeframe, and “Low Hazard” means the non-disconnected portions of the channel that are less likely to be affected by channel migration, but is still at risk due to its location on the valley floor.

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Article I Purpose

18.22.010 Purpose - Generally

The purpose of the Jefferson County Critical Areas Ordinance is to comply with state law and to describe authorized methods and procedures established to ensure the functions and values of Critical Areas are not degraded when allowing approved uses and development activities in the County. This regulation offers landowners a choice of two (2) methods for ensuring the functions and values of Critical Areas are not degraded;

- (a) For any critical area, landowners may use a prescriptive method, as described herein, or
- (b) For Fish and Wildlife Habitat Conservation Areas (FWHCA) and Wetlands, landowners may choose an adaptive method by providing a site-specific stewardship plan (see Article IX, 18.22.460).

Article II – Administrative Provisions

18.22.020 Applicability

Unless otherwise exempted under 18.22.070, any land use or development activity that is subject to a development permit or approval under JCC Title 18 may only be undertaken on land located within or containing a critical area or its buffer if the provisions of this Chapter 18.22 are met. Unless otherwise exempted under 18.22.070, uses and activities in critical areas or their buffers for which no permit or approval is required by any other provision of county code are also subject to the development standards and other requirements of this chapter.

18.22.030 Identification and Mapping of Critical Areas

The approximate locations and extents of critical areas within the county are displayed on various inventory maps available through the Jefferson County Department of Community Development. The critical areas maps are provided only as a general guide to alert the viewer to the possible location and extent of critical areas. These maps need not to be relied upon exclusively to establish the existence/absence or boundaries of a critical area, or to establish whether all of the elements necessary to identify an area as a critical area actually exist. Conditions in the field control: in the event of a conflict between the information shown on the maps and information shown as a result of field investigations, the latter shall prevail. To the extent practicable, the County shall ensure that its critical area maps are updated as inventories are completed in compliance with the requirements of the Growth Management Act.

18.22.050 Coverage

- (1) The following permits and approvals shall be subject to, and coordinated with, the requirements of this section: clearing and grading; site plan approval; sewage disposal; subdivision or short subdivision; binding site plans; building permit; planned residential development; shoreline substantial development; variance; conditional use permit; certain forest practice permits (Class IV general, Class III conversion option harvest plans); other permits leading to the development or alteration of land; and rezones if not combined with another development permit. In instances where a proposal involves a parcel of real property with more than one critical area or critical area buffer, the standards that pertain to each identified critical area shall apply. When provisions of this section conflict with one another, or when provisions of this section conflict with any other local law, the provision that provides more protection to the critical area shall apply. No permit involving a designated critical area shall be approved unless it is determined to be in compliance with this code.
- (2) Any action taken in a critical area designated under this chapter that is in violation of the standards and conditions contained herein is expressly prohibited.

18.22.070 General Exemptions

The following activities in critical areas or their buffers are exempt from the requirements of this chapter:

- (1) Agricultural activities when undertaken pursuant to best management practices to minimize impacts to critical areas and consistent with JCC Chapter 18.20.030.
- (2) Forest practices regulated and conducted in accordance with the provisions of Chapter 76.09 RCW and forest practice regulations, Title 222 WAC, and which are exempt from Jefferson County jurisdiction.

- (3) Maintenance or reconstruction of existing public or private roads, paths, bicycle ways, trails, bridges, and associated storm drainage facilities when undertaken pursuant to best management practices to minimize impacts to critical areas and to immediately restore any disturbed critical area or its buffer, provided that reconstruction does not involve expansion of facilities.
- (4) Maintenance and repair of existing drainage facilities or systems, including, but not limited to, ditches, culverts, catch basins, and outfalls when undertaken pursuant to best management practices to minimize impacts to critical areas and immediately to restore any disturbed critical area or its buffer.
- (5) Utility activities, when undertaken pursuant to best management practices to minimize impacts to critical areas and immediately to restore any disturbed critical area or its buffer:
 - (a) Normal and routine maintenance or repair of existing utility facilities or rights-of-way.
 - (b) Installation, construction, relocation and replacement, operation, repair, or alteration of all utility lines, equipment, or appurtenances, not including substations, in improved road rights-of-way.
- (6) Reconstruction, remodeling, or maintenance of existing structures. This exemption shall not apply to reconstruction which is proposed as a result of structural damage associated with a Geologically Hazardous Area and does not allow further intrusion into a wetland, fish and wildlife habitat conservation area and/or their buffers.
- (7) Site investigative work. Site investigative work necessary for land use application submittals, including but not limited to surveys, soil logs, and percolation tests involving no fill or use of heavy equipment in a wetland, or a fish and wildlife habitat conservation area or their buffers, provided that disturbed critical areas and their buffers are immediately restored and best management practices are implemented and excavation for soil logs or percolation tests are filled.
- (8) Emergency action. Action that is taken which is necessary to resolve or prevent imminent threat or danger to public health or safety, or to public or private property, or serious environmental degradation. If the nature of the emergency is such that it is not possible to first seek review, the Department, as well as any federal or state agencies with jurisdiction (e.g., the US Army Corps of Engineers), must be notified of the action within thirty (30) days of the initiation of the emergency work.
- (9) Artificial wetlands and artificial ponds.
- (10) Flood Control. Operation, maintenance and repair of dikes, ditches, reservoirs, and other structures and facilities which were created or developed as part of normal flood control activities, except that this exemption does not extend to the permanent draining or permanent alteration of any regulated wetland.
- (11) Irrigation. Operation, maintenance and repair of ditches, reservoirs, ponds and other structures and facilities.
- (12) Recreational Uses. Swimming, boating and fishing. Maintenance and repair of docks, piers, boat launches and floats in lakes (provided that the proposed action complies with the requirements of the Shoreline Management Act), in deep water habitats one (1) acre or greater in size when such activities are for recreational purposes and do not involve alteration of or construction through, over or in a regulated wetland. Other outdoor activities, including hunting and fishing (pursuant to state law), bird watching, hiking, bicycling;
- (13) Existing Residential Landscaping. Planting, irrigating, fertilizing, spraying, mowing and pruning and maintenance and repair of structures when such activities are part of existing normal residential landscaping activities and no building permit is required. This exemption does not allow further intrusion into a wetland, fish and wildlife habitat conservation area, geologically hazardous area or their buffers.
- (14) All wetlands wherein wetland conditions are being maintained only because of human-induced water, even if it can be determined that the wetland conditions would no longer exist if the activity (for example, irrigation or pumping water) were to be terminated.
- (15) Removal or destruction of noxious weeds listed in Chapter 16-750 WAC is the responsibility of the landowner, provided that, the following conditions are met:
 - (a) The removal or control of noxious weeds shall follow guidelines issued by the Jefferson County Noxious Weed Control Board. The Jefferson County Noxious Weed Control Board shall coordinate with the Department of Planning and Community Development for the control of noxious weeds in wetlands.
 - (b) All herbicide applications in aquatic environments shall conform to the rules of the Department of Ecology, Department of Agriculture and Department of Natural Resources, pursuant to WAC 173-201, WAC 16-228, and WAC 222-38.
- (16) The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling soil, planting crops, or changing existing topography, water conditions, or water sources and provided these activities do not have any adverse impacts on protection of the critical area or its buffer.
- (17) The enhancement of a buffer by planting indigenous vegetation;
- (18) The construction of unpaved trails when located in the buffer areas and elevated when located in wetlands, which are not intended for motorized use, and which are no wider than five feet, unless additional width is necessary for safety along a precipice, steep hillside, or other hazardous area;

- (19) Installation of navigation aids and boundary markers;
- (20) Drilling or digging and maintenance of wells; provided, that impacts to critical areas and their buffers are minimized and disturbed areas are immediately restored;
- (21) The administrator may determine that an activity is closely allied or similar to any activity in this list. If such an activity does not impact the functions and values of any critical area or its buffers, it may also be determined to be exempt.

18.22.080 Nonconforming Uses

- (1) Any legal use or legal structure in existence on the effective date of this Chapter 18.22 that does not meet the buffer requirements of this chapter for any designated critical area shall be considered a legal nonconforming use.
- (2) Any use or structure for which an application has vested or for which a permit has been obtained prior to the effective date of the ordinance codified in this chapter, that does not meet the buffer requirements of this chapter for any designated critical area, shall be considered a legal nonconforming use.
- (3) A legal nonconforming use or structure may be maintained or repaired without limitation by this chapter.
- (4) A legal nonconforming use or structure that has been damaged or destroyed by fire or other calamity may be restored and its immediately previous use may be resumed.

18.22.090 Reasonable Economic Use Variance

- (1) Generally. If the application of this Chapter 18.22 would deny all reasonable economic use of the property, the applicant, upon denial of a permit due to the requirements of this chapter, may apply for a reasonable economic use variance.
- (2) Staff recommendation and burden of proof. Upon application to the department, the department shall prepare a recommendation to the hearing examiner. The property owner and/or applicant for a reasonable economic use variance shall bear the burden of proving that the property is deprived of all reasonable economic use.
- (3) Hearing examiner process. The hearing examiner shall conduct a public hearing on the variance request. Decisions of the hearing examiner shall be final and conclusive. Public notice shall be provided as follows:
 - (a) The department shall arrange for at least one publication of the notice of hearing to appear in a newspaper of general circulation within the county at least 10 days before the hearing. Payment of all publication fees shall be the responsibility of the applicant.
 - (b) The department shall send notice to adjacent property owners advising them of the hearing. The notice shall be mailed to the owners of record of all property lying within 300 feet of the property at issue, at least 10 days before the public hearing. Names and addresses of adjacent property owners shall be provided to the department by the applicant, subject to department approval.
 - (c) The department shall provide the applicant with at least two copies of the hearing notice, and one copy of an affidavit of posting. The applicant shall post the notices and maintain them in place for at least 10 days prior to the hearing, not including the day of posting or the day of the hearing. The notices shall be placed in conspicuous locations on or near the property and shall be removed by the applicant after the hearing. Notices shall be mounted on easily visible boards provided by the department. The affidavit of posting shall be signed, notarized, and returned to the department at least 10 days prior to the hearing.
 - (d) All hearing notices shall include a legal description of the property involved, and a concise description of the variance requested in lay language.
- (4) Hearing examiner - required findings. A reasonable economic use variance may be granted only when the hearing examiner finds that the application meets all of the following criteria:
 - (a) No reasonable economic use with less impact on the critical area or its buffer is possible.
 - (b) There is no feasible on-site alternative to the proposed activities that would allow a reasonable economic use with less adverse impacts to critical areas or associated buffers. Feasible on-site alternatives shall include, but are not limited to:
 - (i) Reduction in density, scope, scale or intensity;
 - (ii) Phasing of project implementation;
 - (iii) Change in timing of activities; and
 - (iv) Revision of road or parcel layout or related site planning considerations.
 - (c) The proposed variance will result in the minimum feasible alteration or impairment to the critical area functional characteristics and existing contours, vegetation, fish and wildlife resources, and hydrological conditions.
 - (d) Disturbance of critical areas has been minimized by locating any necessary alteration in critical area buffers to the minimum extent possible.

- (e) The proposed variance will not cause degradation to surface or groundwater quality.
 - (f) The proposed variance complies with all federal, state and local statutory and common law, including the Endangered Species Act, and statutory laws related to sediment control, pollution control, floodplain restrictions, and on site wastewater disposal, and common law relating to property and nuisance.
 - (g) There will be no material damage to nearby public or private property and no material threat to the health or safety of people on or off the property.
 - (h) The inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and creating the undevelopable condition after the effective date of the regulations codified in this chapter.
- (5) Conditions.
- (a) In granting approval for reasonable economic use variances, the hearing examiner may require mitigating conditions.
 - (b) In granting approval for reasonable economic use variances involving designated wetlands, the hearing examiner shall consider the following mitigating conditions:
 - (i) Provision of a mitigation plan demonstrating how the applicant intends to substantially restore the site to predevelopment conditions following project completion; and
 - (ii) The restoration, creation or enhancement of wetlands and their buffers in order to offset the impacts resulting from the applicant's actions; the overall goal of any restoration, creation or enhancement project shall be no net loss of wetlands function and acreage.
- (6) Performance Bond. The Administrator may require a performance bond of 120% of the cost of the outstanding work items to be accomplished.

18.22.095 Physical Separation, Functional Isolation

Buffers areas which are both physically separated and functionally isolated from a critical area and do not protect the critical area from adverse impacts shall be excluded from buffers otherwise required by this Chapter. Functional isolation can occur due to existing public roads, structures, vertical separating, or any other relevant physical characteristic . The Administrator may require a Biological Site Assessment to determine whether the buffer is functionally isolated.

Article III – Critical Aquifer Recharge Areas

18.22.100 Classification

Critical aquifer recharge areas are naturally susceptible due to the existence of permeable soils or a seawater wedge in coastline aquifers. Certain overlying land uses can lead to water quality and/or quantity degradation. The following classifications define critical aquifer recharge areas.

- (1) Susceptible aquifer recharge areas are those with geologic and hydrologic conditions that promote rapid infiltration of recharge waters to groundwater aquifers. For the purposes of this Article III, unless otherwise determined by preparation of an aquifer recharge area report authorized under this article, the following geologic units, as identified from available State of Washington Department of Natural Resources geologic mapping, define susceptible aquifer recharge areas for east Jefferson County:
- (a) Alluvial fans (Ha);
 - (b) Artificial fill (Hx);
 - (c) Beach sand and gravel (Hb);
 - (d) Dune sand (Hd);
 - (e) Floodplain alluvium (Hf);
 - (f) Vashon recessional outwash in deltas and alluvial fans (Vrd);
 - (g) Vashon recessional outwash in melt water channels (Vro);
 - (h) Vashon ice contact stratified drift (Vi);
 - (i) Vashon ablation till (Vat);
 - (j) Vashon advance outwash (Vao);
 - (k) Whidbey formation (Pw); and
 - (l) Pre-Vashon stratified drift (Py).
- (2) Those areas meeting the requirements of susceptible aquifer recharge areas (above) and which are overlain by the following land uses as identified in this code are subject to the provisions of the protection standards in this article:
- (a) All industrial land uses;

- (b) All commercial uses;
 - (c) All rural residential land uses:
 - (i) Requiring a discretionary use or conditional use permit, or
 - (ii) With nonconforming uses that would otherwise require a discretionary use or conditional use permit;
 - (d) Unsewered planned rural residential developments;
 - (e) Unsewered residential development with gross densities greater than one unit per acre.
- (3) Special aquifer recharge protection areas include:
- (a) Sole source aquifers designated by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act of 1974 (Public Law 93-523);
 - (b) Special protection areas designated by the Washington Department of Ecology under Chapter 173-200 WAC;
 - (c) Wellhead protection areas determined in accordance with delineation methodologies specified by the Washington Department of Health under authority of Chapter 246-290 WAC;
 - (d) Groundwater management areas designated by the Washington Department of Ecology in cooperation with local government under Chapter 173-100 WAC.
- (4) Seawater intrusion protection zones (SIPZ) are aquifers and land overlying aquifers with some degree of vulnerability to seawater intrusion. SIPZ are defined either by proximity to marine shoreline or by proximity to groundwater sources that have demonstrated high chloride readings. All islands and land area within one-quarter mile of marine shorelines and associated aquifers together compose the coastal SIPZ. Additionally, areas within 1,000 feet of a groundwater source with a history of chloride analyses above 100 milligrams per liter (mg/L) are categorized as either at risk (between 100 mg/L and 200 mg/L) or high risk (over 200 mg/L) SIPZ. Individual groundwater sources with a history of chloride analyses above 200 mg/L shall be considered "sea-salt water intrusion areas," which are among the "sources or potential sources of contamination" listed in Washington Administrative Code (WAC) 173-160-171, implementing code for the Water Well Construction Act.
- (a) In some cases, high chloride readings may be indicative of connate seawater (i.e., relic seawater in aquifers as opposed to active seawater intrusion). When best available science or a hydrogeologic assessment demonstrate that high chloride readings in a particular area are due to connate seawater, the area in question shall not be considered an at risk or high risk SIPZ. When the status of an area is in question, the UDC administrator is responsible for making the determination based upon recommendation from county department of health and human services.

18.22.110 Designation

Jefferson County shall prepare and exhibit dated critical aquifer recharge area maps which demonstrate the approximate distribution of the susceptible aquifer recharge areas, special aquifer recharge protection areas, and seawater intrusion protection zones. The critical aquifer recharge area maps shall be periodically revised, modified, and updated to reflect additional information.

18.22.120 Applicability

- (1) The following land use activities are considered high impact land uses due to the probability and/or potential magnitude of their adverse effects on groundwater and shall be prohibited in susceptible aquifer recharge areas and special aquifer recharge protection areas. In all other areas of the county outside of susceptible aquifer recharge areas and special aquifer recharge protection areas, these activities shall require an aquifer recharge area report pursuant to this Article III:
- (a) Chemical manufacturing and reprocessing;
 - (b) Creosote/asphalt manufacturing or treatment (except that asphalt batch plants may be permitted in susceptible aquifer recharge areas only if such areas lie outside of special aquifer recharge protection areas and only if best management practices are implemented pursuant to JCC 18.20.240 (2)(h)(iv) and 18.30.170 and an accepted aquifer recharge area report);
 - (c) Electroplating and metal coating activities;
 - (d) Hazardous waste treatment, storage and disposal facilities;
 - (e) Petroleum product refinement and reprocessing;
 - (f) Underground storage tanks for petroleum products or other hazardous materials;
 - (g) Recycling facilities as defined in this code;
 - (h) Solid waste landfills;

- (i) Waste piles as defined in Chapter 173-304 WAC;
 - (j) Wood and wood products preserving;
 - (k) Storage and primary electrical battery processing and reprocessing.
- (2) All other land uses shall be subject to the protection standards contained in this article and mitigating conditions included with an aquifer recharge area report, where applicable.
- (3) Seawater Intrusion Protection Zones: Marine shorelines and islands are susceptible to a condition that is known as seawater intrusion. Seawater intrusion is a condition in which the saltwater/freshwater interface in an aquifer moves inland so that wells drilled on upland areas cannot obtain freshwater suitable for public consumption without significant additional treatment and cost. Maintaining a stable balance in the saltwater/freshwater interface is primarily a function of the rate of aquifer recharge (primarily through rainfall) and the rate of groundwater withdrawals (primarily through wells). New development, redevelopment, and land use activities on islands and in close proximity to marine shorelines in particular should be developed in such a manner to maximize aquifer recharge and maintain the saltwater/freshwater balance to the maximum extent possible.

18.22.130 Protection Standards

- (1) General. The following protection standards shall apply to land use activities in susceptible aquifer recharge areas and special aquifer protection areas, and when specified in seawater intrusion protection zones, unless mitigating conditions have been identified in a critical aquifer recharge report that has been prepared pursuant to this Article III.
- (2) Storm water Disposal.
- (a) In all critical aquifer recharge areas, storm water runoff shall be controlled and treated in accordance with best management practices and facility design standards as identified and defined in the Storm water Management Manual for the Puget Sound Basin, as amended, and the storm water provisions contained in Chapter 18.30 JCC.
 - (b) To help prevent seawater from intruding landward into underground aquifers, all new development activity on Marrowstone Island, Indian Island and within one-quarter mile of any marine shoreline shall be required to infiltrate all storm water runoff on site. The administrator will consider requests for exceptions to this policy on a case-by-case basis. This provision is interpreted as establishing a hierarchy in which the first and best alternative is on-site infiltration using drywells or other methods, the second best alternative is direct discharge into marine waters through a storm water tightline. In order to utilize the least preferred alternative, which is considered an exception to the policy, applicants must demonstrate through a geotechnical or similar report prepared by a licensed professional that both on-site infiltration and upland off-site disposal are not practicable or feasible. The report must include cost figures for comparison.
- (3) On-Site Sewage Disposal.
- (a) All land uses identified in JCC 18.22.120 and special aquifer recharge protection areas that are also classified as susceptible aquifer recharge areas (as defined in this article) shall be designated areas of special concern pursuant to WAC 246.
 - (i) Such designation shall identify minimum land area and best management practices for nitrogen removal as design parameters necessary for the protection of public health and groundwater quality.
 - (ii) Best management practices (BMPs) shall be adopted by action of the Board of Health.
 - (b) As new information becomes available that would classify an area as a special aquifer recharge protection area or an area of special concern under this article, said area may be designated as such by the county. Any additional areas of special concern designated through this process shall receive the same protections identified in subsection (3)(a) of this section.
- (4) Golf Courses and Other Turf Cultivation. In all critical aquifer recharge areas, golf courses shall be developed and operated in a manner consistent with the most current edition of "Best Management Practices for Golf Course Development and Operation," King County Department of Development and Environmental Services. Recreational and institutional facilities (e.g., parks and schools) with extensive areas of cultivated turf shall be operated in a manner consistent with portions of the aforementioned best management practices pertaining to fertilizer and pesticide use, storage, and disposal. In seawater intrusion protection zones, golf courses and other turf cultivation using groundwater for irrigation shall be prohibited, unless the water source is located outside of seawater intrusion protection zones or in an approved public water supply.
- (5) Above-Ground Storage Tanks. Above ground tanks shall be fabricated, constructed, installed, used and operated in a manner which prevents the release of hazardous substances or dangerous wastes to the ground or groundwater. Above-ground storage tanks intended to hold or store hazardous substances or dangerous wastes

shall be provided with an impervious containment area, equivalent to or greater than 100 percent of the tank volume, enclosing and underlying the tank; or ensure that other measures are undertaken as prescribed by the Uniform Fire Code which provide an equivalent measure of protection.

- (6) Mining and Quarrying. Mining and quarrying performance standards containing groundwater protection best management practices pertaining to operation, closure, and the operation of gravel screening, gravel crushing, cement concrete batch plants, and asphalt concrete batch plants, where allowed, are contained in Chapters 18.20 and 18.30 JCC.
- (7) Hazardous Materials. Land use activities that generate hazardous waste, which are not prohibited outright under this code, and which are conditionally exempt from regulation by the Washington Department of Ecology under WAC 173-303-100, or which use, store, or handle hazardous substances, shall be required to prepare and submit a hazardous materials management plan that demonstrates that the development will not have an adverse impact on groundwater quality. The facility owner must update the hazardous materials management plan annually.
- (8) Well Drilling, Land Division, and Building Permits in Seawater Intrusion Protection Zones.
 - (a) Well Drilling. The Washington State Department of Ecology regulates well drilling pursuant to the Water Well Construction Act. Proposed wells, including those exempt from permitting requirements, must be sited at least 100 feet from "known or potential sources of contamination," which include "sea-salt water intrusion areas" (WAC 178-160-171), unless a variance is obtained from Ecology per WAC 173-160-106.
 - (b) Subdivisions. Applications for land division (Chapter 18.35 JCC) must include specific and conclusive proof of adequate supplies of potable water through a qualifying hydrogeologic assessment (relevant components of an aquifer recharge area report per JCC 18.22.400) that demonstrates that the creation of new lots and corresponding use of water will not impact the subject aquifer such that water quality is degraded by seawater intrusion.
 - (i) Marrowstone Island Subdivision Moratorium: Due to documented seawater intrusion on Marrowstone Island and the existence of undeveloped lots of record, Jefferson County has imposed a moratorium on additional land divisions on the island until such time as public water is available or it is demonstrated through the well monitoring program that groundwater quality is not degrading due to seawater intrusion.
 - (c) Building Permits
 - (i) Evidence of potable water may be an individual well, connection to a public water system, or an alternative system. Whatever method is selected, the regulatory and operational standards for that method must be met, including Jefferson County health codes and Washington Administrative Code. Pursuant to Section 4 of the state "Guidelines for Determining Water Availability for New Buildings" (Ecology Publication 93-27), investigation and identification of well interference problems and impairment to senior rights is the responsibility of the Washington Department of Ecology. If the possibility of a problem is suspected, the local permitting authority should contact Ecology.
 - (ii) All types of building permits that require proof of potable water use are subject to this policy, specifically building permits for new single-family residences (SFRs) or other structures with plumbing that are not associated with an existing SFR (i.e., shops or garages with a bathroom).
 - (d) Voluntary and mandatory measures of the Jefferson County seawater intrusion policy apply to development proposals within the coastal, at risk, and high risk SIPZ, and upon Marrowstone Island, in the following manner, in addition to all existing applicable health codes:
 - (i) Coastal SIPZ.
 - (A) Voluntary actions:
 - (I) Water conservation measures;
 - (II) On-going well monitoring for chloride concentration;
 - (III) Submittal of data to county.
 - (B) Mandatory actions:
 - (I) For proof of potable water on a building permit application, applicant must utilize DOH-approved public water system if available;
 - (II) If public water is unavailable, an individual well may be used as proof of potable water subject to the following requirement:
 - 1. Chloride concentration of a laboratory-certified well water sample submitted with building permit application;
 - 2. Installation of source-totalizing meter (flow).
 - (III) If public water is unavailable, a qualifying alternative system may be used as proof of potable water.
 - (ii) At Risk SIPZ.

- (A) Voluntary actions:
 - (I) Water conservation measures.
 - (B) Mandatory actions:
 - (I) For proof of potable water on a building permit application, applicant must utilize DOH-approved public water system if available;
 - (II) If public water is unavailable, an individual well may be used as proof of potable water subject to the following requirements:
 - 1. Chloride concentration of a laboratory-certified well water sample submitted with building permit application;
 - 2. Installation of a source-totalizing meter (flow);
 - 3. On-going well monitoring for chloride concentration;
 - 4. Submittal of flow and chloride data to the county per monitoring program;
 - (III) If public water is unavailable, a qualifying alternative system may be used as proof of potable water.
- (iii) High Risk SIPZ.
- (A) Mandatory actions:
 - (I) Water conservation measures (per list maintained by UDC administrator);
 - (II) For proof of potable water on a building permit application, applicant must utilize DOH-approved public water system if available;
 - (III) If public water is unavailable, an individual well may only be used as proof of potable water subject to the following requirements:
 - 1. Variance from WAC Title 173 standards granted by Ecology per WAC 173-160-106 for a new groundwater well within 100 feet of a sea-salt water intrusion area per WAC 173-160-171 (i.e., within 100 feet of a groundwater source showing chloride concentrations above 200 mg/L or within 100 feet of the marine shoreline); or for an existing groundwater well not subject to an Ecology variance, applicant must provide a hydrogeologic assessment (relevant components of an aquifer recharge area report per JCC 18.22.400) which shall be transmitted to Ecology for review, demonstrating that use of the well does not cause any detrimental interference with existing water rights and is not detrimental to the public interest;
 - 2. Chloride concentration of a laboratory-certified well water sample submitted with building permit application;
 - 3. If chloride concentration exceeds 250 mg/L in a water sample submitted for a building permit, then the property owner shall be required to record a restrictive covenant that indicates a chloride reading exceeded the U.S. Environmental Protection Agency secondary standard (250 mg/L) under the National Secondary Drinking Water Regulations;
 - 4. Installation of a source-totalizing meter flow;
 - 5. On-going well monitoring for chloride concentration;
 - 6. Submittal of flow and chloride data to the county per monitoring program;
 - (IV) If public water is unavailable, a qualifying alternative system may be used as proof of potable water.
- (iv) Marrowstone Island. In addition to all voluntary and mandatory actions associated with the applicable SIPZ as described above, the following measures apply to all development proposals on Marrowstone Island that include groundwater withdrawal:
- (A) Voluntary Actions.
 - (I) Installation of timers together with new well pump installations to enable pump use limitation to low demand times.
 - (B) Mandatory Actions.
 - (I) The use of a well proposed as proof of potable water for a new building permit shall be conditioned through the building permit such that enrollment in a county-sponsored monitoring program is required, including periodic submittal of flow and chloride data as determined by the county.
 - (II) Installation of a source-totalizing meter (flow).
 - (III) Installation of a variable speed pump, controllable from the surface, in order to enable reduction of withdrawal rate, as may be necessary.

- (IV) Installation of a 1,000-gallon minimum storage tank that shall conform to the ANSI/NSF standard 61.
- (9) Mitigating Conditions. The administrator may require additional mitigating conditions, as needed, to provide protection to all critical aquifer recharge areas to ensure that the subject land or water use action will not pose a risk of significant adverse groundwater quality impacts. The determination of significant adverse groundwater quality impacts will be based on the anti-degradation policy included in Chapter 173-200 WAC.
- (10) Authority for Denial. In all critical aquifer recharge areas, the administrator may deny approval if the protection standards contained herein or added mitigating conditions cannot prevent significant adverse groundwater quality impacts.

18.22.135 Adaptive Management

As part of the periodic review and amendment to Jefferson County's implementing regulations required under RCW 36.70A.130(4), Jefferson County shall review the need for and implement an adaptive management program for groundwater resources in certain discrete geographic areas of the County, consistent with the provisions of WAC 365-195-920(2).

Article IV – Frequently Flooded Areas

18.22.140 Incorporation by Reference

This Article IV incorporates by reference the classification, designation and protection provisions contained in the Jefferson County floodplain management ordinance (Chapter 15.15 JCC) with the following addition:

- (1) In addition to the insurance maps identified in the floodplain management ordinance (Chapter 15.15 JCC), flood hazard areas shall be identified with reference to the Federal Emergency Management Agency (FEMA) 100-year floodplain designations. Such flood hazard areas shall be subject to the criteria of the floodplain management ordinance.
- (2) The floodplain management ordinance conforms with the intent of the minimum guidelines (WAC 365-190-080(3)) through directly considering the effects of flooding on human health and safety, together with effects on public facilities and services, through its protection standards.

18.22.150 Relationship to Other Regulations

While the Jefferson County floodplain management ordinance requires consistency with all other applicable laws, in the event that a conflict should exist the stricter standard shall apply to the regulated development.

Article V - Geologically Hazardous Areas

18.22.160 Classification/Designation

- (1) Classification. Geologically hazardous areas shall be classified based upon a combination of erosion, landslide and seismic hazard.
- (2) Designation. The following erosion, landslide, seismic, and channel migration zone (CMZ) hazard areas shall be subject to the standards of this Article V:
 - (a) Erosion Hazard Areas. Areas containing soils or soil complexes described and mapped within the United States Department of Agriculture/Soil Conservation Service Soil Survey for Jefferson County as having a severe or very severe erosion hazard potential.
 - (b) Landslide Hazard Areas. Areas potentially subject to mass movement due to a combination of geologic, topographic and hydrologic factors including:
 - (i) Areas of historic failures or potentially unstable slopes, such as:
 - (A) Areas described and mapped as having severe or very severe building limitations for dwellings without basements within the United States Department of Agriculture/Soil Conservation Service Soil Survey for Jefferson County;
 - (B) Areas described and mapped as recent or old landslides or slopes of unstable materials within the Washington State Department of Ecology Coastal Zone Atlas of Jefferson County; and

- (C) Areas described and mapped as areas of poor natural stability, former landslides and recent landslides by the Washington State Department of Natural Resources, Division of Geology and Earth Resources;
 - (ii) Areas potentially unstable as a result of rapid stream incision, stream bank erosion, or undercutting by wave action; and
 - (iii) Areas with any indications of earth movement, such as:
 - (A) Rockslides;
 - (B) Earthflows;
 - (C) Mudflows; and
 - (D) Landslides.
 - (c) Seismic Hazard Areas. Areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. These areas are identified by the presence of: poorly drained soils with greater than 50 percent silt and very little coarse material; loose sand or gravel, peat, artificial fill and landslide materials; or soil units with high organic content.
 - (d) Channel Migration Zones (CMZs). Areas subject to the natural movement of stream channel meanders. Those areas within the delineated high risk CMZ area (the area in which channel migration is likely to occur within the next 50 years) are subject to this Article. Disconnected Migration Areas, which are areas that have been disconnected from the river by legally existing artificial structure(s) that restrain channel migration (such as levees and transportation facilities build above or constructed to remain intact through the 100-year flood elevation) and are no longer available for migration by the river, shall be excluded from review under Article V. Moderately high, moderate, and low risk CMZs areas are also excluded from review under this article.
- (3) Sources Used for Identification. Sources used to identify geologically hazardous areas include, but are not limited to:
- (a) United States Department of Agriculture/Soil Conservation Service, Soil Survey for Jefferson County.
 - (b) Washington State Department of Ecology, Coastal Zone Atlas.
 - (c) Washington State Department of Natural Resources, Slope Stability and Geologic Maps of Eastern Jefferson County.
 - (d) Washington State Department of Natural Resources, Geographic Information System: Soil Survey.
 - (e) Washington State Department of Natural Resources, Geologic Maps of Eastern Jefferson County, Compressibility of Earth Materials in Eastern Jefferson County.
 - (f) United States Department of the Interior, USGS Quad Maps.
 - (g) US Department of the Interior, Bureau of Reclamation. 2004. Channel Migration Zone Study for the Duckabush, Dosewallips, Big Quilcene and Little Quilcene Rivers, Jefferson County, Washington. Denver, CO.
 - (h) Perkins Geosciences. 2006. Channel Migration Hazard Maps for the Dosewallips, Duckabush, Big Quilcene and Little Quilcene Rivers, Jefferson County, Washington. Seattle, WA.
 - (i) Perkins Geosciences with TerraLogic GIS. June, 2004. Lower Hoh River Channel Migration Study Summary Report.
 - (j) The following rivers are not regulated in this section as a result of not having mapped CMZs (not an exhaustive list):
Thorndyke Creek, Shine Creek, Chimacum Creek, Snow Creek, Salmon Creek, Upper Hoh River, Bogachiel River, Clearwater River, and Quinault River
- (4) Geologic Hazard Area Maps. The maps prepared by the county using the identification sources listed in this section have been produced for informational purposes only and are not regulatory devices forming an integral part of this code.

18.22.170 Protection Standards

- (1) General. Application for a project on a parcel of real property containing a designated geologically hazardous area or its buffer shall adhere to the requirements set forth below.
- (2) Drainage and Erosion Control.
 - (a) An applicant submitting a project application shall also submit, and have approved, a drainage and erosion control plan, as specified in this chapter, when the project application involves either of the following:
 - (i) The alteration of a geologically hazardous area or its buffer; or
 - (ii) The creation of a new parcel within a known geologically hazardous area.

- (b) Drainage and erosion control plans required under this chapter shall discuss, evaluate and recommend methods to minimize sedimentation of adjacent properties during and after construction.
 - (c) Surface drainage shall not be directed across the face of a marine bluff, landslide hazard or ravine. The applicant must demonstrate that the storm water discharge cannot be accommodated on-site or upland by evidence of a geotechnical report, unless waived by the administrator. If drainage must be discharged from a bluff to adjacent waters, it shall be collected above the face of the bluff and directed to the water by tight line drain and provided with an energy dissipating device at the shoreline, above OHWM.
 - (d) In addition to any erosion control methods specified in the drainage and erosion control plan, the administrator may require hydroseeding of exposed or disturbed areas or other BMPs.
- (3) Clearing and Grading.
- (a) In addition to the general clearing and grading provisions in Chapter 18.30 JCC, the following provisions shall also apply:
 - (i) Clearing within geologically hazardous areas shall be allowed only from April 1st to November 1st, unless the applicant demonstrates that such activities would not result in impacts contrary to the protection requirements herein;
 - (ii) Only that clearing necessary to install temporary sedimentation and erosion control measures shall occur prior to clearing for roadways or utilities;
 - (iii) Clearing limits for roads, septic, water and storm water utilities, and temporary erosion control facilities shall be marked in the field and approved by the administrator prior to any alteration of existing native vegetation;
 - (iv) Clearing for roads and utilities shall remain within construction limits which must be marked in the field prior to commencement of site work; and
 - (v) The authorized clearing for roads and utilities shall be the minimum necessary to accomplish project specific engineering designs and shall remain within approved rights-of-way.
 - (b) The following provisions regarding grading shall apply:
 - (i) An applicant submitting a project application shall also submit, and have approved, a grading plan, as specified in this chapter, when the application involves either of the following:
 - (A) The alteration of a geologically hazardous area or its buffer; or
 - (B) The creation of a new parcel within a known geologically hazardous area.
 - (ii) Excavation, grading and earthwork construction regulated under this section shall only be allowed from April 1st to November 1st, unless the applicant demonstrates that such activities would not result in impacts contrary to the protection requirements herein.
- (4) Vegetation Retention. The following provisions regarding vegetation retention shall apply:
- (a) During clearing for roadways and utilities, all trees and understory lying outside of approved construction limits shall be retained; provided, that understory damaged during approved clearing operations may be pruned.
 - (b) Damage to vegetation retained during initial clearing activities shall be minimized by directional felling of trees to avoid critical areas and vegetation to be retained.
 - (c) Retained trees, understory and stumps may subsequently be cleared only if such clearing is necessary to complete the proposal involved in the triggering application.
 - (d) Within a high risk CMZ, vegetation removal shall not be allowed. Vegetation removal outside of a high risk CMZ shall not be reviewed under this Article. Should this provision conflict with other vegetation retention requirements specified within the JCC, the more restrictive protection requirement applies.
- (5) Buffer Marking. The location of the outer extent of landslide hazard area buffers shall be marked in the field as follows:
- (a) A permanent physical separation along the boundary of the landslide hazard area shall be installed and permanently maintained. Such separation may consist of logs, a tree or hedgerow, fencing, or other prominent physical marking approved by the administrator.
 - (b) Buffer perimeters shall be marked with temporary signs at an interval of one per parcel or every 100 feet, whichever is less. Signs shall remain in place prior to and during approved construction activities. The signs shall contain the following statement: "Landslide Hazard Area & Buffer – Do Not Remove or Alter Existing Native Vegetation."
 - (c) In the case of short plat, long plat, binding site plan or site plan approvals under this code, the applicant shall include on the face of any such instrument the boundary of the landslide hazard area and its buffer.
- (6) Buffers – Standard Requirements. The following landslide hazard area buffer provisions shall apply:
- (a) Buffer areas shall be required to provide sufficient separation between the landslide hazard area and the adjacent proposed project.

- (b) The appropriate width of the landslide hazard area buffer shall be determined by either: application of the standard buffer width set forth below; or, by acceptance of a geotechnical report meeting the criteria of this section.
 - (c) Buffers shall remain naturally vegetated. Where buffer disturbance has occurred during construction, replanting with native vegetation shall be required.
 - (d) Buffers shall be retained in their natural condition; however, minor pruning of vegetation to enhance views may be permitted by the administrator on a case-by-case basis.
 - (e) All buffers shall be measured perpendicularly from the top, toe or edge of the landslide hazard area boundary.
 - (f) A standard buffer of 30 feet shall be established from the top, toe and all edges of landslide hazard areas.
 - (g) A building setback line is required to be five (5) feet from the edge of any buffer area for a landslide hazard area OR to outside the full extent of the high risk channel migration zone (CMZ), whichever is greater.
- (7) Reducing Buffer Widths. The administrator may reduce the standard landslide hazard area buffer width only when the project applicant demonstrates, to the satisfaction of the administrator, that the project cannot meet the required setback. The reduced buffer must adequately protect the proposed project from the risks of the landslide hazard area to the maximum extent possible. Under no circumstances shall the buffer width be reduced to less than 15 feet.
- (8) Increasing Buffer Widths. The administrator may increase the standard landslide hazard area buffer width when a larger buffer is necessary to protect the proposed project and the landslide hazard area. This determination shall be made when the administrator demonstrates any one of the following through appropriate documentation:
- (a) The landslide area is unstable and active.
 - (b) The adjacent land is susceptible to severe landslide or erosion, and erosion control measures will not effectively protect the proposed project from the risks posed by the landslide hazard area.
 - (c) The adjacent land has minimal vegetative cover.
- (9) Geotechnical Report.
- (a) An applicant submitting a project application shall submit, and have approved, a geotechnical report, as specified in Article VIII of this chapter, when the application involves any of the following:
 - (i) The alteration of a landslide hazard area or its buffer.
 - (ii) The creation of a new parcel within a known landslide hazard area.
 - (iii) The construction of a publicly owned facility in a designated seismic hazard area.
 - (b) Where a geotechnical report is required for a landslide hazard area, the project application shall not be approved unless the geotechnical report certifies all of the following:
 - (i) There is minimal landslide hazard as proven by a lack of evidence of landslide activity in the vicinity in the past;
 - (ii) An analysis of slope stability indicates that the proposal will not be subject to risk of landslide, or the proposal or the landslide hazard area can be modified so that hazards are eliminated;
 - (iii) The proposal will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions;
 - (iv) The proposal will not decrease slope stability on adjacent properties; and
 - (v) All newly created building sites will be stable under normal geologic and hydrogeologic conditions (if applicable).
 - (c) Where a geotechnical report is required for a seismic hazard area, the project application shall not be approved unless the geotechnical report demonstrates that the proposed project will adequately protect the public safety.

18.22.180 Conditions

- (1) General. In granting approval for a project application subject to the provisions of this Article V, the administrator may require mitigating conditions that will, in the administrator's judgment, substantially secure the objectives of this article.
- (2) Basis for Conditions. All conditions of approval required pursuant to this section shall be based upon either the substantive requirements of this section or the recommendations of a qualified professional, contained within a special report required under this chapter.

Article VI - Fish and Wildlife Habitat Conservation Areas (FWHCAs)

18.22.195 Compliance Alternatives

Article VI sets forth the prescriptive requirements. Applicants for development permits or approvals subject to this Article VI may elect to comply with the Critical Area Stewardship Plan (CASP) provisions set forth in Article IX of this Chapter in lieu of the prescriptive requirements set forth herein.

18.22.200 Classification/Designation

- (1) Classification. Fish and wildlife habitat conservation areas (FWHCAs) are those areas identified as being of critical importance to the maintenance of endangered, threatened, or sensitive species of fish, wildlife and/or plants, or species of local importance. These areas are typically identified either by known point locations of specific species (such as a nest or den) or by habitat areas or both. All areas within the County meeting these criteria are hereby designated critical areas and are subject to the provisions of this article.
- (2) Mapping. The approximate location and extent of identified fish and wildlife habitat conservation areas (FWHCAs) are shown on the County's critical area maps. These maps are to be used as a guide and do not provide a definitive critical area determination. The County shall update the maps as new FWHCAs are identified or new information related to updates to existing maps becomes available.
- (3) Designation. The following are designated as Fish and Wildlife Habitat Conservation Areas (FWHCAs):
 - (a) Areas with which endangered, threatened, and sensitive species listed by the federal or state government have a primary association.
 - (i) Federally designated and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered. The U.S. Fish and Wildlife Service and the National Marine Fisheries Services should be consulted for current listing status.
 - (ii) State endangered, threatened, and sensitive species are those species native to the State of Washington identified by the state Department of Fish and Wildlife that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered within the state. The state maintains the list of these species in WAC 232-12-014 (endangered species) and in WAC 232-12-014 (threatened and sensitive species). The State Department of Fish and Wildlife should be consulted for current listing status.
 - (b) Rivers and Streams not otherwise protected under Washington State Forest Practices regulations (RCW 76.09 and Chapter 222 WAC) that have FWHCAs are protected according to stream type.
 - (c) Lands covered under the Forest Practices Act. Forested areas in Jefferson County provide protection as FWHCAs under the Forest Practices Act (RCW 76.09) and Forest Practices Regulations (Chapter 222 WAC).
 - (d) Commercial and recreational shellfish areas, including designated Shellfish Habitat Conservation Areas (note: shellfish aquaculture activities within all public and private tidelands and bed lands suitable for shellfish harvest are allowed uses; such activities include but are not limited to bed marking, preparation, planting, cultivation, and harvest).
 - (e) Kelp and eelgrass beds.
 - (f) Surf smelt, Pacific herring, and Pacific sand lance spawning areas.
 - (g) Natural Area Preserves and Natural Resource Conservation Areas.
 - (h) All areas designated by the Department of Natural Resources ("DNR") through the Washington Natural Heritage Program as high quality wetland ecosystems and high quality terrestrial ecosystems.
 - (i) Species and Habitats of Local Importance established pursuant to the process delineated in JCC 18.22.210.

18.22.210 Process and Requirements for Designating Habitats of Local Importance as Critical Areas

- (1) Purpose. This section describes the process for designating species and habitats of local importance that are not covered by the Federal and State sensitive, threatened or endangered species regulations. Accordingly, this section details the requirements for designating and monitoring species and habitats of local importance, as well as removing such species and habitats from designation if necessary.
- (2) Definition. The use of the term "habitat" in this section includes areas designated as "wildlife corridors."

- (3) Procedure for designation – generally. An application/nomination to designate a habitat of local importance as a critical area shall be processed according to the procedures for Type V land use decisions established in Chapter 18.40 JCC.
- (4) Nominations/applications. Any person, organization, or Jefferson County agency may nominate and apply for designation a species or habitat of local importance. A nominating person or organization must be a resident of, or headquartered in, Jefferson County.
- (5) Nomination/application submittal.
 - (a) The applicant shall provide information demonstrating that the species or habitat is native to Jefferson County existing on or before the date of adoption of the regulations codified in this chapter.
 - (b) All nominations/applications for designation of a species/habitat of local significance shall include the following:
 - (i) Identification of the species including its scientific and locally common name(s);
 - (ii) Identification of the geographic location, including Jefferson County Parcel Numbers, and extent of the habitat associated with a nominated species or the nominated habitat itself if not associated with a nominated species; a map of an appropriate scale to properly describe the location and extent of the habitat will accompany the nomination, as well as geo-referencing information sufficient to allow mapping of the habitat site in the county GIS mapping system;
 - (iii) The status of the species or the occurrence of the type of habitat in surrounding counties and in the rest of the State has been considered in making this nomination;
 - (iv) A management strategy for the species or habitat;
 - (v) Indications as to whether the proposed management strategy has been peer reviewed, and if so, how was this done and by whom;
 - (vi) Where restoration of habitat is proposed, a specific plan, including how the restoration will be funded, must be provided as part of the nomination;
 - (vii) Recommendations for allowed, exempt, and regulated activities within the area;
 - (viii) Recommended buffer and setback requirements and their justification;
 - (ix) Seasonal requirements;
 - (x) A monitoring plan must be practical and achievable and includes the following:
 - (A) Baseline data and a description of what measurements will be used to determine the success of the project. The plan shall include the criteria and time period required to evaluate the success of the plan.
 - (B) A contingency plan for failure.
 - (C) A list of all parcels not included in the nomination but affected by the monitoring process.
 - (xi) The nomination must also include an economic impact, cost and benefits analysis. The nomination must also include an analysis of alternative solutions to formal designation of the habitat of local importance as a regulated critical area under this chapter.
 - (c) The applicant shall be responsible for paying all fees and all expenses incurred by Jefferson County to process the application.
- (6) Review and approval criteria.
 - (a) Species nominated for designation under this section must satisfy the following criteria:
 - (i) Local populations that are in danger of extirpation based on documented trends since the adoption of the Growth Management Act;
 - (ii) The species is sensitive to habitat manipulation;
 - (iii) The species or habitat has commercial, game, or other special value such as locally rare species;
 - (iv) The nomination includes an analysis of the proposal using best available science; and
 - (v) The nomination specifies why protection by other county, state or federal policies, laws, regulations or non-regulatory tools is inadequate to prevent degradation of the species or habitat and for which management strategies are practicable, and describes why, without designation and protection, there is a likelihood that the species will not maintain and reproduce over the long term, or that a unique habitat will be lost.
 - (b) Habitats nominated for designation under this section must satisfy the following criteria:
 - (i) Where a habitat is nominated to protect a species, the use of the habitat by that species must be documented or be highly likely or the habitat is proposed to be restored with the consent of the affected property owner so that it will be suitable for use by the species; and, long term persistence of the species in Jefferson County and adjoining counties is dependent on the protection, maintenance or restoration of the habitat;

- (ii) Areas nominated to protect a particular habitat must represent either high quality native habitat or habitat that has an excellent potential to recover to a high quality condition and which is either of limited availability or highly vulnerable to alteration.
 - (iii) The nomination specifies the specific habitat features to be protected (e.g., nest sites, breeding areas, nurseries, etc.). In the case of proposed wildlife corridors, the nomination shall specify those features that are required for the corridor to remain viable to support and protect the nominated species.
- (7) Review and approval process.
- (a) The Department of Community Development shall determine whether the application submittal is complete. If deemed complete, the department shall evaluate the proposal for compliance with the approval criteria set forth in this section and make a recommendation to the Planning Commission based on those criteria. The department shall also notify all parcel owners affected of the terms and contents of the proposal.
 - (b) Upon receipt of a staff report and recommendation from the department, the Planning Commission shall hold a public hearing, and make a recommendation to the Board of Commissioners based upon the approval criteria set forth in this section.
 - (c) The Jefferson County Board of Commissioners shall consider the recommendation transmitted by the Planning Commission at a regularly scheduled public meeting, and may then adopt an ordinance formally approving the designation. Should the Board wish to vary from the Planning Commission recommendation and alter or reject the application, such action may only occur following a separate public hearing conducted by the Board.
 - (d) Upon approval, the ordinance designating and regulating the species or habitat of local importance shall be codified in this article for public information and implementation by the department, and a notice to title shall be placed upon all parcels affected by the designation.
 - (e) Each ordinance creating a species or habitat of local importance shall include periodic review of reassessment of the initial designation. The length of the periodic review may be dependent on the characteristics of the species or habitat.
- (8) Removal from designation. Species or habitats of local significance may be removed at any time, PROVIDED, that they no longer meet the criteria set forth in JCC 18.22.210(5). (e.g., as a result of a natural catastrophe or climatic change event), and PROVIDED FURTHER, that the procedural requirements of this section and the procedural requirements established for Type V land use decisions set forth within Chapter 18.40 JCC.

18.22.220 Sources used for Identification

Sources used to identify fish and wildlife habitat conservation areas (FWHCAs) include, but are not limited to the following:

- (1) United States Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory.
- (2) Washington State Department of Natural Resources, Water Type Index Maps.
- (3) Washington State Department of Fish and Wildlife, Non-Game and Priority Habitats and Species databases.
- (4) Public and private tidelands or bedlands suitable for shellfish harvest and identified by the Washington Department of Health's classification system and shellfish protection districts established pursuant to Chapter 90.72 RCW.
- (5) Kelp and eelgrass beds may be classified and identified with the Department of Natural Resources Aquatic Lands Program and the Department of Ecology (note: many locations are compiled in the Puget Sound Environmental Atlas).
- (6) Herring and smelt spawning times and locations are outlined in WAC 220-110-240 through WAC 220-110-250, Hydraulic Code Rules, Technical Report No. 79, and the Puget Sound Environmental Atlas.

18.22.230 Fish and wildlife Habitat Conservation Area (FWHCA) Maps

County maps identifying FWHCAs have been produced for informational purposes only and are not regulatory devices forming an integral part of this Article VI.

18.22.250 Regulated Activities

Any land use or development activity that is subject to a development permit or approval requirements of this code shall be subject to the provisions of this Article VI. These include, but are not limited to the following

activities that are directly undertaken or originate in a FWHCA or its buffer, unless otherwise exempted under JCC 18.22.070.

- (1) Stream Crossings. Any private or public road expansion or construction which is proposed and must cross streams classified within this article, shall comply with the following minimum development standards:
 - (a) The design of stream crossings shall meet the requirements of the Washington Department of Fish and Wildlife. Fish passage shall be provided if necessary to address manmade obstructions on-site. Other alternatives may be allowed upon a showing that, for the site under review, the alternatives would be less disruptive to the habitat or that the necessary building foundations were not feasible. Submittal of a habitat management plan which demonstrates that the alternatives would not result in significant impacts to the fish and wildlife habitat area (FWHCA) may be required;
 - (b) Crossings shall not occur in salmonid spawning areas unless no other reasonable crossing site exists. For new development proposals, if existing crossings are determined to adversely impact salmon spawning or passage areas, new or upgraded crossings shall be located as determined necessary through coordination with the Washington State Department of Fish and Wildlife;
 - (c) Bridge piers or abutments shall not be placed either within the floodway or between the ordinary, high water marks unless no other reasonable alternative placement exists;
 - (d) All stream crossings shall be designed based on the 100-year projected flood flows, even in non-fish bearing Type Np and Ns streams. In addition, crossings for Type S and F streams should allow for downstream transport of large woody debris;
 - (e) Crossings shall serve multiple properties whenever possible; and
 - (f) Where there is no reasonable alternative to providing a culvert, the culvert shall be the minimum length necessary to accommodate the permitted activity.
- (2) Utilities. Placement of utilities within designated fish and wildlife habitat areas may be allowed pursuant to the following standards:
 - (a) Construction of utilities may be permitted in FWHCAs or their buffers, only when no practicable or reasonable alternative location is available and the utility corridor meets the requirements for installation, replacement of vegetation and maintenance outlined below. Utilities are encouraged to follow existing or permitted roads where possible.
 - (b) Construction of sewer lines or on-site sewage systems are not permitted in FWHCAs or their buffers, except that they may be permitted in a buffer area when the applicant demonstrates it is necessary to meet state and/or local health code requirements; there are no other practicable alternatives available; and construction meets the requirement of this article. Joint use of the sewer utility corridor by other utilities may be allowed.
 - (c) New utility corridors shall not be allowed in FWHCAs with known locations of federal or state-listed endangered, threatened or sensitive species, except in those circumstances where an approved habitat management plan is in place.
 - (d) Utility corridor construction and maintenance shall protect the environment of fish and wildlife habitat areas and their buffers.
 - (i) New utility corridors shall be aligned when possible to avoid cutting trees greater than 12 inches in diameter at breast height (four and one-half feet) measured on the uphill side.
 - (ii) New utility corridors shall be revegetated with appropriate native vegetation at not less than preconstruction vegetation densities or greater, immediately upon completion of construction or as soon thereafter as possible due to seasonal growing constraints. The utility shall ensure that such vegetation survives for a three-year period.
 - (e) Utility towers should be painted with brush, pad or roller and should not be sandblasted or spray-painted, nor shall lead-base paints be used.
- (3) Bank Stabilization.
 - (a) A stream channel and bank, bluff, and shoreline may be stabilized when naturally occurring earth movement threatens existing legal structures (structure is defined for this purpose as those requiring a building permit pursuant to the building code), public improvements, unique natural resources, public health, safety or welfare, or the only feasible access to property, and, in the case of streams, when such stabilization results in maintenance of fish habitat or improved water quality, as demonstrated through a habitat management plan or equivalent study or assessment. Bluff, bank and shoreline stabilization shall follow the standards of the Jefferson County Shoreline Master Program, geologically hazardous areas provision in this chapter, and the floodplain management ordinance.
 - (b) The administrator shall require that bank stabilization be designed by a professional engineer licensed in the state of Washington with demonstrated expertise in hydraulic actions of shorelines. For bank stabilization projects within FWHCAs, the applicant must provide a geotechnical report that demonstrates

that bioengineering solutions (vegetation versus hard surfaces) are infeasible. The report must document the engineering rationale why bioengineering solutions are infeasible in a manner that can be confirmed through review by other engineering professionals. Bank stabilization projects may also require a hydraulic project approval from the Washington Department of Fish and Wildlife that will be determined after consultation with WDFW.

- (4) Gravel Mining. Gravel mining is discouraged within FWHCAs or their buffers, and it shall not be permitted if it causes unmitigatable significant adverse impacts, but it may be allowed following the review and approval of a habitat management plan, including a detailed mining and reclamation plan pursuant to the applicable performance standards in Chapter 18.20.240 JCC or as otherwise required in this code.
- (5) Forest Practices, Class IV General. Timber harvesting with associated development activity involving land conversions from forest use, or otherwise meeting the DNR definition as a Class IV General application, shall comply with the provisions of this article, including the maintenance of buffers, where required.
- (6) Road/Street Repair and Construction. Any private or public road or street expansion or construction which is allowed in a FWHCA or its buffer shall comply with the following minimum development standards:
 - (a) No other reasonable or practicable alternative exists and the proposed road or street serves multiple properties whenever possible;
 - (b) Public and private roads are encouraged to provide for other purposes, such as utility crossings, pedestrian or bicycle easements, viewing points, etc.;
 - (c) The road or street construction is the minimum necessary, as required by the department of public works' guidelines. Minimum necessary provisions may include projected level of service requirements; and
 - (d) Construction time limits shall be determined in consultation with the Washington Department of Fish and Wildlife in order to ensure species and habitat protection.
- (7) Outdoor Recreation, Education and Trails. Activities and improvements that do not significantly affect the function of the FWHCA or regulated buffer (including viewing structures, outdoor scientific or interpretive facilities, trails, hunting blinds, etc.) may be permitted in FWHCAs or their buffers.
 - (a) Trails and other facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or other previously disturbed areas;
 - (b) Trails and other facilities shall be planned to minimize removal of trees, shrubs, snags and important wildlife habitat;
 - (c) Viewing platforms, interpretive centers, benches and access to them, shall be designed and located to minimize impacts to wildlife, fish, or their habitat and/or critical characteristics of the affected FWHCA;
 - (d) Trails, in general, shall be set back from streams so that there will be minimal impact to the stream from trail use or maintenance. Trails shall be constructed with pervious surfaces when feasible and trails within FWHCAs are not intended to be used by motorized vehicles.
- (8) Chemical Application or Storage. Chemical applications are not permitted within FWHCAs unless expressly approved as part of a farm plan, forest practices application, or for the control of invasive or noxious plant species. In cases where approved chemical applications occur as part of a forest practices application or farm plan, proper reporting procedures shall be followed. Chemical storage shall not be permitted within a FWHCA or its buffer.

18.22.265 Habitat Management Plans – When Required

When a development proposal is located on lands which may contain a habitat for a Protected Species other than Bald Eagle nesting territories, or when the applicant proposes to alter, decrease or average the standard buffer, a Habitat Management Plan (HMP) shall be required, consistent with the requirements of JCC 18.22.440.

18.22.270 Protection Standards

- (1) General. Application for a project on a parcel of real property containing a designated FWHCA or its buffer shall adhere to the requirements set forth in this section.
- (2) Drainage and Erosion Control. An applicant submitting a project application shall also submit, and have approved, a drainage and erosion control plan, as specified in this chapter.
- (3) Grading. An applicant submitting a project application shall also submit, and have approved, a grading plan, as specified in this chapter.
- (4) Vegetation Retention. The following provisions regarding vegetation retention shall apply:
 - (a) All trees and understory lying outside of road rights-of-way and utility easements shall be retained (except for hazard trees) during clearing for roadways and utilities; provided, that understory damaged during approved clearing operations may be pruned.

- (b) Damage to vegetation retained during initial clearing activities shall be minimized by directional felling of trees to avoid critical areas and vegetation to be retained.
 - (c) Retained trees, understory and stumps may subsequently be cleared only if such clearing is necessary to complete the proposal involved in the project application.
- (5) Buffers – Standard Requirements. The administrator shall have the authority to require buffers from the edges of all FWHCAs in accordance with the following:
- (a) Buffers generally.
 - (i) Buffers shall be established for activities adjacent to FWHCAs as necessary to protect the integrity, functions and values of the resource, consistent with the requirements set forth in Tables 18.22.270(1) and 18.22.270(2) of this section.
 - (ii) A building setback line of five feet is required from the edge of any buffer area, however, nonstructural improvements such as septic drain fields may be located within setback areas.
 - (iii) Buffers shall be retained in their natural condition, however, minor pruning of vegetation to enhance views or provide access may be permitted as long as the function and character of the buffer are not diminished.
 - (iv) Lighting shall be directed away from the FWHCA.
 - (b) Prescriptive FWHCA Buffers.
 - (i) The standard buffer widths required by this article are considered to be the minimum required to protect the stream functions and values at the time of the proposed activity. When a buffer lacks adequate vegetation to protect critical area functions, the administrator may deny a proposal for buffer reduction or buffer averaging.
 - (ii) The standard buffer shall be measured landward horizontally on both sides of the stream from the ordinary high water mark (OHWM) as identified in the field. Nevertheless, the required buffer shall include any adjacent regulated wetland(s), landslide hazard areas and/or erosion hazard areas and required buffers, but shall not be extended across paved roads or other lawfully established structures or hardened surfaces. The following standard buffer width requirements are established, provided that portions of streams that flow underground may be exempt from these buffer standards at the administrator's discretion when it can be demonstrated that no adverse effects on aquatic species will occur.

TABLE 18.22.270(1): STREAM BUFFERS*	
STREAM TYPE	BUFFER REQUIREMENT
Type "S" - Shoreline Streams	150 feet
Type "F" – Fish Bearing Streams	150 feet
Type "Np"- Non-Fish Bearing Perennial Streams	75 feet
Type "Ns" – Non-Fish Bearing Seasonal Streams greater than or equal to 20% grade	75 feet
Type "Ns" – Non-Fish Bearing Seasonal Streams less than 20% grade	50 feet

* Note:

- (a) The buffers set forth above shall apply to culverted streams; though in limited circumstances, a variance may be made in the application of stream buffers under Article IX of JCC Chapter 18.40.
- (b) Stream type shall be determined using the criteria set forth in WAC 222-16-030.

(iii) Buffers for other FWHCAs. The administrator shall determine appropriate buffer widths for other FWHCAs based on the best available information. Buffer widths for non-stream habitat conservation areas shall be as follows:

Table 18.22.270(2): Buffers for Other FWHCAs	
FWHCA Type	Buffer Requirement
Areas with which federally listed species have a primary association	Buffers shall be 150 feet provided that local and site specific factors shall be taken into consideration and the buffer width based on the best available information concerning the species/habitat(s) in question and/or the opinions and recommendations of a qualified professional with appropriate expertise.
Commercial and recreational shellfish areas	Buffers shall extend one hundred-fifty (150) feet landward from ordinary high water mark of the marine shore.
Kelp and Eelgrass Beds	Buffers shall extend one hundred-fifty (150) feet landward from ordinary high water mark of the marine shore.
Surf Smelt, Pacific Herring, and Pacific Sand Lance Spawning Areas	Buffers shall extend one hundred-fifty (150) feet landward from ordinary high water mark of the marine shore.
Natural Pond and Lakes	Ponds under 20 acres - buffers shall extend 50 feet from the ordinary high water mark; Lakes 20 acres and larger - buffers shall extend 100 feet from the ordinary high water mark, provided that where vegetated wetlands are associated with the shoreline, the buffer shall be based on the wetland buffer requirements.
Natural Area Preserves and Natural Resource Conservation Areas	Buffers shall not be required adjacent to these areas. These areas are assumed to encompass the land required for species preservation.

Table 18.22.270(2), continued: Buffers for Other FWHCAs	
FWHCA Type	Buffer Requirement
Locally Important Habitat Areas	<p>The buffer for marine nearshore habitats shall extend landward 150 feet from the ordinary high water mark.</p> <p>The need for and dimensions of buffers for other locally important species or habitats shall be determined on a case-by-case basis, according to the needs of the specific species or habitat area of concern. Buffers shall not be required adjacent to the wildlife corridor. The administrator shall coordinate with the Washington Department of Fish and Wildlife and other state, federal or Tribal experts in these instances, and may use WDFW PHS management recommendations when available and applicable.</p>

- (6) The administrator shall have the authority to reduce buffer widths on a case-by case basis, provided that the specific standards for avoidance and minimization set forth in JCC 18.22.350(1) shall apply, and when the applicant demonstrates to the satisfaction of the administrator that all of the following criteria are met:
- (a) The buffer reduction shall not adversely affect the habitat functions and values of the adjacent FWHCA or other critical area.
 - (b) The buffer shall not be reduced to less than seventy-five (75) percent of the standard buffer.
 - (c) The slopes adjacent to the FWHCA within the buffer area are stable and the gradient does not exceed thirty percent (30%).
- (7) The administrator shall have the authority to average buffer widths on a case-by case basis, provided that the specific standards for avoidance and minimization set forth in JCC 18.22.350(1) shall apply, and when the applicant demonstrates to the satisfaction of the administrator that all the following criteria are met:
- (a) The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer and all increases in buffer dimension are parallel to the FWHCA.
 - (b) The buffer averaging does not reduce the functions or values of the FWHCA or riparian habitat, or the buffer averaging, in conjunction with vegetation enhancement, increases the habitat function.
 - (c) The buffer averaging is necessary due to site constraints caused by existing physical characteristics such as slope, soils, or vegetation.
 - (d) The buffer width is not reduced to less than seventy-five percent (75%) of the standard width.
 - (e) The slopes adjacent to the FWHCA within the buffer area are stable and the gradient does not exceed thirty percent (30%).
 - (f) Buffer averaging shall not be allowed if FWHCA buffers are reduced pursuant to subsection 6 of this section.
- (8) **Buffer Marking.** The location of the outer extent of required buffers shall be marked in the field as follows:
- During Construction: Buffer perimeters shall be marked with temporary signs at an interval of one per parcel or every 100 feet, whichever is less. Signs shall remain in place prior to and during approved construction activities. The signs shall contain the following statement: "Buffer – Do Not Remove or Alter Existing Native Vegetation."
- (9) In the case of short plat, long plat, binding site plan, and site plan approvals under this code, the applicant shall include on the face of any such instrument the boundary of the FWHCA.
- (10) The applicant may also choose to dedicate the buffer through a conservation easement or deed restriction that shall be recorded with the Jefferson County auditor. Such easements or restrictions shall, however, use the forms approved by the prosecuting attorney.

18.22.280 Conditions

- (1) General. In granting approval for a project application subject to the provisions of this Article VI, the administrator may require mitigating conditions that will, in the administrator's judgment, substantially secure the objectives of this article.
- (2) Basis for Conditions. All conditions of approval required pursuant to this article shall be based upon either the substantive requirements of this article or the recommendations of a qualified professional utilizing best available science, contained within a special report required under this chapter.

Article VII - Wetlands

18.22.290 Stewardship Alternative

Article VII sets forth the prescriptive requirements for wetlands. Applicants for development permits or approvals subject to this Article VII may elect to comply with the Critical Area Stewardship Plan (CASP) provisions set forth in Article IX of this Chapter in lieu of the prescriptive requirements set forth herein. CASP may be applied within Category II, III, & IV wetlands and buffers, and within buffers in Category I. They cannot be used in Category I wetlands.

18.22.300 Classification/Designation

- (1) Classification. Wetlands shall be classified using the 2004 Washington State Department of Ecology's Wetland Rating System for Western Washington (Ecology Publication #04-06-025), or as amended. Wetland rating categories shall not be determined based upon illegal modification of the land. Wetland delineations shall be determined by using the Washington State Wetlands Identification and Delineation Manual, March 1997, or as amended hereafter.
- (2) Designation. As determined using the 1997 Washington State Department of Ecology's Washington State Wetlands Identification and Delineation Manual (Ecology Publication #96-94 or as amended), wetlands shall be designated as critical areas and regulated under this article regardless of size; PROVIDED that Category IV wetlands less than one-tenth (0.1) acre (4,356 square feet) shall be exempt from the requirements of this article when all of the following criteria are met:
 - (a) The wetland does not provide breeding habitat for native amphibian species. Breeding habitat is indicated by adequate and stable seasonal inundation, presence of thin-stemmed emergent vegetation, and clean water;
 - (b) The wetland does not have unique characteristics that would be difficult to replace through standard compensatory mitigation practices;
 - (c) The wetland is not located within a fish and wildlife habitat conservation area (FWHCA) as defined in the section of this ordinance dealing with FWHCAs, and is not integral to the maintenance of habitat functions of an FWHCA;
 - (d) The wetland is not located within a floodplain;
 - (e) The wetland is not associated with a shoreline of the state as defined by the County's Shoreline Master Program;
 - (f) The wetland is not part of a mosaic of wetlands and uplands, as determined using the guidance provided in the Wetland Rating System.
- (3) Sources Used for Identification. The following sources should be used to identify potential wetland locations. Sources include, but are not limited to:
 - (a) United States Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory.
 - (b) United States Department of Agriculture, Soil Conservation Service, Soil Survey of Jefferson County Areas, Washington.
 - (c) United States Department of Agriculture, Natural Resources Conservation Service, Hydric Soils List, Jefferson County Area.
 - (d) County Critical Areas Mapping. The wetland maps prepared by the county have been produced for informational purposes only and are not regulatory devices forming an integral part of this article.

18.22.310 Regulated Activities

Any land use or development activity shall be subject to the provisions of this Article VII, including, but not limited to, the following activities that are directly undertaken or originate in a regulated wetland or its buffer, unless exempted under JCC 18.22.070:

- (1) The removal, excavation, grading, or dredging of material of any kind, including the construction of ponds and trails;
- (2) The dumping, discharging of any material, or placement of any fill;
- (3) The draining, flooding, or disturbing of the wetland water level or water table;
- (4) The driving of pilings;
- (5) The placing of obstructions;
- (6) The construction, reconstruction, demolition, or expansion of any structure;
- (7) The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, application of herbicides or pesticides, or planting of vegetation that would alter the character of a regulated wetland; provided, that these activities are not part of a forest practice governed under Chapter 76.09 RCW (Forest Practices Act) and its rules; or
- (8) Activities that result in:
 - (a) A significant change of water temperature;
 - (b) A significant change of physical or chemical characteristics of wetlands water sources, including quantity; or
 - (c) The introduction of pollutants.
- (9) Wetland Buffers. In addition to those activities allowed in regulated wetlands in this article, the following activities are allowed within wetland buffers without having to meet the protection standards, or requirements for wetland studies or mitigation set forth in this article; provided, that impacts to buffers are minimized and that disturbed areas are immediately restored except as specifically allowed in subsection (2)(a) of this section.
 - (a) Activities having minimal adverse impacts on buffers and no adverse impacts on regulated wetlands. These include low intensity, passive recreational activities, such as pervious trails, nonpermanent wildlife watching blinds, scientific or educational activities, and sports fishing or hunting. Trails within buffers shall be designed to minimize impacts to the wetland, and shall not include any impervious surfaces.
 - (b) Within the buffers of Category III and IV wetlands only, vegetation-lined swales designed for storm water management or conveyance when topographic restraints determine there are no other upland alternative locations. Swales used for detention purposes may only be placed in the outer 25 percent of the buffer. Conveyance swales may be placed through the buffer, if necessary.

18.22.330 Protection Standards

- (1) General. Application for a project on a parcel of real property containing a designated wetland or its buffer shall adhere to the requirements set forth below.
 - (2) Delineation. An applicant submitting a project application shall also submit, and have approved, a wetland delineation report as specified in JCC 18.22.450. Additionally, the following provisions shall apply:
 - (a) The location of the wetland and its boundary shall be determined through the performance of a field investigation utilizing the methodology contained in the Washington State Wetlands Identification and Delineation Manual, March 1997, or as amended hereafter.
 - (b) If the wetland is located off of the property involved in the project application and is inaccessible, the best available information shall be used to determine the wetland boundary and category.
 - (c) The wetland boundary shall be staked or flagged in the field.
 - (d) This requirement may be waived under the following circumstances:
 - (i) Single-Family Residences. The requirement for a wetland delineation and special report may be waived by the administrator for construction of a single-family residence on an existing lot of record if DCD staff or a qualified wetland evaluator determines that:
 - (A) Sufficient information exists for staff to estimate the boundaries of a wetland without a delineation; and
 - (B) The single-family residence and all accessory structures and uses are not proposed to be located within the distances identified in Table 18.22.330(1), below, from the estimated wetland boundary.
- “Qualified wetland evaluator” means an individual recognized and acceptable to the Administrator in using the most current edition of the Department of Ecology’s Washington State Wetland Rating System for Western Washington (2004), Ecology Publication # 04-06-025, or as amended in categorizing and rating wetlands.

- (ii) Subdivisions and Short Subdivisions. The requirement for a wetland delineation and special report will be waived for subdivisions and short subdivisions of an existing lot of record if a site assessment made by a qualified wetland evaluator indicates the following:
 - (A) Sufficient information exists to estimate the boundaries of a wetland without a delineation; and
 - (B) Building envelopes or building setback lines are not proposed to be located within the distances identified in Tables 18.22.330(1), (2) and (3), below, from the estimated wetland boundary.
- (3) Wetland Buffer Requirements. Wetland buffer widths shall be prescribed and established based upon the category of the wetland, the wetland rating scores and the impact level of the proposed land use. The resulting buffers are shown in Tables: 18.22.330 (1), (2), and (3) [for low, moderate and high impact land-uses].
 - (a) The category and rating scores of a wetland shall be determined by a qualified wetland evaluator who must be: recognized and acceptable to the Administrator and use the most current edition of the Department of Ecology's "Wetlands in Washington State Volume 2: Guidance for Protecting and managing Wetlands" (DOE Publication #05-06-0008) in categorizing and rating wetlands.
 - (b) There are three (3) Land-Use Impact Level types. Each type is presented with the Table containing the buffer widths that would be prescribed for its associated wetland category.
 - (c) Proposals for development will have three options for deciding what their buffer distance will be. A buffer distance is the closest distance the proposed development can be to the wetland boundary.
 - (i) The Stewardship Plan Option, as detailed in Article IX of this Chapter 18.22.
 - (ii) The Professionally Delineated Boundary Option: A prescriptive buffer distance based on an actual delineation of the wetland boundary as determined by an qualified wetland evaluator (cost is the responsibility of proponent). This buffer distance will be measured outward from the delineated wetland boundary. Refer to the column in the Tables with the word "delineation" in the heading.
 - (iii) The Apparent Boundary option: A prescriptive buffer distance based on the apparent location of the wetland boundary as proposed by the county's wetland specialist. In these cases the buffer will be the total distance calculated using the buffer distance as shown in the "delineation" column of the Tables plus an additional twenty (20) to fifty (50) feet, depending upon wetland category (shown in the "non-delineation" column of the table). This calculated buffer distance will be measured outward from the apparent wetland boundary.
- (4) Drainage and Erosion Control. An applicant submitting a project application shall also submit, and have approved, a drainage and erosion control plan as specified in this chapter. The plan shall discuss, evaluate and recommend methods to minimize sedimentation of designated wetlands during and after construction.
- (5) Buffer Marking. Upon approval of the delineation report the location of the outer extent of the wetland buffer shall be marked in the field as follows:
 - (a) A permanent physical indicator along the upland boundary of the wetland buffer area shall be installed and permanently maintained.
 - (b) During construction activities, buffer perimeters shall be marked with temporary signs at an interval of one per parcel or every 100 feet, whichever is less. Signs shall remain in place prior to and during approved construction activities. The signs shall contain the following statement: "Wetland & Buffer – Do Not Remove or Alter Existing Native Vegetation."
 - (c) In the case of short plat, long plat, binding site plan, and site plan approvals under this code, the applicant shall include on the face of any such instrument the boundary of the wetland and its buffer.
 - (d) The applicant may also choose to dedicate the buffer through a conservation easement or deed restriction that shall be recorded with the Jefferson County auditor. Such easements or restrictions shall, however, use the forms approved by the prosecuting attorney.
- (6) Buffers – Standard Requirements.
 - (a) The administrator shall have the authority to require buffers from the boundaries of all wetlands as established by this article, and in accordance with the following criteria.
 - (i) Wetland buffer widths shall be measured along a horizontal line perpendicular to the wetland boundary as marked in the field during delineation if required, or based upon site investigation, aerial photographs, or LiDAR images.
 - (ii) Functionally isolated buffer areas are those areas separated from a wetland that do not protect the wetland from adverse impacts. Buffers need not include areas that are functionally isolated and physically disconnected from the wetland by a substantial developed surface such as a dike, building, parking lot, or road. In determining whether or not a buffer area is functionally isolated, the administrator shall take into consideration whether or not the isolated buffer area is used by

wildlife to gain access to the wetland. In instances where substantial wildlife use is documented, the area shall be retained as buffer despite being otherwise isolated or disconnected from the wetland.

- (iii) When a buffer is on a slope steeper than forty percent (40%), and/or lacks adequately dense and diverse vegetation, the administrator may deny a proposal for buffer reduction or buffer averaging.
- (b) The prescribed buffer widths shall be established on the basis of the following factors:
- (i) The wetland's value and sensitivity to disturbance, based on its category (I, II, III, IV) as determined by the total score on the rating form for the Wetland Rating System;
 - (ii) The expected level of impact of the proposed adjacent land use, as determined from the tables in 18.22.330 (1), (2), and (3), below. The administrator may determine, on the basis of detailed information from the applicant about the site conditions, scope, and intensity of the proposed development, that the proposed land use will have a lesser level of impact on the wetland than indicated by similar land uses on the list.

TABLE 18.22.330(1)
WETLAND CATEGORIES, RATING SCORES & BUFFER WIDTHS
FOR LOW IMPACT LAND USES

Low Impact Land-Uses shall include the following:

- Private driveways serving no more than two (2) residential parcels;
- Unpaved trails (when not exempted by 18.22.070);
- Utility corridors (private or public) without a maintenance road;
- Landscaping, lawns, gravel driveways, etc.

Wetland Category	Wetland Characteristics <ul style="list-style-type: none"> • Habitat (H) • Water Quality (WQ) 	Buffer Width with an Identified Wetland Boundary (Delineated)	+ An Additional Distance from an Apparent Wetland Boundary (Not Delineated)
IV (Total of scores for all functions is less than 30 points)	[Total of scores less than 30 points]	25 feet	+20 feet
III (Total of scores for all functions is 30 – 50 points)	[With H score 20 – 28 points] [Not meeting above characteristic]	75 feet 40 feet	+30 feet
II (Total of scores for all functions is 51 – 69 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 – 28 points] [Estuarine] [Interdunal] [Not meeting above characteristics]	50 feet 150 feet 75 feet 75 feet 75 feet 50 feet	+40 feet
I (Total of scores for all functions is more than 70 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 - 28 points] [Coastal Lagoon] [Estuarine] [Natural Heritage Wetland] [Bog] [Forested] [Not meeting above characteristics]	50 feet 150 feet 75 feet 100 feet 100 feet 125 feet 125 feet Buffer width based on score for H functions or WQ functions 50 feet	+50 feet

Note: Wetlands shall be classified using the 2004 Washington State Department of Ecology’s Wetland Rating System for Western Washington (Ecology Publication #04-06-025), or as amended.

**TABLE 18.22.330(2)
WETLAND CATEGORIES, RATING SCORES & BUFFER WIDTHS
FOR MODERATE IMPACT LAND USES**

Moderate Impact Land-Uses shall include the following:

- Single-family residential use on parcels of one (1) acre or larger;
- Private roads or driveways serving three (3) or more residential parcels;
- Paved trails;
- Passive recreation areas;
- Utility corridors (private or public) with a maintenance road;
- Class IV-General forest conversions, including conversion option harvest plans.

Wetland Category	Wetland Characteristics: <ul style="list-style-type: none"> • Habitat (H) • Water Quality (WQ) 	Buffer Width with an Identified Wetland Boundary (Delineated)	+ An Additional Distance from an Apparent Wetland Boundary (Not Delineated)
IV (Total of scores for all functions is less than 30 points)	[Total of scores less than 30 points]	40 feet	+20 feet
III (Total of scores for all functions is 30 – 50 points)	[With H score 20 – 28 points] [Not meeting above characteristic]	110 feet 60 feet	+30 feet
II (Total of scores for all functions is 51 – 69 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 – 28 points] [Estuarine] [Interdunal] [Not meeting above characteristics]	75 feet 225 feet 110 feet 110 feet 110 feet 75 feet	+40 feet
I (Total of scores for all functions is more than 70 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 to 28 points] [Coastal Lagoon] [Estuarine] [Natural Heritage Wetland] [Bog] [Forested] [Not meeting above characteristics]	75 feet 225 feet 110 feet 150 feet 150 feet 190 feet 190feet Buffer width based on score for H functions or WQ functions 75 feet	+50 feet

Note: Wetlands shall be classified using the 2004 Washington State Department of Ecology’s Wetland Rating System for Western Washington (Ecology Publication #04-06-025), or as amended.

**TABLE 18.22.330(3)
WETLAND CATEGORIES, RATING SCORES & BUFFER WIDTHS
FOR HIGH IMPACT LAND USES**

High Impact Land-Uses shall include the following:

- Single-family residential use on parcels smaller than one (1) acre;
- Commercial, multi-family, industrial and institutional uses;
- Public Roads.

Wetland Category	Wetland Characteristic: <ul style="list-style-type: none"> • Habitat (H) • Water Quality (WQ) 	Buffer Width with an Identified Boundary (Delineated)	+ An Additional Distance from an Apparent Wetland Boundary (Not Delineated)
IV (Total of scores for all functions is less than 30 points)	[Total of scores less than 30 points]	50 feet	+20 feet
III (Total of scores for all functions is 30 – 50 points)	[With H score 20 – 28 points] [Not meeting above characteristic]	150 feet 80 feet	+30 feet
II (Total of scores for all functions is 51 – 69 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 – 28 points] [Estuarine] [Interdunal] [Not meeting above characteristics]	100 feet 300 feet 150 feet 150 feet 150 feet 100 feet	+40 feet
I (Total of scores for all functions is more than 70 points or having “Special Characteristics” identified in the rating form)	[WQ score 24 - 32 points and H score less than 20 points] [H score 29 – 36 points] [H score 20 to 28 points] [Coastal Lagoon] [Estuarine] [Natural Heritage Wetland] [Bog] [Forested] [Not meeting above characteristics]	100 feet 300 feet 150 feet 200 feet 200 feet 250 feet 250 feet Buffer width based on score for H functions or WQ functions 100 feet	+50 feet

Note: Wetlands shall be classified using the 2004 Washington State Department of Ecology’s Wetland Rating System for Western Washington (Ecology Publication #04-06-025), or as amended.

- (7) Reducing Buffer Widths. Upon submission of a special report by a qualified professional that demonstrates a buffer reduction does not have any adverse impact on the existing functions and values of the wetland, the administrator shall have the authority to reduce the prescribed buffer widths, [within a defined area], listed in the section above, provided that all of the following shall apply:
- (a) The buffer of a Category I or II wetland is not reduced to less than seventy-five (75) percent of the required buffer or fifty (50) feet, whichever is greater;
 - (b) The buffer of a Category III or IV wetland is not reduced to less than seventy-five (75) percent of the required buffer, or twenty five (25) feet, whichever is greater;

- (c) The applicant implements reasonable measures to reduce the adverse impacts of structures and appurtenances on the subject parcel as determined by the Administrator.
 - (d) Buffer area reduction shall be minimized to accommodate only those structures and appurtenances as approved by the administrator.
- (8) Averaging Buffer Widths. Upon submission of a special report by a qualified professional, that demonstrates a buffer reduction does not have any adverse impact on the existing functions and values of the wetland, the administrator shall have the authority to average wetland buffer widths on a case-by-case basis, provided that all of the following shall apply:
- (a) The buffer averaging does not have any adverse impact on the functions and values of the wetland;
 - (b) The total area contained within the buffer after averaging is no less than that which would be contained within the prescribed buffer, and the buffer boundary remains more or less parallel to the wetland boundary in order to avoid the creation of "panhandles";
 - (c) The most sensitive, or highest value, areas of the wetland have the widest buffer dimensions, and the buffer boundary takes into account variations in slope, soils, or vegetation to optimize the overall effectiveness of the buffer;
 - (d) The minimum buffer width is no less than seventy-five percent (75%) of the standard prescribed buffer width;
 - (e) The buffer has not been reduced in accordance with section (5) above. Buffer averaging is not allowed if the width of the entire buffer has been reduced already.

18.22.340 Non-Compensatory Enhancement

Non-compensatory enhancement projects are those which are conducted solely to increase the functions and values of an existing wetland and which are not required to be conducted pursuant to the mitigation requirements of JCC 18.22.330. There are two types of non-compensatory enhancement:

- (1) Type 1 Non-compensatory Enhancement. Type 1 non-compensatory enhancement projects involve the filling, draining, or excavating of a regulated wetland. All applications for Type 1 non-compensatory enhancement projects shall be accompanied by an enhancement plan prepared in accordance with subsections (1)(a) and (1)(b) of this section, which demonstrates that the proposed activities will result in an increase in wetland functions and values.
 - (a) The enhancement plan must be submitted for review, and approved by the administrator.
 - (b) The enhancement plan must either be prepared by a qualified wetlands consultant or accepted in writing by the U.S. Fish and Wildlife Service, the Washington Department of Fish and Wildlife, or the Washington Department of Ecology.
- (2) Type 2 Non-compensatory Enhancement. Type 2 non-compensatory enhancement projects involve wetland alterations that do not include the filling, draining, or excavating of a regulated wetland. Such projects might involve the removal of non-native plant species or the planting of native plant species. All applications for Type 2 non-compensatory enhancement projects shall be accompanied by an enhancement plan prepared in accordance with subsections (2)(a) through (2)(c) of this section, which demonstrates that the proposed activities will result in an increase in wetland functions and values.
 - (a) The enhancement plan shall be submitted for review, and approved, by the administrator;
 - (b) The enhancement plan must include a detailed description of the activity including the following information:
 - (i) The goal of the enhancement project;
 - (ii) What plants, if any, will be removed or planted;
 - (iii) How the activity will be conducted, including the type(s) of tools or machinery to be used; and
 - (iv) The qualifications of the individual who will be conducting the enhancement activity.
 - (c) The enhancement plan must either be prepared by a qualified wetlands consultant or accepted in writing by the U.S. Fish and Wildlife Service, the Washington Department of Fish and Wildlife, or the Washington Department of Ecology.

18.22.350 Mitigation

The overall goal of mitigation shall be no net loss of wetland function, value, and acreage.

- (1) Mitigation Sequence. Mitigation includes avoiding, minimizing, or compensating for adverse impacts to regulated wetlands or their buffers. When a proposed use or development activity poses potentially significant adverse impacts to a regulated wetland or its buffer, the preferred sequence of mitigation as defined below shall be

followed unless the applicant demonstrates that an overriding public benefit would warrant an exception to this preferred sequence.

- (a) Avoiding the impact altogether by not taking a certain action or parts of actions on that portion of the site which contains the regulated wetland or its buffer;
 - (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
 - (e) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.
- (2) Compensatory Mitigation – General Requirements. As a condition of any permit or other approval allowing alteration which results in the loss or degradation of regulated wetlands, or as an enforcement action pursuant to Chapter 18.50 JCC, compensatory mitigation shall be required to offset impacts resulting from the actions of the applicant or any code violator.
- (a) Except persons exempt under this article, any person who alters or proposes to alter regulated wetlands shall restore or create areas of wetland equivalent to or larger than those altered in order to compensate for wetland losses. The following table specifies the ratios that apply to creation or restoration that is in-kind, on-site, and is accomplished prior to or concurrently with alteration:

Table 18.22.350 Required Replacement Ratios for Compensatory Wetland Mitigation

Category and Type of Wetland Impacts	Re-establishment or Creation	Rehabilitation Only ¹	Re-establishment or Creation (R/C) and Rehabilitation (RH) ¹	Re-establishment or Creation (R/C) and Enhancement (E) ¹	Enhancement Only ¹
All Category IV	1.5:1	3:1	1:1 R/C and 1:1RH	1:1 R/C and 2:1 E	6:1
All Category III	2:1	4:1	1:1 R/C and 2:1RH	1:1 R/C and 4:1 E	8:1
Category II Estuarine	Case-by-case	4:1 Rehabilitation of an estuarine wetland	Case-by-case	Case-by-case	Case-by-case
Category II Interdunal	2:1 Compensation has to be interdunal wetland	4:1 Compensation has to be interdunal wetland	1:1 R/C and 2:1 RH Compensation has to be interdunal wetland	Not considered an Option ²	Not considered an Option ²
All other Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Natural Heritage site	Not considered Possible ³	6:1 Rehabilitation of a Natural Heritage site	R/C Not considered possible ³	R/C Not considered Possible ³	Case-by-case
Category I Coastal Lagoon	Not considered Possible ³	6:1 Rehabilitation of a coastal lagoon	R/C not considered possible ³	R/C not considered Possible ³	Case-by-case
Category I Bog	Not considered Possible ³	6:1 Rehabilitation of a bog	R/C Not considered Possible ³	R/C Not considered Possible ³	Case-by-case

Category I Estuarine	Case-by-case	6:1 Rehabilitation of an estuarine wetland	Case-by-case	Case-by-case	Case-by-case
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¹These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

²Due to the dynamic nature of interdunal systems, enhancement is not considered an ecologically appropriate action.

³Natural Heritage sites, coastal lagoons, and bogs are considered irreplaceable wetlands because they perform some functions that cannot be replaced through compensatory mitigation. Impacts to such wetlands would therefore result in a net loss of some functions no matter what kind of compensation is proposed.

- (b) Compensation must be completed prior to wetland destruction, where possible.
 - (c) Compensatory mitigation must follow an approved compensatory mitigation plan pursuant to this article, with the replacement ratios as specified above.
 - (d) Compensatory mitigation must be conducted on property that will be protected and managed to avoid further development or degradation. The applicant or code violator must provide for long-term preservation of the compensation area.
 - (e) The applicant shall demonstrate sufficient scientific expertise, supervisory capability, and financial resources, including bonding, to carry out the project. The applicant must demonstrate the capability for monitoring the site and making corrections if the project fails to meet projected goals.
 - (f) Compensatory mitigation must monitor the impact and take appropriate corrective measures.
- (3) Compensatory Mitigation – Type, Location, and Timing.
- (a) Priority will be given to in-kind, on-site compensation if feasible and if the wetland to be lost has a moderate to high functional value.
 - (b) When the wetland to be impacted is of a limited functional value and is degraded, compensation may be of the wetland community type most likely to succeed with the highest functional value possible.
 - (c) Out-of-kind compensation may be allowed when out-of-kind replacement will best meet identified goals (for example, replacement of historically diminished wetland types). Where out-of-kind replacement is accepted, greater acreage replacement ratios may be required to compensate for lost functional values
 - (d) Off-site compensation can be allowed only if:
 - (i) On-site compensation is not feasible due to hydrology, soils, waves, or other factors;
 - (ii) On-site compensation is not practical due to probable adverse impacts from surrounding land uses;
 - (iii) Potential functional values at the site of the proposed restoration are significantly greater than the lost wetland functional values; or
 - (iv) Off-site compensation will be conducted in accordance with subsection (4) of this section (Cooperative Compensation Projects).
 - (e) Except in the case of cooperative compensation projects, off-site compensation must occur within the same watershed where the wetland loss occurs; provided, that Category IV wetlands may be replaced outside of the watershed if there is no reasonable technical alternative. The storm water storage function provided by Category IV wetlands must be provided for within the design of the development project.
 - (f) Except in the case of cooperative compensation projects, in selecting compensation sites applicants must pursue locations in the following order of preference:
 - (i) Filled, drained, or cleared sites which were formerly wetlands and where appropriate hydrology exists; and
 - (ii) Upland sites, adjacent to wetlands, if the upland is significantly disturbed and does not contain a mature forested or shrub community of native species, and where the appropriate natural hydrology exists.
 - (g) Construction of compensation projects must be timed to reduce impacts to existing wildlife and flora. Construction must be timed to assure that grading and soil movement occurs during the dry season. Planting of vegetation must be specifically timed to the needs of the target species.

- (h) A mitigation plan shall include a monitoring plan. The duration, frequency and methods of monitoring depend on a project's goals, objectives, and performance standards. In general, monitoring is required for at least five (5) years. If a scrub-shrub or forested vegetative community is proposed, monitoring may be required for ten (10) years or more. Monitoring may be extended if interim performance standards are not met.
- (4) Cooperative Compensation Projects. The county may encourage, facilitate, and approve cooperative projects where one or more applicants, or an organization with demonstrated capability, may undertake a compensation project if it is demonstrated that:
 - (a) Creation of one or several larger wetlands may be preferable to many small wetlands;
 - (b) The group demonstrates the organizational and fiscal capability to act cooperatively;
 - (c) The group demonstrates that long term management of the compensation area can and will be provided; and
 - (d) There is a clear potential for success of the proposed compensation at the identified compensation site. Conducting compensation as part of a cooperative process does not reduce or eliminate the required replacement ratios outlined in this article.

Article VIII - Special Reports

18.22.360 General Requirements

- (1) The administrator may require a special report or reports when critical areas are impacted.
- (2) Special reports for critical areas shall include a scale map of the development proposal site and a written report.
- (3) The special report shall identify and characterizes any critical area as a part of the larger development proposal site, assess impacts of the development proposal on any critical area on or adjacent to the development proposal site, and assess the impacts of any alteration proposed for a critical area.
- (4) The special report shall propose adequate protection mechanisms that may include mitigation, maintenance and monitoring plans, and performance surety.
- (5) Special reports shall include documentation certifying the qualifications of the preparer.

18.22.370 Waivers

The administrator may waive the requirement for a special report when an applicant demonstrates all of the following:

- (a) The proposal involved will not affect the critical area in a manner contrary to the goals, purposes and objectives of this code.
- (b) The minimum protection standards required by this chapter are satisfied.

18.22.380 Retaining Consultants

Jefferson County may retain consultants to assist in the review of special reports outside the range of staff expertise. The applicant shall pay for the costs of retaining said consultants.

18.22.390 Acceptance of Special Reports

- (1) The administrator shall verify the accuracy and sufficiency of all special reports within 42 calendar days of their submission.
- (2) If the administrator finds that a special report does not accurately reflect site conditions, or does not incorporate appropriate protections mechanisms, the administrator shall cite evidence (e.g., soil samples, well log data, etc.) that demonstrates where the special report is insufficient or in error. The applicant may then either revise the special report and submit another special report, or appeal the administrative determination pursuant to this code.

18.22.400 Aquifer Recharge Area Report

- (1) General. Aquifer recharge area reports serve as the primary means for Jefferson County to verify the accuracy of its critical aquifer recharge area map and to determine specific aquifer protection measures to be applied to prevent significant adverse groundwater quality impacts.

- (2) Aquifer Recharge Area Report Content. An initial evaluation shall be made by a qualified groundwater scientist/engineer. The aquifer recharge area report shall include:
 - (a) A detailed description of the project, including all processes and other activities that have the potential for contaminating groundwater;
 - (b) A hydrogeologic evaluation that includes, at a minimum:
 - (i) A description of the hydrogeologic setting of the aquifer region;
 - (ii) Site location, topography, drainage, and surface water bodies;
 - (iii) Soils and geologic units underlying the site;
 - (iv) Groundwater characteristics of the area, including flow direction and gradient, and existing groundwater quality;
 - (v) The location and characteristics of wells and springs within 1,000 feet of the site;
 - (vi) An evaluation of existing groundwater recharge; and
 - (vii) A discussion and evaluation of the potential impact of the proposal upon groundwater recharge;
 - (c) A contaminant transport analysis for the uppermost groundwater supply aquifer assuming an accidental spill or release of project specific contaminants or on-site sewage discharge, or both if applicable;
 - (d) A discussion and evaluation that details available on-site spill response and containment equipment, employee spill response training, and emergency service coordination measures;
 - (e) Proposed best management practices to minimize exposure of permeable surfaces to potential pollutants and to prevent degradation of groundwater quality; and
 - (f) Requirements for a monitoring program with financial guarantees/assurances that the monitoring program will be implemented.
- (3) Professional Qualifications. The minimum qualifications for groundwater scientists and engineers performing groundwater and contaminant transport evaluations and preparing aquifer recharge area reports shall be established pursuant to acceptable industry standards for training and experience and as established by the state of Washington in the Washington Administrative Code or by statute.
- (4) County Review. Reports shall be forwarded to the Jefferson County environmental health division for technical review. The environmental health division shall review the reports within 30 days of receipt to determine their adequacy. The county may request additional information in order to determine the adequacy of the reports. The administrator shall determine appropriate conditions as identified in the report to mitigate proposed land uses. The administrator shall be authorized to collect fees necessary to recover costs associated with processing and review of aquifer recharge area reports, implementation of the protection standards contained in this chapter, and administration of the general provisions of the critical aquifer recharge area provisions of this code. Such fees will be incorporated into the Jefferson County Fee Schedule.

18.22.410 Drainage and Erosion Control Plan

- (1) General. This plan shall address best management practices that are physical, structural or managerial practices, that when used singly or in combination, prevent or reduce pollution of water.
- (2) Qualifications of the Preparer. Drainage and erosion control plans shall be prepared by a licensed professional engineer, except for small parcel erosion control plans.
- (3) Information Requirements. The design standards and information requirements for submission of drainage and erosion control plans shall be established in accordance with the Department of Ecology's Storm water Management Manual currently adopted by Jefferson County.

18.22.420 Geotechnical Report

- (1) General. This report shall include a description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposal, and opinions and recommendations on the suitability of the site to be developed.
- (2) Qualifications of the Preparer. Geotechnical reports shall be prepared by a licensed geotechnical engineer, a professional geologist, or a licensed professional engineer knowledgeable in regional geologic conditions with professional experience in landslide, erosion, or seismic hazard evaluation.
- (3) Information Requirements.
 - (a) A description of the geologic setting of the region, based upon readily available data, including:
 - (i) Site location and topography;
 - (ii) Soils and geologic units underlying the site; and
 - (iii) The location and characteristics of springs within 1,000 feet of the site;
 - (iv) Level of hazard in CMZ.

- (b) An evaluation of the potential impact of the proposal upon existing geological hazards.
- (c) A discussion and evaluation of the potential impact of the proposal upon existing geological hazards.
- (d) Recommendations on appropriate protection mechanisms, if necessary, to minimize the risk of erosion or landslide.

18.22.430 Grading Plan

- (1) General. This plan shall identify the proposed development project including the movement of material on-site, along with the proposed and existing contours of the site, and cross-sections thereof.
- (2) Qualifications of the Preparer. Grading plans shall be prepared by a licensed professional engineer or an individual with at least three years experience in the preparation of grading plans who is knowledgeable of soil conditions and geology in Jefferson County.
- (3) Information Requirements.
 - (a) A description of the general vicinity of the proposed site.
 - (b) The property limits and accurate contours of existing ground and details of terrain and area drainage.
 - (c) Limiting dimensions, elevations of finish contours to be achieved by the grading, and proposed drainage channels and related construction.
 - (d) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work together with a map showing the drainage areas and the estimated runoff of the areas served by any drains.
 - (e) The location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners that are within 15 feet of the property or which may be affected by proposed grading operations.
 - (f) A discussion and evaluation of the potential impact of the proposed grading upon designated critical areas.
 - (g) Recommendations on appropriate protection mechanisms, if necessary, to prevent degradation of designated critical areas and to ensure public safety.

18.22.440 Habitat Management Plan

- (1) General. This report shall identify how the development impacts of the proposed project will be mitigated. The Washington Department of Fish and Wildlife Priority Habitat and Species Management Recommendations shall be the basis for this report.
- (2) Qualifications of the Preparer. Habitat management plans shall be prepared by persons who have a minimum of a bachelor's degree in wildlife or fisheries habitat biology, or a related degree in a biological field from an accredited college or university with a minimum of four years experience as a practicing fish or wildlife habitat biologist.
- (3) Information Requirements.
 - (a) A map(s) prepared at an easily readable scale, including the following information:
 - (i) The location of the proposed development site, including property limits;
 - (ii) The relationship of the site to surrounding topographic and cultural features;
 - (iii) The nature and density of the proposed development or land use change;
 - (iv) Proposed building locations and arrangements; and
 - (v) The boundaries of forested areas.
 - (b) A legend that includes the following information:
 - (i) A complete and accurate legal description as prescribed by the triggering application form (the description shall include the total acreage of the parcel);
 - (ii) Title, scale and north arrows;
 - (iii) Date, including revision dates, if applicable; and
 - (iv) Certificates by a professional biologist as appropriate.
 - (c) A report that contains the following information:
 - (i) A description of the nature, density and intensity of the proposed development in sufficient detail to allow analysis of such land use change upon identified fish and wildlife habitat;
 - (ii) The applicant's analysis of the effect of the proposed development, activity or land use change upon the fish or wildlife species identified by the Washington Department of Fish and Wildlife within the identified priority habitat, utilizing the management guidelines;
 - (iii) A plan by the applicant that shall explain how any adverse impacts created by the development will be mitigated.
 - (d) Possible mitigating measures that may include, but are not limited to:

- (i) Establishment of buffer zones;
- (ii) Preservation of critically important plants and trees;
- (iii) Limitation of access to habitat area;
- (iv) Seasonal restriction of construction activities; and
- (v) Establishing a timetable for periodic review of the plan.

18.22.450 Wetland Delineation Report

- (1) General. This report shall be required when a proposed development encroaches upon a designated wetland or its buffer, and shall be used to identify the boundaries and classification of the designated wetland.
- (2) Qualifications of the Preparer. Wetland delineation reports shall be prepared by a biologist with wetlands expertise, a Professional Wetland Scientist certified by the Society of Wetland Scientists.
- (3) Information Requirements.
 - (a) A map(s) prepared at an easily readable scale, including the following information:
 - (i) Wetland boundaries;
 - (ii) Sample site and sample transects;
 - (iii) Boundaries of forested areas; and
 - (iv) Boundaries of wetland classes if multiple classes exist.
 - (b) A legend that includes the following information:
 - (i) A complete and accurate legal description as prescribed by the triggering application form (the description shall include the total acreage of the parcel);
 - (ii) Title, scale and north arrows;
 - (iii) Date, including revision dates, if applicable; and
 - (iv) Certificates by a professional biologist as appropriate.
 - (c) A report that contains the following information:
 - (i) A discussion of the delineation methods and results, with special emphasis on technique used from the Washington State Wetlands Identification and Delineation Manual, March 1997, or as amended hereafter;
 - (ii) A description of relevant site information acquired from the National Wetland Inventory maps and the Soil Survey for Jefferson County;
 - (iii) The acreage of each wetland on the site, based on the survey, if the acreage will impact the buffer size determination or the project design;
 - (iv) All completed field data sheets numbered to correspond to each sample site;
 - (v) Project cross-sections, both before and after completion, in relation to the surface elevation of the wetland must be indicated for proposed activities that involve cutting or filling operations within the wetland or its proposed buffer;
 - (vi) Classification of the wetland in accordance with the standards adopted in this chapter and a detailed written analysis of the existing regulated wetland including: vegetation communities classified per the U.S. Fish and Wildlife Service Classification of Deepwater Habitats (1979); species composition of vegetation communities, including presence and percent cover; existing soils; and existing hydrologic conditions including inflow/outflow, source of water within the system, relative water quality, and seasonal changes in hydrology, if applicable;
 - (vii) A detailed analysis of wildlife species use of the wetland and its buffer;
 - (viii) A detailed analysis of the existing wetland buffer including species composition and percent coverage, whether the buffer is disturbed or not, and the functional value of the buffer in relation to the regulated wetland;
 - (ix) If the development activity would eliminate all or part of a regulated wetland then a detailed compensatory mitigation plan as outlined in subsection (4) of this section must be provided.
- (4) Mitigation Plan Contents. All wetland restoration, creation, and enhancement projects required by this code, either as a condition of project approval or as the result of an enforcement action, shall follow a mitigation plan prepared by a qualified specialist as defined herein and conducted in accordance with the requirements described in this code. The applicant or violator must receive written approval of the mitigation plan by the administrator prior to commencement of any wetland restoration, creation, or enhancement activity.

ARTICLE IX Alternative Protection Standards – Critical Area Stewardship Plans (CASPs)

18.22.460 Critical Area Stewardship Plans (CASPs) – Generally

Property owners may elect to develop site-specific critical area stewardship plans (CASPs) as an alternative to the prescriptive requirements of Articles VI (Fish and Wildlife Habitat Conservation Areas) through VII (Wetlands) of this Chapter 18.22 JCC. At a minimum, the CASP must provide equal or greater protection of critical area functions and values than the prescriptive standards of buffers and setbacks. The property owner shall be responsible for developing these plans in consultation with a qualified professional meeting the applicable requirements of Article VIII of this Chapter 18.22 JCC. When available, qualified Jefferson County staff may assist landowners with these submissions. The administrator shall be responsible for reviewing and approving submitted plans. The Administrator may, at his/her discretion, seek technical assistance from the Jefferson County Conservation District, Washington Department of Fish and Wildlife or the Washington Department of Ecology when reviewing CASPs for approval.

18.22.461 Applicability and Limitations

The following provisions define the applicability and limitations of the CASP.

1. CASPs apply to only residential development, related activities and appurtenances, including accessory dwelling units (ADUs). They may be used in Rural Village Centers (RVCs) but are not to be used in Urban Growth Areas (UGAs). They are not to be used for commercial or industrial uses or developments, as identified and defined in JCC 18.10.
2. They can be applied to properties 1/4 acre or larger.
3. CASPs are only applicable to Fish and Wildlife Habitat Conservation Areas (Article VI) or Wetlands (Article VII).
4. CASPs must provide equal or greater protection of critical area functions and values than the prescriptive standards of buffers and setbacks.
5. They may be applied within Category II, III & IV wetlands and buffers, and within buffers of Category I wetlands. They cannot be used in Category I wetlands.
6. CASPs may not be used for activities involving fill for building within wetlands and FWHCAs but may be used for fill or vegetation management within these critical areas if it is for enhancement of their functions.
7. CASPs will be administered as a Type I Permit, per JCC 18.40.
8. A CASP may be prepared by any person, but it is strongly advised that a qualified professional be at least consulted.

18.22.465 Performance Standards

Critical area stewardship plans (CASPs) shall identify specific performance standards focused on maintaining or enhancing the functions and values of the critical area(s).

- (1) Performance standards will vary from one plan to another depending on the critical area being protected and the potential hazards associated with the proposed development. Chosen performance standards should be quantifiable so that they can be measured. They may include maintenance of a wetland's hydraulic capacity, percent ground cover in revegetated areas, control of invasive plants, survival of shrubs and trees and etc. Compliance with Washington State water and/or sediment quality standards (WAC 173-201A and WAC 173-204) will be determined by Jefferson County's watershed monitoring program described in Article X of this Chapter 18.22 JCC.
- (2) The CASP shall include protocols for monitoring these performance standards to include sampling and analytical methods; timing of the sampling; and determination of the statistical procedures used to define significant departures from the performance standards. Performance standards should contain the following components:
 - (a) Indicator. They identify what will be monitored, such as woody vegetation, invasive species (e.g., reed canary grass (*Phalaris arundinacea*), wetland area, or water regimes).
 - (b) Attributes. They identify what aspect of the indicator will be monitored, such as percent cover of vegetation, density of stems of surviving vegetation, size of the wetland buffer area, or percent of an inundated area.
 - (c) Actions. They identify the degree of compliance, such as "will not exceed X percent cover of invasive species", or "will establish X acres of wetland area", or will "prescribe a required survival of planted vegetation.
 - (d) Quantities/Status. They identify the amount of change or the desired level the attribute should reach, such as achieving X% total aerial cover of trees and shrubs, or establishing X acres of wetland buffer.

- (e) Time Frame. They identify when the standard should be achieved. For example, “having X area inundated at the end of July each year.” Or achieving X% total aerial cover of trees and shrubs by year Y.” Performance standards should be appropriate for the monitoring period.

18.22.470 CASP Contents – Existing Conditions

Critical area stewardship plans (CASPs) shall include the following elements:

- (1) A site plan of the entire parcel identifying the critical area being protected by the CASP.
- (2) When wetlands are present on the property, a wetland delineation report shall be completed in accordance with JCC 18.22.450. The most current edition of Washington State Wetland Rating System for Western Washington shall be used in preparing the report. The report shall detail the scores determined for hydrologic, water quality and habitat functions, and shall ensure the most pertinent score is accorded the greatest weight in rating the wetland. The ratings forms and supplemental information required for completing those forms shall be included in the report. The prescriptive wetland buffers appropriate to the wetland class and proposed activity defined in JCC 18.22.330 shall be reviewed.
- (3) Surface waters and wetlands shall be surveyed for accurate stream typing and/or wetland rating by a qualified professional, consistent with State law.
- (4) Habitats of Local Importance documented by Jefferson County on and within 3/10ths of one mile the property shall be documented.
- (5) Presence of any other critical areas.
- (6) A description of the property and adjacent watershed to include:
 - (a) A contour map describing land elevations within 3/10ths of one mile of the property.
 - (b) Documented or observed presence of threatened or endangered species.
 - (c) A qualitative assessment of the property’s hydrology to include evidence of prolonged flooding or ponding, known significant aquifer recharge areas, observed surface water drainage patterns and stream flows.
- (7) A qualitative assessment of surface waters to include stream and/or pond substrate types, presence of large woody debris and riffles and pools, potential fish spawning areas, observed fish and aquatic invertebrates, etc.
- (8) A qualitative assessment of the existing landscape located within the prescriptive buffers defined in JCC 18.22.330 for wetlands and JCC 18.22.270 for surface waters shall include:
 - (a) The presence of invasive and/or exotic plant species and the presence and condition of all layers of vegetation. The species composition and general age and condition of existing forests within this area should be documented. This section should be supported with photo documentation;
 - (b) Evidence of historic or existing and ongoing agricultural and/or forestry activities;
 - (c) A determination of the landscape slopes adjacent to surface waters to include a qualitative assessment of soil textures and stability together with an assessment of the value of existing vegetation for stabilizing soils.
- (9) A description of existing human disturbances within the critical area to include roads, bridges, bulkheads, hydrologic modification to include pre-existing (i.e., grandfathered) farm ponds, excavated ditches, drain tile lines and other structures. The location of these features should be annotated on the site map.
- (10) A description of how the proposed development might adversely affect the critical area’s functions and values.
- (11) This section should be supported by photo documentation.

18.22.480 Description of the Management Proposal

The overall goal of the critical area stewardship plan (CASP) is to maintain or enhance the existing functions and values of the associated watershed while addressing the needs and desires of the property owner. The proposed plan should be described in detail to include the following:

- (1) A clear statement of the goals, objectives, and performance standards of the plan and how implementation of this plan will protect the functions and values. This section shall also describe the goals of the property owner, including proposed multiple uses of the critical area and/or the areas within the buffers defined in JCC 18.22.270 and JCC 18.22.330.
- (2) The CASP shall be supported with the site map described in JCC 18.22.470(1) overlaid with the following information:
 - (a) The location of the development activities proposed at the site;
 - (b) Final contours when grading within the critical area or its buffer is proposed;
 - (c) Existing vegetation in the critical area or its buffer that is to be preserved;

- (d) Invasive and/or noxious vegetation that is to be controlled or eradicated including control methods;
 - (e) Species and general location of new vegetation to be planted;
 - (f) Location of all structures to be placed within a critical area and the buffers prescribed in JCC 18.22.270 and JCC 18.22.330.
- (3) The proposed buffers shall be described with an emphasis on how they will protect the critical area's functions and values from being degraded. This section of the report should be supported by reference to published literature or well reasoned rationales provided by the professional preparing the report.
 - (4) A rationale for the final contours when grading is involved with a description of how the changes will help implement the goals of the plan.
 - (5) A detailed plan describing the maintenance of existing vegetation and/or re-vegetation of the site. For trees and shrubs, this plan should describe the density (spacing) of individual species as well as their location in the landscape. A rationale for the vegetation maintenance and/or revegetation plan shall be provided to include a description of how the plants will function to meet the goals of the management plan and of the property owner. This plan should include:
 - (a) A table describing the numbers and types of plants to be introduced;
 - (b) A description of how the various vegetation layers will function to protect water quality, the critical area's hydrology, and the habitat needs of wildlife known to exist in the area.
 - (c) Planting density (spacing) by species;
 - (d) A planting schedule with reference to local rainfall patterns and additional watering requirements and methods;
 - (e) Short term protection methods such as protective tubes, socks, control of other vegetation that might out-compete the planted stock, mulching requirements, etc.
 - (6) A proposed or approved storm water management plan as applicable per JCC 18.30.060 through JCC 18.30.070 shall be attached as an appendix.
 - (7) The timing of proposed plan implementation, with an emphasis on how the anticipated timing will minimize disturbance to the critical area and eliminate potential effects to adjoining properties and/or wildlife of local concern.
 - (8) A list of the additional local, state and federal permits that will be required for implementing the CASP.

18.22.490 Maintenance

Some critical area stewardship plans (CASPs) may require periodic maintenance activities. These plans shall include a maintenance schedule detailing these activities. In general, plans that do not require long-term maintenance are preferred to plans that require periodic maintenance to be verified by County staff.

18.22.510 As Built Plan Requirement

An initial As Built Plan shall be prepared by a qualified professional judged competent by Jefferson County describing the action taken to implement the critical area stewardship plan (CASP). This report shall include:

- (1) A contour map describing final contours if grading is required;
- (2) A quantitative description of the vegetation planted;
- (3) Establishment of two or more permanent photo documentation stations with established bearings and monuments to insure that subsequent photographs depict the same landscape for comparative purposes.
- (4) Additional photographic documentation is encouraged.

18.22.520 Periodic Monitoring

Critical area stewardship plans (CASPs) shall be monitored and reports submitted as prescribed by the approving authorities implementation program. Monitoring reports shall be submitted to the Department of Community Development, and shall include the following:

- (1) Identification of the goals, objectives and performance standards of the CASP including the specific Performance Standards adopted pursuant to JCC 18.22.465;
- (2) A qualitative comparison of the critical area functions and values present at the time of annual monitoring with conditions existing during creation of the CASP and conditions observed during previous annual reports;
- (3) A discussion of real time observation describing compliance with the Performance Standards described in JCC 18.22.500;

- (4) When analysis of monitoring results describes a deficiency in meeting the CASP's goals, adaptive management shall be employed to rectify the deficiency
- (5) The landowner agrees to allow approved Jefferson County staff access to property for the purposes of monitoring.
- (6) Monitoring periods may be extended when necessary, as determined by the Administrator.

18.22.530 Contingency Planning

A contingency plan is required describing how the critical area stewardship plan (CASP) might be modified if monitoring indicates a failure to meet the stated goals, or a need to modify the goals because of events outside the landowner's control (e.g., damage associated with a wildlife). For instance, if one of the planted species of vegetation proves ill adapted to the environment and fails to survive or thrive to the extent needed to provide the intended function then alternative species should be identified. In general, plans should initially plant at greater than 120% of the specified final density of shrubs and trees. The contingency plan should call for either supplemental planting when the density falls below the prescribed final density or it could call for the planting of alternate specie(s).

18.22.540 Failure to Submit Required Reports

Failure to submit a report required under this Article IX shall constitute a failure to comply with the terms of the permit, and shall be processed by the administrator pursuant to Chapter 18.50 JCC, Enforcement.

18.22.550 Waiver

The administrator may waive portions of critical area stewardship plan (CASP), if in his/her opinion, critical area functions and values will not be adversely affected by a proposed activity. An approved CASP must be recorded on the property deed [recorded with the Jefferson County Auditor] and must remain in effect unless replaced by a new or updated CASP approved by the County.

Article X Implementation Strategies

18.22.570 Conservation Futures

Jefferson County through the Conservation Futures Fund (JCC Ordinance No. 06-0708-02) may use conservation futures funds to compensate affected property owners for their costs in protecting fish and wildlife through the purchase of conservation easements.

18.22.580 Education

Jefferson County encourages good stewardship on its land to provide benefits to fish and wildlife. The county will seek funds to provide general resource education and site-specific assistance to help landowners understand why it is important to improve their management practices and to show them how to improve those practices in a way that benefits both the landowner and natural resources. The county believes that these are win-win goals key to maintaining and enhancing natural resources.

18.22.590 Best Management Practices (BMPs)

As a general practice, Jefferson County encourages and supports the use of Best Management Practices by all landowners in an effort to enhance the county's natural resources. Farm BMPs have been developed over the last five decades by the USDA and Jefferson County's Conservation District. Residential BMPs (JCC 18.22.640) are promoted for all land-owners in Jefferson County, whether engaged in agriculture or not.

18.22.600 Cost Sharing Incentives

Jefferson County will assist and encourage landowners to participate in private, state and federally funded resource enhancement projects. In addition, Jefferson County will seek outside sources of grant funds to increase the resources available for resource stewardship programs.

18.22.610 Static Buffer Widths for Voluntarily Enhanced Critical Areas

For purposes of determining required buffer widths, wetlands and or riparian areas that are intentionally enhanced, where such enhancement is not part of a required mitigation plan will retain the prescriptive buffer requirements determined prior to the enhancement activity. Additional future restrictions will not be placed on wetlands associated with their increased functions and values caused by voluntary enhancement.

18.22.620 Public Benefit Rating System

Buffers that are dedicated as permanent open space tracts will qualify for the maximum number of points under the Public Benefit Rating System. Qualifying applicants will be offered the opportunity to enroll in the Jefferson County Open Space tax program at no cost.

18.22.630 Residential Best Management Practices (BMPs)

The following Best management practices (BMPs) will be encouraged by Jefferson County for all existing and future residential development adjacent to critical areas. Permits may be conditioned to require these BMPs when utilizing buffer averaging or other administratively available means of buffer reduction.

- (1) Storm water management.
 - (a) Filter runoff from impervious surfaces through appropriate vegetation such as lawns or biofiltration swales prior to entering wetlands or wetland buffers.
 - (b) Direct gutter downspouts into either biofiltration swales or gravel lined pits to sequester bacteria and atmospherically deposited contaminants.
 - (c) Store petroleum, fertilizer and pesticide containers under cover and away from water sources and critical areas until properly disposed.
 - (d) Apply only the amount of irrigation water that can be absorbed into the ground to landscapes. Avoid excessive water resulting in surface flows into wetland or wetland buffers.
 - (e) Avoid the use of chlorinated water for landscape use.
 - (f) Avoid using salt on impervious surfaces such as walks and driveways during freezing weather.
 - (g) Ensure that all outside burning is controlled.
 - (h) Avoid motorized vehicle incursions into the wetland and/or wetland buffer.
- (2) Management of household contaminants and yard waste.
 - (a) Maintain all garbage and litter in enclosed containers that exclude wildlife.
 - (b) Do not use poisons to control moles, rodents or other pests near wetlands.
 - (c) Strictly adhere to label restrictions when using EPA approved pesticides.
 - (d) Do not dispose of yard waste (grass clippings, trimmings, etc.) or any other waste in wetlands or wetland buffers.
 - (e) Do not maintain vehicles or equipment in areas where contaminants will wash directly into wetland buffers. Maintenance areas should include filter swales or grassy areas of sufficient width to intercept surface flows into critical areas or their buffers.
 - (f) Store all potential contaminants, including petroleum products, pesticides, cleaners, etc. under cover and properly dispose of empty containers.
- (3) Landscape management.
 - (a) Do not plant invasive ornamental plants in or adjacent to all critical area buffers.
 - (b) Retain, where possible, large trees that shade wetland areas – even though they may grow outside the required buffer.
 - (c) Leave permeable surfaces on as much of the landscape as possible.
 - (d) Attempt to incorporate large woody debris into the landscape plan as a benefit to wildlife.
 - (e) Shield outside lights so that they do not shine directly into nearby wetlands.

Article XI Watershed Monitoring

18.22.640 Watershed Monitoring

Jefferson County shall develop and implement a countywide monitoring plan designed to give early notification of degrading water quality and to document improving water quality as a result of an increased emphasis on voluntary landowner stewardship. This effort will include the following:

- (1) The county will initiate this process by conducting an inventory of all current monitoring activities conducted by local, state and federal agencies and private groups such as Stream keepers and Water watchers.
- (2) The county will assist with compilation of all of the marine and freshwater data applicable to Jefferson County in a single database to establish a baseline dataset.
- (3) When the inventory described above is complete, a monitoring program will be designed to complement existing efforts to assess the following endpoints:
 - (a) Temperature;
 - (b) Dissolved oxygen
 - (c) pH;
 - (d) Fecal and total coliform;
 - (e) Total suspended solids;
 - (f) Total volatile solids; and
 - (g) Nutrients, to include NH₄⁺, NH₃, NO₃ and PO₄.
- (4) Monitoring of all appropriate Type S and F streams will be accomplished near their entry into the marine environment. Additional monitoring will be accomplished during the first one inch of rain in the fall of each year and during the period of anticipated lowest flow in late summer (August or September).
- (5) Jefferson County will encourage biological monitoring using rapid bio-assessment procedures of the health of its watersheds by voluntary programs such as Water watchers.
- (6) Three samples will be collected at each established sampling site. Where sampling indicates a significant exceedance of Washington State Water Quality Criteria (using appropriate statistical analyses) and/or an exceedance of existing baseline data, Jefferson County will notify (as appropriate) the Washington State Department of Health and the Department of Ecology requesting assistance in determining the cause of the exceedance.
- (7) Jefferson County will work cooperatively with landowners contributing to the exceedance to correct the problem. If property owners do not cooperate, or if the exceedance persists despite attempts at adaptive management, then Jefferson County will take whatever legal or regulatory steps are necessary to correct the situation. Those steps may include legal action or an increase in the buffer widths in stream segments causing the exceedances.

Article XII Adaptive Management

18.22.650 Adaptive Management

Adaptive management relies on scientific methods to evaluate how well regulatory and nonregulatory actions achieve their objectives and makes adjustments to those programs. Management, policy, and regulatory actions are treated as experiments that are purposefully monitored and evaluated to determine whether they are effective and, if not, how they should be improved to increase their effectiveness. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. To effectively implement an adaptive management program, Jefferson County, in support of its CAO will:

- (a) Address funding for the research component of the adaptive management program;
- (b) Change course based on the results and interpretation of new information that resolves uncertainties; and
- (c) Commit to the appropriate time frame and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting critical areas protection and anadromous fisheries.