18.__.___ Repealer

(Note: Here, repeal all previous Critical Areas Ordinance Sections and denominate NEW Sections to be added to the UDC. Also review other UDC Sections, e.g. the Ag Section, for any necessary repealers and/or NEW Section additions.)

THE JEFFFERSON COUNTY CRITICAL AREAS ORDINANCE – CRITICAL AREAS ORDINANCE REVIEW COMMITTEE – MAY 2, 2007

NEW SECTION - 18.__.____ Authority

This ordinance shall be known as the Jefferson County Critical Areas Ordinance and is hereby adopted under the authority and requirements of Chapters 19.27, 36.70, 36.70A, 39.34, 43.21C, 58.17, 76.09, 84.33, 84.34 and 90.58 RCW.

NEW SECTION - 18.__.___ Purpose

The purpose of the Jefferson County Critical Areas Ordinance is to:

A. Protect the functions and values of Jefferson County's critical areas.

B. Implement the Comprehensive Plan of Jefferson County;

C. Support the orderly planned use of Jefferson County's land resources;

D. Permit developments which will provide a desirable and stable economic environment consistent with the rural characteristics of Jefferson County and protection of its critical areas and natural features;

E. Permit flexibility that will encourage a more creative approach in the development of land, while ensuring the retention, protection and use of the County's open spaces, critical areas and natural ecosystems;

F. Ensure that Jefferson County's natural constraints are recognized and considered in planning decisions;

G. Protect the public health, safety and general welfare of the residents of Jefferson County;

H. Provide an alternative/voluntary program to land owners who wish to protect and preserve certain lands for agricultural use;

I. Preserve the integrity of water resources by ensuring a balanced program controlling storm water runoff and ground water recharge;

J. Prevent pollution of surface and subsurface water resources;

K. Protect the habitat of flora and fauna established by Jefferson County as fish and wildlife habitat conservation areas;

L. Minimize the hazards incident to development on or adjacent to steep slopes or other geologically hazardous areas;

M. Protect the fundamental and inalienable right of the residents of Jefferson County to a healthful environment and the reasonable use of their property;

N. Provide a means for every resident of Jefferson County to participate fairly and equitably in the land use decision making process and contribute to the preservation and enhancement of the environment;

O. Encourage in-fill of undeveloped residential lands consistent with limits imposed by natural constraints;

P. Provide for regulatory review processes which are proportional in scale, time and cost, to scope and scale and costs of development actions proposed.

NEW SECTION - 17.02.030 Definitions

Administrator: The Director of the Department of Community Development, or authorized representative.

Agricultural Activities: See section 18.__.___ for cross-reference.

Agricultural/Farm Use: See section 18.__.___ for cross-reference.

Alteration Approval: The process and action taken by the County to grant conceptual approval for alteration of a wetland, fish and wildlife habitat conservation area or their buffers.

Alteration of a Wetland or a Fish and Wildlife Habitat Conservation Area: In any wetland, or a Fish and Wildlife Habitat Conservation Area or required buffer, the placement or erection of any solid material or structure; the discharge or disposal of any dredged material or waste, including filling, grading, channelization, removing, dredging, draining, mining or extraction of any materials; the removal or harvesting of trees or other vegetation; modification for use as a storm water retention/detention facility; or other alteration.

Areas with a Critical Recharging Effect on Aquifers Used for Potable Water: Areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water.

Artificial Wetlands: Areas that meet the definition of a wetland because of human action which impounded water by means such as construction of a dam or an embankment or excavation of a depression which was planned and executed for the specific purpose of creating a wetland where no wetland before existed.

Baseline Monitoring: Surface water quality sampling and other monitoring activities (such as vegetation surveys, etc.) designed to establish local trends and seasonal patterns.

Best Management Practices: Conservation practices or systems of practices and management measures that:

(1) control soil loss and reduce water quality degradation; and

(2) minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of critical areas.

Channel Migration Zone: Area of current and historic lateral stream channel movement that is subject to erosion, bank destabilization, rapid stream incision, and/or channel shifting, as well as adjacent areas that are susceptible to channel erosion, except that the channel migration zone may not include the area behind a lawfully constructed flood protection device.

Clearing: The act of removal or destruction of vegetation by mechanical or chemical means, but does not include normal cultivation associated with an agricultural operation.

Conditional Use: A use allowed only upon approval of a site plan or the granting of Use Approval under the Jefferson County Unified Development Code (UDC).

Conversion: The change of land use from a resource land use to a conditional rural land use under the Jefferson County UDC.

Critical Areas: Wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas and geologically hazardous areas as defined herein and in the Growth Management Act (GMA).

Differential Settlement: Differential Settlement is the uneven settlement of elements of a structure. Peat deposits are capable of large permanent deformations as a result of earthquake shaking, including differential movement and settlement of structures.

Erosion Hazard Areas: Areas of slopes greater than 15 percent and with soils identified by the Natural Resources Conservation Service as having a “severe” or “very severe” rill and inter-rill erosion hazard.

Estuarine Wetlands: Tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean and in which ocean water is at least occasionally diluted by fresh water runoff from the land. Estuarine wetlands have ocean-derived salinities of at least ~~0.05%~~ 0.5% practical salinity units.

Exceedance: A deviation in a monitoring parameter from an adopted Water Quality Standard that will trigger a responsive action.

Existing: Unless otherwise expressly stated, legally established and existing on the effective date of this Chapter, (date).

Existing Building: A structure, or portion thereof, which meets the definition of existing and was lawfully erected and maintained including those which, because of the enactment of this Chapter, no longer conform to the land use standards or use regulations of the zone in which it is located.

Existing Lot: A lot or parcel of land which meets the definition of "existing" and was also of record and lawfully established and maintained including those which, because of the enactment of this Chapter, no longer conforms to the land use standards or use regulations of the zone in which it is located.

Existing Use: A use which meets the definitions of "existing" and was lawfully established and maintained including those which, because of the enactment of this Chapter, no longer conforms to the land use standards or use regulations of the zone in which it is located.

Fish and Wildlife Habitat Conservation Area: An area as specified herein in which land management for maintaining species in suitable habitats within their natural geographic distribution is practiced.

Forest Land: All land which is capable of supporting a merchantable stand of timber and is not being actively used for a use which is incompatible with timber growing. Forest land does not include agricultural land that is or was enrolled in the conservation reserve enhancement program by contract if such agricultural land was historically used for agricultural purposes and the landowner intends to continue to use the land purposes in the future.

Forest Practices: any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber, including but not limited to road and trail construction; harvesting, final and intermediate; precommercial thinning; reforestation; fertilization; prevention and suppression of diseases and insects; salvage of trees; and brush control.

Frequently Flooded Areas: Lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year.

Geologically Hazardous Area or Slope: Areas consisting of Erosion, Landslide, Seismic, Volcanic, Coal Mine, and/or Tsunami Hazards.

Grading: The act of excavation or filling or combination thereof or any leveling to a smooth horizontal or sloping surface on a property, but not including normal cultivation associated with an agricultural operation.

Hydrophytic Vegetation: Plant life growing in water or in a substrate that is at least periodically deficient in oxygen as a result of excessive water content. (See "Wetland Plants of the Pacific Northwest," September, 1984, U.S. Army Corps of Engineers.)

Impacts on Critical Areas: Those activities having a probable significant adverse impact on the functions and values of critical areas.

Lake: A lake twenty (20) acres or greater in size which is subject to the provisions of the Shoreline Management Act (NOTE: IDENTIFY LAKES), and (SPECIFY) (NUMBER?) unnamed lakes located in Section , Township N, Range E (SPECIFY SIZE)

Landslide Hazard Area: Areas that because of their susceptibility to erosion, sliding, or other geologic events, are generally not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns, including, but not limited to, those lands designated in the Department of Ecology Coastal Zone Atlas dated April 1979, as it may be amended or revised. Liquefaction: Liquefaction is the temporary transformation of stable saturated loose granular soil deposits into fluid-like state similar to quicksand usually caused by the shaking of earthquake. The soils dramatically loose strength once liquefaction occurs.

Livestock: Domestic animals, fish and fowl of types customarily raised or kept on farms for profit or other purposes, but not including household pets such as dogs, cats, birds, etc.

Macrophyte: Any plant species that can be readily observed without the aid of optical magnification.

Merchantable Stand of Timber: A stand of trees that will yield logs and/or fiber: suitable in size and quality for the production of lumber, plywood, pulp and other forest products; of sufficient value at least to cover the costs of harvest and transportation to available markets.

Mitigation: The re-creation, replacement or enhancement in proportion to impacts created by alteration in order to maintain the functional processes and characteristics of the critical area and/or watershed.

Native Wetland Species: Wetland species which are indigenous to Jefferson County. Such species are defined in Flora of the Pacific Northwest (C. Leo Hitchcock and Arthur Cronquist, University of Washington Press).

Non-Native Wetland Species: Wetland species which have been accidentally or purposefully introduced into Jefferson County. This Chapter shall contain a list of the principal non-native wetland species.

Permitted Use: A use allowed outright by the Unified Development Code.

Protected Species: Species of flora and fauna listed by the federal government or the State of Washington as endangered, threatened or sensitive which are present in Jefferson County and those species of flora and fauna which, while not necessarily endangered or threatened, are unique in Jefferson County and worthy of protection that have been designated as Habitats and Species of Local Importance.

Reasonable Economic Use: The logical or rational use of a specific parcel of land which a person can be expected to conduct or maintain fairly and appropriately under the specific circumstances of the parcel and uses in the surrounding area.

Restoration: Measures taken to replace, recreate or otherwise return to their previous functioning condition regulated wetlands, fish and wildlife conservation areas or their buffers which have been lost or damaged through illegal alteration activities.

Rill: Small steep-sided channels resulting from accelerated erosion, generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Seismic Hazard Areas: Areas subject to severe risk of earthquake damage as a result of seismically induced ground shaking, differential settlement, slope failure, settlement, lateral spreading, mass wasting, surface faulting, or soil liquefaction.

Source Identification: Sampling that is specific to an identified Watershed or portion of a Watershed intended to determine the source of an exceedance in Water Quality Standards or Thresholds.

Steep Slopes: Those slopes forty percent (40%) or steeper within a vertical elevation change of at least ten (10) feet. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief. For the purpose of this definition:

1. The toe of a slope is a distinct topographic break in slope which separates slopes inclined at less than forty percent (40%) from slopes forty percent (40%) or steeper. Where no distinct break exists, the toe of a steep slope is the lowermost limit of the area where the ground surface drops ten (10) feet or more vertically within a horizontal distance of twenty five (25) feet; and

2. The top of a slope is a distinct, topographic break in slope which separates slopes inclined at less than forty percent (40%) from slopes forty percent (40%) or steeper. Where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops ten (10) feet or more vertically within a horizontal distance of twenty five (25) feet.

Streams: Those areas where naturally occurring surface waters produce a defined channel, bed, bank or side, and where there is clear evidence of the passage of water such as bedrock channels, gravel beds, sand and silt beds. The channel or bed need not contain water year-round. This definition is not intended to include irrigation or drainage ditches or swales, canals, storm or surface water run-off devices or other artificial watercourses unless they are used by salmonids or to convey streams naturally occurring prior to construction of such watercourses.

Tsunami Hazard Areas: Coastal areas susceptible to flooding, inundation, debris impact, and/or mass wasting as the result of wave action generated by seismic events.

Volcanic Hazard Areas: Areas subject to lava flows, pyroclastic surges, mud flows, lahars, debris flows, debris avalanche, ash clouds, ash fall, lateral blast, ballistic debris, or flooding as a result of volcanic activity.

Water Quality Standards: A specific numeric measure established for a monitoring parameter that, if exceeded, will require immediate action by the County to identify the source of the contamination. Water Quality Standards are established by Chapter 173-201A WAC.

Water Quality Trend: A statistically significant change over time for a monitoring parameter after Baseline Monitoring is completed. Such a change can serve as early warning that an exceedance may occur in the future.

Watersheds: Watershed boundaries are established drainage areas. Initial boundaries have been established by Jefferson County for [specify number] ( ) geographic areas. Watersheds are also referred to as "basins."

Wetland Edge: The upper limit of a wetland is designated as the boundary between land meeting the requirements of jurisdictional wetlands and land not meeting those requirements .

Wetland Functions: The beneficial roles that may be served by wetlands, including but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, groundwater recharge and discharge, erosion control, wave attenuation, historical and archaeological site protection.

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands. Groups of two (2) or more wetlands which are hydrologically connected through surface or shallow ground water within twelve inches (12") of the surface are considered to be associated with each other.

NEW SECTION - 18.__.___ Critical Areas - General Requirements and Administrative Procedures.

A. Purpose. This section establishes general requirements and administrative procedures adopted for the protection of critical areas as required by the Growth Management Act which shall apply throughout this Title.

B. Applicability. This section shall apply to all properties which contain critical areas designated by Jefferson County. Critical areas are defined as:

1. Wetlands. Wetlands are regulated pursuant to the Wetlands Overlay Zone, JCC , the Land Use Standards governing wetlands and their surrounding buffers, JCC , and the Land Development Standards, Chapter JCC.

2. Fish and Wildlife Habitat Conservation Areas. Fish and Wildlife Habitat Conservation Areas are regulated pursuant to the Fish and Wildlife Habitat Conservation Areas Overlay Zone, JCC __.___, Chapter ___ JCC, and the Land Development Standards, Chapter 11.01 JCC.

3. Geologically Hazardous Areas. Geologically hazardous areas are regulated pursuant to JCC , and Chapters JCC. Geologically Hazardous Areas include Erosion Hazard Areas, Landslide Hazard Areas, Seismic Hazard Areas, and Tsunami Hazard Areas.

4. Frequently Flooded Areas or Floodplains. Frequently flooded areas, also referred herein to as floodplains, are regulated pursuant to the Flood Damage Prevention Ordinance, Chapter JCC.

5. Areas With a Critical Recharging Effect on Aquifers Use for Potable Water or Aquifer Recharge Areas. Areas with a critical recharging effect on aquifers used for potable water, also referred to herein as aquifer recharge areas, are regulated pursuant to sections JCC and of Potable Water and Supply, and the Land Development Standards, Chapter JCC.

C. Permitted Uses. The Administrator may authorize, pursuant to Chapters and JCC, the following activities in critical areas and/or their buffers:

1. Roads or utilities where they are the least environmentally damaging, practical alternative, the width of the fill is limited to the minimum necessary, best management practices are implemented during construction, culverts are installed when necessary to maintain hydrology and mitigation proportionate to the impacts.

2. Installation of underground utilities or moderate impact stormwater facilities, such as grass-lined swales, in the outer thirty-three percent (33%) of buffers for Type 1, Type 2, and Type 3 (USE NEW STREAM TYPES) streams and Class I wetlands, the outer fifty percent (50%) of Type 4 and 5 (USE NEW STREAM TYPE) streams and Class II wetlands where topsoil is stockpiled

outside of the buffer for use in restoration, and best management practices are used during construction.

3. Conservation, preservation, or enhancement projects to protect functions of critical areas. The Administrator shall require a Habitat Management Plan in order to determine whether the proposed activity would conserve, preserve or enhance critical areas functions.

D. Exemptions.

The following activities in critical areas or their buffers are exempt from the provisions of this section, JCC :

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, tide gates 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. This exemption shall not apply to tide gates which historically drained wetlands where:

(i) lack of maintenance of the tidegate for five (5) consecutive years has allowed positive indicators of wetland hydrology, hydrophytic vegetation and hydric soils to become established; and,

(ii) maintenance or repair of the tidegate would result in adverse alteration of wetland hydrology.

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 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 possible, the Department shall review proposed emergency actions to confirm the existence of the emergency and the reasonableness of the proposed action. If the nature of the emergency is such that it is not possible to first seek review, the Department must be notified of the action within thirty (30) days of the conclusion 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 on or prior to (INSERT DATE), 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 which were created or developed as part of normal irrigation activities on or prior to (Note: insert applicable date).

12. Recreational Uses. Swimming, boating and fishing. Construction, placement, 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.

13. Existing Residential Landscaping. Planting, irrigating, fertilizing, spraying, mowing and pruning and maintenance and repair of yard or garden 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 vegetation is being maintained only because of man-induced water, and it can be determined that the wetland vegetation 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 (in preparation of the guidelines) 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. Isolated Class III wetlands of less than 2,500 square feet or isolated Class IV wetlands covering less than 10,000 square feet. There shall be no exemption for estuarine wetlands.

17. Wildlife Nesting Structure.

E. Alteration.

Unless expressly authorized herein, any alteration of a wetland, fish and wildlife habitat conservation area or their buffer may be permitted only pursuant to the alteration standards in JCC __.___, or if the application of this Chapter would preclude reasonable economic use, by a Reasonable Economic Use Exception pursuant to JCC __.___.

F. Reasonable Economic Use Exception - Single Family Residence on Existing Lots.

This section applies to new single family residences on existing, legal lots where application of this Chapter would preclude reasonable economic use. The Administrator may modify or waive the requirements pertaining to critical areas, including mitigation and buffer requirements, if he or she finds all of the following:

1. The proposal is the minimum necessary to accommodate the principal residence access and necessary appurtenances including, if necessary, well site, septic system and drainfield utilities, provided that the ~~foundation~~ footprint of the

principal residence and any accessory structures shall not exceed 2,800 square feet.

2. The building footprint, access and utilities are located so as to have the least impact on the critical area and its buffer.

3. The proposal does not degrade the functions of wetlands and streams beyond that needed to achieve a reasonable use.

4. Material adverse impacts onsite or offsite resulting from alterations of steep or geologically hazardous slopes are avoided.

5. The proposal includes on-site mitigation required by this Chapter to the extent possible, while allowing a reasonable use.

6. Disturbed critical areas and their buffers will be immediately restored, where possible, consistent with good restoration practices.

7. This alteration does not allow wetlands or fish and wildlife habitat conservation areas or their buffers to be converted to lawn or residential landscaping.

The Administrator's decision on a Reasonable Economic Use Exception may be appealed to the Examiner only by the applicant.

G. Reasonable Economic Use Exception - General.

This ordinance is not intended to preclude reasonable economic use of property as that term is defined herein. Once an applicant has proven to the satisfaction of the Examiner that strict application of the critical areas standards will deny reasonable economic use of the parcel, development with conditions will be permitted if the Examiner finds each of the following:

1. There is no other reasonable economic use or reasonably feasible alternative to the proposed development with less impact on the critical area; and

2. The proposed development does not pose a material threat to public health, safety and welfare on or off the subject property; and

3. Any alterations permitted pursuant to the requirements of this Chapter shall be the minimum necessary to allow for reasonable use of the property; and

4. The inability of the applicant to derive reasonable economic use of the property is not the result of actions by the applicant in subdividing the property or adjusting a boundary line, thereby creating the undevelopable condition after (INSERT DATE OF ADOPTION) (wetlands) or (INSERT DATE OF ADOPTION) (other critical areas); and

5. The proposal mitigates the material impacts on the critical area(s) to the extent reasonably possible, while still allowing reasonable economic use of the parcel.

The Administrator shall prepare or have prepared, at County expense, a report based on the applicant's development proposal which shall accompany a reasonable

use exception petition to the Examiner and which provides information on the function and value of the critical area(s) proposed for alteration, impact of the proposed development on the critical area(s) and any required buffer(s), what constitutes a reasonable economic use of the property, steps taken to minimize the impact of the proposed alteration, recommended modifications of the code, and any other information deemed necessary by the Administrator and/or Examiner.

H. Physically Separated and Functionally Isolated Buffers.

Areas which are both physically separated and functionally isolated from a critical area and do not protect the critical area from adverse impacts due to existing public roads, structures, vertical separation, or any other relevant physical characteristic shall be excluded from buffers otherwise required by this Chapter. The Administrator may require a ~~Biological~~ site assessment to determine whether the buffer is functionally isolated.

I. Review Process

1. Single Family Residence on Existing Lots. Single Family Residence on existing lots shall be reviewed under the process set forth for Type I decisions in Chapter JCC.
2. Permitted Uses and Reasonable Use Exceptions. Permitted uses and reasonable use exceptions shall be reviewed under the process set forth in Chapter JCC for the underlying permit decision.
3. Alterations: Alterations shall be reviewed under the process set forth for Type III decisions in Chapter JCC.
4. For all other developments: For proposals located on property which may contain a critical area, the applicable critical areas regulations shall be applied to the underlying permit through the review process applicable to that permit.

J. Assessment.

The Assessor's Office shall consider any limitations imposed on private property as a result of the protection and buffering requirements of this Chapter in determining the fair market value of land.

K. Monitoring Program. (MAY BE RELOCATED TO ANOTHER AREA OF THE ORDINANCE OR AS A STAND-ALONE ORDINANCE BY RECOMMENDATION OF THE PLANNING COMMISSION)

Definitions

Baseline Monitoring: Surface water quality sampling designed to establish existing conditions against which future trends and/or determinations of harm can be assessed. This ordinance establishes a goal of completing baseline monitoring on all identified streams within five years of the effective date of this ordinance.

Compliance Assessment: A property or area specific evaluation of compliance with adopted performance standards. Compliance Assessments will routinely be initiated when a statistically significant violation(s) of baseline conditions and adopted performance standard(s) are observed.

Exceedance: A statistically significant deviation in a monitoring parameter above or below an adopted performance standard is detrimental to aquatic resources.

Endpoint: A measurable physicochemical property of water or sediment for which a performance standard has been legally established.

Baseline Conditions: Geometric mean (for bacteria) or arithmetic mean (all other endpoints) water quality data published in the Jefferson County Conservation District Report dated 1988-89. Historic baseline conditions are specific to watersheds that have previously been monitored. Baseline conditions for previously unmonitored watersheds or for any watershed for which baseline data describing all of the required parameters are not available will be established during the first year of monitoring of those watersheds.

Routine Monitoring. A continuing monitoring program on all watersheds where there is a potential for anthropogenic effects.

Source Identification: Sampling that is specific to an identified watershed or portion of a watershed intended to determine the source of an exceedance in Water Quality Standards and baseline conditions.

Water Quality Standard (WQS): A specific numeric value established for a monitoring endpoint that, if exceeded, will require action by the County to identify the source of the contamination when the exceedance also exceeds the watershed's Baseline Condition. Water Quality Standards are established by Chapter 173-201A WAC.

Water Quality Trend: A detectable change over time for a monitoring parameter after Baseline Monitoring is completed. Trends are established by a statistically significant ($p \leq 0.05$) coefficient on an appropriate dependent variable. A Water Quality Trend can serve as early warning that an Exceedance may occur in the future and will typically result in increased monitoring within a watershed and may result in Compliance Monitoring.

Watersheds: Watershed boundaries are established drainage areas. Watersheds are also referred to as "basins."

Performance Standards. These are standards against which future water quality endpoints are evaluated to determine compliance with the Critical Area Ordinance. Exceedances occur when existing water quality endpoints do not comply with the Water Quality Standards published in Chapter 173-201A WAC or documented Baseline Conditions, whichever is least restrictive.

Monitoring Procedures

Monitoring water quality is important to determining whether exemptions and uses permitted under this Chapter are adversely affecting Critical Areas. Commencing on the date of enactment of this ordinance, the Administrator shall implement an interdepartmental water quality monitoring program in coordination with other local, state and federal agencies conducting water quality monitoring in Jefferson County or adjacent waters. The Department shall prepare annual reports describing the results of this monitoring to the public, State Agencies, and the Board of County Commissioners, as part of the annual Comprehensive Plan review. The Water Quality Monitoring Program shall have five components: baseline monitoring, routine monitoring, compliance assessment; source identification; and adaptive management.

1. Purpose. The primary focus of the County's Water Quality Monitoring Program is to detect and respond to potential sources of surface water contamination that are adversely affecting critical areas.

2. Guiding Principles. The following principles shall be used to guide the implementation of the Water Quality Monitoring Program and adaptive management actions that are used by the County to address exceedances in water quality standards, baseline conditions or thresholds that are or may in the future adversely affect designated critical areas.

    a) Water quality monitoring of all fish bearing perennial streams (Department of Natural Resources Type F) shall be conducted countywide to establish baseline conditions in watersheds where:
        i. baseline conditions have not already been established and;
        ii. for which there is a reason to believe that development may now or in the future adversely affect water quality and;
        iii. the watershed lies at least partially outside state, federal and/or tribal lands;
        iv. The monitoring program shall be conducted in a manner that encourages the involvement of property owners and voluntary compliance.
        v. Except when authorized pursuant to JCC XX.XXX, access to private property to conduct Baseline Monitoring and Source Identification shall

only occur if the property owner voluntarily consents in writing to such access.

b) Routine water quality monitoring shall be conducted on all fish bearing perennial streams (Department of Natural Resources Type F) countywide on a schedule to be determined from review of the baseline data.

c) Compliance monitoring will be undertaken as quickly as possible under the following conditions:
   i. in those watersheds where new baseline monitoring indicates existing exceedances of performance standards. Exceedances shall be determined using *t-tests* of arithmetic means with $\alpha = 0.05$ for all endpoints excepting bacterial endpoints, which shall be based on geometric mean values.
   ii. where an exceedance of the adopted performance standard is observed;

d) Compliance monitoring may be undertaken where routine monitoring determines that a statistically significant trend (regression analysis with a non-zero slope significant at $p \leq 0.05$ indicates deteriorating water quality;

e) Source Identification shall be initiated whenever Compliance Monitoring confirms violation of a performance standard. The goal of source identification is to determine the nature of the exceedance. If it is determined to be anthropogenic in nature, then an attempt shall be made to determine the specific property or properties from which the contaminant is originating. Source Identification will require development of protocols specific to the situation that provide for the efficient determination of the sources of the exceedance.

f) Adaptive Management. When Source Identification identifies a specific property or properties that are contributing to an existing or probable future Exceedance. The following sequence of approaches to correcting the problem will be undertaken:

   i. Jefferson County will request that the property owner(s) participate in a voluntary adaptive management program to correct the identified problem.
   ii. Educational outreach will be the first action taken by the County after a Compliance Assessment or Source Identification determines that an Exceedance is attributable to a specific source or sources.
   iii. When available, technical assistance may be provided by the Jefferson County Conservation District or other local, state or federal jurisdiction. Alternatively, the property owner(s) may retain a qualified professional to develop a management plan for correcting meeting the performance standard.
   iv. Correction of Exceedances associated with agriculture will focus on incorporation of National Resource Conservation Service *Best*

Management Practices using technical assistance provided by Jefferson County's Conservation District.

v. When voluntary measures fail to correct the identified problem, property owners shall be subject to the enforcement protocols in the enforcement section.

g) Enforcement. All property owners must comply with State Water Quality Standards except where baseline data demonstrates a historic Deviation from those Standards. In the latter case, enforcement action shall not be initiated by Jefferson County unless a Deviation is documented above or below baseline values. The Washington State Department of Ecology is charged with the responsibility to initiate enforcement actions when such actions are required under State law. In addition:

i. When specifically authorized by this Chapter, the Administrator may order a
property owner(s) to modify their management practices in order to achieve compliance with a Performance Standard or Baseline Condition, whichever is less restrictive.

ii. Administrative actions taken by the County to address non-point source contamination adversely affecting designated critical area functions and values shall be proportional to the scale of the exceedance. Actions may focus on single properties, groups of properties, individual watersheds or segments of watersheds or on the county as a whole. However, the administrative action taken must be the least onerous available that is sufficient to correct the problem.

iii. Any order directing that management practices be modified may be appealed as a Type I decision to the Hearing Examiner by a property owner that is required to modify management practices. Appeals will be governed by this Chapter and Chapter XX.XX JCC

h) Monitoring protocols. All stages of monitoring shall utilize the best available "peer reviewed" protocols for sampling and measuring contaminants. The Puget Sound Estuary Protocols (most current edition) provide a compendium of protocols useful for monitoring. The following general provisions shall apply.

i. Baseline monitoring will be accomplished monthly during over a one year period. The routine monitoring schedule may be modified during subsequent years based on results.

ii. Site specific protocols may be developed where conditions warrant. For instance, eutrophic waters may require monitoring of dissolved oxygen and temperature at several times during the day in summer to establish diurnal trends and ranges.

iii. Monitoring of lakes having residential development within XXX feet of their shorelines will be included when baseline monitoring of Type F streams has been completed.
iv. The water quality database will include inputs from the Washington State Department of Health describing nearshore marine fecal coliform data and from the Department of Ecology and the U.S. Environmental Protection Agency associated with their ongoing monitoring programs.
v. The Jefferson County Conservation District will establish permanent water quality monitoring stations at identifiable locations. Stations having public access (bridges, etc.) are preferred. Permanent monitoring stations will be established on private property only after obtaining written permission from the property owner.

i) Monitoring endpoints. The endpoints listed in Table 1 will be monitored during baseline and routine monitoring. Additional endpoints may be added generally or on a site specific basis as needed.

Table 1. Water quality endpoints to be evaluated quarterly in support of baseline and routine monitoring.

1. Dissolved Oxygen
2. Temperature
3. Turbidity
4. Conductivity
5. pH
6. Phosphorus (PO_4)
7. Dissolved Inorganic Nitrogen (NO_2, NO_3, NH_3, NH_4^+)
8. Hardness (as $CaCO_3$)
9. Fecal coliform bacteria

j) Reporting. The Administrator will produce annual reports and make them available to the public and State Agencies. These reports will include all Baseline Monitoring data, summary statistics, an assessment of the accuracy and completeness of the data, and a description of data collection issues, if any, identified during the reporting period as well as the following additional information:

i. A background section describing baseline conditions, current performance standards, and previously detected exceedances.
ii. Materials and methods section describing the protocols used to include sampling methods, sampling dates, endpoints evaluated, and quality assurance procedures.
iii. Results section to include a general description of available rainfall data for the county, a list of the sampling stations and dates on which samples were collected and a tabulation of the results for all endpoints. The results section should include a summary description of conditions existing in each evaluated watershed to include appropriate statistical analyses assessing compliance with performance standards and the identification of significant trends suggesting possible future problems. The results section should discuss, in detail the results of all

Compliance Assessments and Source Identification studies undertaken during the previous year. The current status of all previously identified exceedances and voluntary actions undertaken by property owners shall be discussed to include their current water quality status and/or trends and an estimate of the effectiveness of previous actions taken to correct the problem. The status of previously imposed enforcement actions shall be discussed and the effectiveness of enforcement versus voluntary corrective actions compared.

iv. Recommendations. The report shall include recommendations to correct all site and/or watershed specific trends or exceedances observed during the previous year. This may include recommendations for increased action on the part of individual property owners, groups of owners or a change in provisions of the code on a watershed or county wide basis. Recommendations for changes to the monitoring program in subsequent years shall be made here.

v. Summary and conclusions. This section shall include a summary analysis of overall water quality conditions in the watersheds of Jefferson County.

vi. Report due date. This report shall be due by April 1 following each monitoring year.

k) Monitoring program modifications. The monitoring program may be modified based on historical data and future budgetary constraints. This review will take place once each year immediately following completion of the annual report described above. Adaptive management of the monitoring program may include the addition of new streams and sampling stations or the deletion of previous sample stations. New monitoring endpoints may be identified and others deleted in an effort to most efficiently monitoring the County's watersheds.

New Section 18.__.___ Special reports. (Alternatively, these report sections could be included in the overall administration section as sub-elements.)

A. Purpose. One or more of the following special reports may be required to provide environmental information required by the department to make informed decisions and to present proposed strategies for maintaining the functions and values of the watersheds of Jefferson County:

1. Wetland Delineation Report
2. Wetland Mitigation Plan
3. Habitat Management Plan
4. Geotechnical Report
5. Hydrogeological Report

B. When required. Special reports shall be submitted by the applicant and approved by the Administrator for regulated uses when the information contained therein is necessary to make informed decisions by the Department. A requirement for a special report shall be required by the Department only in response to a demonstrated need for specific information that is not otherwise available.

C. Permit application requirements. Proponents of new developments on property where there is a regulated wetland or buffer shall provide a wetland delineation report with the initial application for development. At this time, the Department shall:

1. Describe all alternatives available to the applicant, including completion of a habitat management plan.

2. Describe the additional permits required from State and/or Federal jurisdictions when jurisdictional surface waters or wetlands are involved. It is the applicant's responsibility to pursue the additional permits required and to determine whether or not to develop a site specific habitat management plan. The department will facilitate and assist the landowner in obtaining these outside permits to the extent possible.

3. The Department shall provide a checklist that identifies these options and additional permit requirements at the time and application is submitted. Following submission of an application that includes an acceptable delineation report and habitat management plan (if appropriate), the department may require a mitigation plan. Requirements for a mitigation plan must be made within 10 days of receipt of the delineation report and habitat management plan by the department.

4. The reasons for requiring mitigation must be specifically stated to include:

   a) The specific wetland and/or watershed functions and values requiring mitigation;
   b) The anticipated cause of the expected environmental harm for which mitigation is being required.

5. If an applicant has considered mitigation sequencing and believes that the proposed development will infringe on the rated wetland or its buffer as defined herein, the applicant may also submit a mitigation plan with the initial application.

6. When determined necessary for specifically stated reasons, the department may, within 10 days of receiving an application, require that the delineation and buffer boundary be surveyed by a professional surveyor licensed by the state of Washington.

D. Responsibility for production of special reports The applicant is responsible for the cost of preparing special reports. Jefferson County is responsible for the costs associated with the review of these reports.

E. Qualifications of professionals to complete wetland special reports and plans. Any special report required by the Department shall be completed by a professional biologist judged to be competent by Jefferson County (see Chapter 18.xx.xxx for qualifications). The county shall compile a list of professionals meeting the following minimum requirements:

1. Wetlands specialist means a person with experience and training in wetlands capable of identifying the extent of wetlands and describing their functions and values. Qualified persons are expected to submit substantially correct reports of wetland delineations, classifications, functional assessments and mitigation plans. Jefferson County will solicit qualifications and provide to permit applicants, a list of persons/firms meeting the following qualifications:

    a) Certification as a Professional Wetland Scientist (PWS) through the Society of Wetland Scientists, or;
    b) A Bachelor of Science degree in biological or geological sciences from an accredited institution and two years of professional field experience under the supervision of a wetlands specialist already certified through these requirements, or:
    c) Five or more years of professional experience as a practicing wetlands biologist with a minimum of three years professional experience delineating wetlands;
    d) Recognition by Jefferson County of these qualifications shall follow the review of a minimum of three accepted wetland delineations by the candidate. Authors of mitigation plans should present evidence establishing a history of successful mitigation projects to include at least two previously approved and implemented plans;

F. Time Limitations for Special Reports. Special reports, including wetland delineation reports, mitigation plans and habitat management plans, submitted in compliance with this regulation, shall be valid for a period of five years from the date of the report unless a different period is specified, for specific reasons, by the department. An extension of the time period may be granted upon submittal of a written request to the department within 30 days of the expiration of the report. Time extensions shall be granted in writing and documented in the file.

G. Appeal of rejected reports. Reports by qualified professionals may be rejected by the Department only for specifically stated substantive reasons. The applicant or affected party may appeal such decisions of the county pursuant to the procedures in Section 18.xxx.xxx (Appeals).

New Section 18.__.___. Wetland Delineation Report.

This report is required whenever a development application includes a wetland or its buffer. Applicants are responsible for documenting the presence of critical areas on their property. Wetland delineation reports shall be required by the Department when existing documentation or a site visit indicates the presence of a critical area or its buffer within a property for which an application is made.

A. Wetland delineation reports shall include, but not be limited to the following:

1. Vicinity map;

2. A discussion of existing conditions on the property to include:

    a) general topography;
    b) anthropogenic disturbances;
    c) general condition of surface waters, riparian areas and the general landscape to include a qualitative assessment of soil stability, vegetative cover, and obvious wildlife use of the area;
    d) evidence of historic and ongoing agricultural uses of the property should be discussed along with evidence of historic/recent timber harvests.
    e) an assessment of the existing functional values of surface waters, riparian areas and wetlands.
    f) Any unusual circumstances that complicate the delineation.

3. Copies of available wetland inventory maps (National Wetland Inventory or Jefferson County Wetland Inventories). This information should be displayed at a scale that allows identification of other wetlands and/or critical areas located within one-half mile of the subject property;

4. A discussion of soil characteristics published in the most recent version of the NRCS soil survey for Jefferson County.

5. The results of a search of the Department of Natural Resources *Natural Heritage Database* for the presence of identified sensitive landscapes on or within one kilometer of the subject property;

6. A site map providing the following information:

    a) Property lines and existing roads;
    b) Contours at two-foot intervals or the smallest readily available larger interval.
    c) Existing building and structures on the property;

d) Hydrologic mapping showing general patterns of surface water movement and known subsurface water movement into, through and out of the property.

7. Field survey report.
   a) The Washington State Delineation Manual (RCW 90.58) shall be used to identify and delineate regulated wetland boundaries.
   b) Riparian wetlands. Wetlands extending further than five feet from the Ordinary High Water Mark of all stream types shall be delineated when they cover >2,500 square feet. These wetlands shall be rated and an appropriate buffer determined. The buffer boundary for the stream-wetland complex shall be the most protective of the stream buffer or the wetland buffer. Riparian wetlands terminating at distances less than five feet from the ordinary high water mark do not need be delineated. The stream's buffer will be measured from the upland edge of the riparian wetland.
   c) Field staking shall be such that it is reasonably permanent and easily located. Appropriate stakes can include steel or fiberglass fence posts or pressure treated wood stakes that protrude at least two feet above ground level. Wire flags and/or surveyor's flagging alone do not make suitably permanent monuments. The stakes should be painted a fluorescent color and individually numbered and keyed to the site map. These numbers allow for the identification of specific soil, hydrology and vegetation test plots in the report. Stakes shall be placed at the maximum interval necessary to clearly define the wetland's boundary but not less than one stake every 100 feet.
   d) The identification (number code) and approximate location of all field stakes shall be shown overlaid on an aerial photograph or Lidar image when available. A site plan may be used when suitable photographs or Lidar images are not available. The figure shall clearly show wetland and upland areas.
   e) Table(s) describing the results of soil logs, hydrologic conditions and vegetation inventories shall be included in the report text or as an appendix to the report. Test plots shall be keyed to the code on field stakes to aid in their location. The report shall contain a narrative describing the results of these inventories. A minimum of one quantitative log shall be provided for adjacent upland and wetland plots in each wetland/vegetation type observed or a minimum of one plot per 300' of wetland boundary, whichever is greater. Field worksheets and/or notes should be retained on file for future use by the person completing the delineation for a period of at least three years, but need not be submitted with the report.
   f) Formal surveys by a Washington State licensed surveyor may be required by the administrator for specifically stated reasons justifying the additional cost, on a case specific basis. The field staked buffer boundary provides a

visible on-site means of identifying the area within which human activity is restricted to some degree.

g) The location, keyed to the numbered delineation stakes, of all formally inventoried soil, hydrology and vegetation test plots shall be shown on an aerial photograph or Lidar image (when available) or site plan.
h) Delineation of wetlands on adjoining properties is not required. However, the approximate location of wetlands and/or wetland boundaries located in the vicinity and a determination of the incursion of appropriate wetland buffers located on immediately adjoining properties shall be included in the report. The location of buffer boundaries on the subject property that are associated with wetlands located on adjoining properties shall be staked in the field and denoted on the site map.

8. A discussion of the development plans for the property such as single family residential at a certain density, expansion of agricultural activities, industrial uses, etc. This is necessary to determine the hazard category for interpreting buffer requirements specified in Section XXX.

9. Recommended wetland category determined using the most current version of the Washington State Wetlands Rating System for Western Washington. The report shall describe the results of the scoring system and include a summary of conditions affecting each of the wetland's functions. There is no requirement to attempt to inventory wildlife use. However, significant habitat features shall be photographed and discussed along with observed wildlife use of the wetland and/or its buffer. A copy of the rating form shall be retained by the person doing the evaluation for a period of three years, but it does not need to be submitted with the report.

    a) The recommended buffer widths defined using the procedures contained in paragraph JCC 18.xx.xxx shall be described and their adequacy to protect the observed functions and values briefly discussed. Complex wetland systems with multiple ratings shall have recommended buffer widths for each Class of wetland observed.
    b) Recommendations for modification to these buffer widths can be made by the wetland specialist, but these recommendations must be approved on a site specific basis by the Administrator.
    c) The location of all field staking defining the limits of the recommended buffer boundaries shall be annotated on the photograph, Lidar image or site plan used to define the location of wetland boundary monuments. Buffer boundary monuments shall be numerically coded, initialed and dated when placed in the field.

10. A summary statement describing the likely effects of the proposed activity on the wetland's and watershed's functions and values shall be provided.

NEW SECTION 18.__.___. Wetland Mitigation and Habitat Management Plans. When required by the Administrator or voluntarily submitted by property owners, mitigation and/or habitat management plans shall be developed by the applicant and submitted for approval. The following points must be addressed in the plan developed by a recognized by Jefferson County as qualified to complete this work:

A. Introduction. An introductory section describing the proposed activity and clearly stating the reasons the plan is being developed to include reference to the wetland and/or watershed functions and values specifically identified by Jefferson County requiring mitigation.

B. Background.

1. A site plan with the wetland delineation and required buffers overlaid shall be provided. This section shall review the scoring accomplished using the most current edition of Washington State Wetland Rating System for Western Washington and detail the scores determined for hydrologic, water quality and habitat functions. Photo documentation of salient points should be provided.

2. Steps taken and proposed as a result of mitigation sequencing to minimize the proposed disturbance shall be described.

3. A description of the watershed to include general contours, precipitation patterns, documented wildlife corridors, documented or observed presence of threatened or endangered species, presence of adjacent wetlands or streams and the watershed's hydrology shall be discussed.

4. A description of how the development requiring a permit will adversely affect the wetland and/or watershed functions and values. This may be copied from Jefferson County's order requiring mitigation for the loss of specific wetland functions and values.

C. Description of the mitigation proposal. The proposed mitigation should be described in detail to include the following:

1. A clear statement of the goals of the mitigation plan and how those goals will maintain or enhance the watershed's functions and values.

2. A contour plot describing the final contours when grading is required with a rationale describing how the changes will help implement the goals of the plan.

a. When wetlands are to be created from an upland site, the source of the water necessary to establish the necessary wetland hydrology shall be identified and if necessary, appropriate water rights assured.

3. An erosion control plan to protect surface waters during construction. This plan shall include details describing any necessary diversion of surface waters to avoid excessive sedimentation during construction.

4. A detailed plan describing the maintenance of existing vegetation 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 mitigation plan and of the property owner.

5. The timing of implementing the plan with emphasis on how the proposed timing will minimize disturbance to the watershed and eliminate potential effects to adjoining properties and/or wildlife of local concern.

D. If offsite mitigation within the watershed is proposed, ownership of the mitigation site shall be established and if the property is not owned by the applicant, then a long-term conservation easement to protect the site shall be recorded in favor of Jefferson County by the legal landowner;

E. Some mitigation plans may include requirements for periodic maintenance activities. These plans shall include a maintenance schedule detailing the maintenance requirements. In general, plans that do not require long-term maintenance are preferred to plans that require periodic maintenance for periods longer than the required monitoring period (typically 3 years).

F. Performance Standards. Mitigation plans and habitat management plans shall identify specific performance standards focused on maintaining or enhancing the scores obtained for each wetland function in the predevelopment wetland rating.

1. These may include hydraulic capacity, percent ground cover, percent survival of shrubs and trees; levels of suspended solids; concentrations of potential contaminants associated with the proposed development; or other standards specific to particular activities that may result in exceedances of Washington State water and/or sediment quality standards.

2. In some instances, natural conditions result in exceedances of state water quality criteria. This sometimes occurs in lowland areas of Jefferson County where water temperature may exceed standards and./or early morning dissolved oxygen may be lower than required due to excessive aquatic vegetation. The potential for

these unavoidable deviations from state water quality criteria should be explained and discussed in the plan.

3. The mitigation plan 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.

G. *As built plan*. An initial *As Built Plan* shall be prepared by a qualified wetland biologist judged competent by Jefferson County describing the action taken to implement the plan. This report shall include:

1. a contour map describing final contours;

2. quantitative descriptions of the planting of vegetation.

3. The report shall establish 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.

H. *Periodic Monitoring.* Mitigation plans shall be monitored annually at a specified time of year (± one month) for a period of three years after completing the plan by a qualified biologist, or at some other interval prescribed by the Administrator for specifically stated reason. Monitoring reports shall include:

1. Identification of the functions being mitigated for;

2. A current rating form completed in accordance with the same edition of the Washington State Wetland Rating System for Western Washington used in the original rating upon which the need for mitigation was based;

3. A comparison of the functional scores present in real time with the original scores and scores observed during previous annual reports;

4. A discussion of real time observation describing compliance with the *Performance Standards* described in Paragraph B.6..

5. If physicochemical monitoring of surface waters is required, the annual report shall detail the results of those tests along with the necessary statistical analyses describing the significance of any changes.

6. When annual monitoring describes a deficiency in meeting the goals of the mitigation plan, monitoring may be required by the administrator for a period longer than three years to insure that the goals of the plan will be met. However,

such additional monitoring shall apply only to that portion of the mitigation project that is found to not be meeting a specific functional goal.

7. A monitoring window (± one month) and an annual report due date shall be established when the mitigation or habitat management plan is accepted.

I. *Contingency planning*. A contingency plan shall be included in the report describing how the plan might be modified if monitoring indicates a failure to meet the stated goals. 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 of the wetland then alternative species should be identified. In general, plans should initially plant at 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 density (60% recommended) or it could call for the planting of an alternative species.

J. *Performance bonds.* The preferred alternative is for the mitigation plan to be implemented prior to occupation of the site by the intended activity for which the mitigation is required. In other words, the mitigation plan should be implemented prior to the sale or occupation of a new home or business (i.e. prior to a final inspection report and permanent electrical and/or water service connections). When this is not possible due to necessary work windows, the administrator, on a case-by-case basis, may require that a performance bond, assignment of savings, or other like security be obtained to insure project implementation and completion of the required annual monitoring. If the approved mitigation is not completed or fails to meet its performance standards, the property owner must agree through a property access release form to allow corrective action and to the forfeiture of the funds.

K. *Right of entry.* Permits that are conditioned to required mitigation or habitat management plans shall include a clause allowing the Administrator or his/her designated representative right of entry to that portion of the property subject to the plan. The Administrator shall notify property owners of a pending inspection at least 30 days in advance.

L. *Failure to submit required reports.* In the event that required reports are not submitted by the report due date agreed to in the permit, the Administrator shall issue a past due notice to the property owner. If the property owner fails to respond within 30 days, the Administrator may initiate the required monitoring and/or reporting to be completed by either staff or a biologist recognized as competent by Jefferson County. All expenses of this monitoring and/or reporting will be borne by the property owner whose report is delinquent.

M. *Waiver.* The department may waive portions of this section of the report, if in its opinion, watershed functions and values will not be adversely affected by the proposed activity.

NEW SECTION – 18.__.___ Agriculture

Agricultural activities on Agricultural Land in Critical Areas are alternatively regulated by the requirements of the Jefferson County Agricultural Ordinance **18.20.030**. Activities that bring an area not previously utilized for agriculture into agricultural use are not covered by this alternative regulation.

NEW SECTION - 18.__.___ Critical Area Identification and Standards

A. **Wetlands.** Wetlands have been initially identified in Jefferson County through the use of the National Wetlands Inventory Mapping System developed by the U. S. Fish and Wildlife Service and the U.S. Department of Agriculture Soil Survey of Jefferson County Area, Washington (latest edition). This process serves to notify both the property owner and the County of the possible existence of a wetland. It does not classify the wetland nor identify its boundaries.

1. Wetlands and their buffers shall be regulated in Jefferson County pursuant to the regulations contained herein. An applicant should be aware that Section 404 of the Federal Clean Water Act and other federal and state statutes may also apply. In making any determination regarding a wetland, the text of the ordinance is always controlling.
2. Critical Area Preliminary Determination. An informal determination of the regulated wetland boundary and an evaluation of unrated regulated wetlands shall be completed by the Department for new developments as part of the permit process.
3. Permitted Uses are those that are allowed in critical areas or their buffers when conducted in accordance with required local, state and federal permits. Permitted uses are found in Table 1, Uses and activities in regulated wetlands and their buffers.
4. Alterations to wetlands allowed subject to administrator's approval:

    a) Uses conditionally permitted in the underlying zone are allowed in a wetland or surrounding buffer subject to the requirements of this Chapter;

    b) Any alteration of Category I or II wetlands or their buffers requires, at a minimum, the Administrator's approval. Such approval will be contingent on a showing of the following:

        (i) Substantial public benefit will accrue through the alteration; and

(ii) The public benefit accruing substantially outweighs the public loss occurring through the alteration of the wetland; and

(iii) There is no reasonable alternative to making the alteration; and

(iv) All conditions for modifying a Class I or II wetland can be met; and

(v) The modification will not result in the loss of watershed functions or values.

c) Alteration of Class III or IV wetlands or their buffers. Unless otherwise provided in JCC XXX alteration of Class III or IV wetlands or their buffers may be allowed only upon Approval of an Alteration when it is determined that:

(i) The alteration is solely to provide access to a **deep water habitat** or to expand an existing water-dependent use and does not act to degrade the functions of the wetland; or the degradation can be fully mitigated; or

(NOTE: The committee voted to delete "deep water habitat" everywhere. This is the only place the term is found. This sentence needs to be rewritten to make sense.)

(ii) Alteration will preserve, improve or protect the functions and values of the wetland and the watershed within which it lies; and

(iii) Alteration will comply with the Land Use Standards JCC XXX; and

(iv) Use of the parcel will comply with all applicable terms and conditions of this Chapter and with other pertinent requirements of the Jefferson County Code; and

d) Mitigation may be required as a condition to the approval of any proposal if it is shown that an associated critical area alteration will degrade or diminish specifically identified watershed functions and values. Mitigation shall result in maintenance of the specific functional scores defined using the most current edition of the Washington State Wetland Rating System for Western Washington.

5. Wetland Delineations. When required by the administrator, the applicant of a proposed action is responsible for submitting a report, as described in Section XXX, completed by a wetlands specialist recognized by Jefferson County as qualified to conduct such work (see definitions). The Washington State Wetlands Identification and Delineation Manual (March 1997) as it may be amended shall serve a guide for all technical questions concerning wetland delineations.

6. Wetlands Rating. When required, wetlands shall be designated as Category I, II, III or IV using the most current edition of the Washington State Wetland Rating

System for Western Washington. Wetland categories are based on existing conditions and can be generally described as:

a) Category I wetlands represent unique or rare wetland types that are essentially undisturbed. These wetlands perform many functions very well and are impossible to replace within a human lifetime. Category I wetlands include estuarine wetlands, bogs, mature and old-growth forested wetlands, coastal lagoon wetlands and those wetlands designated as Natural Heritage Wetlands.

b) Category II wetlands have significant functional value to the watersheds in which they are found. These wetlands typically have habitat scores >20 points. They are difficult, although not impossible, to replace. These wetlands include small estuarine wetlands and large interdunal wetlands.

c) Category III wetlands include small interdunal wetlands and those having a moderate level of function. These wetlands typically have habitat scores <20 points and low vegetative diversity and are typically located in disturbed areas. These wetlands often provide an opportunity for enhancement by increasing their hydrologic and vegetative diversity.

d) Category IV wetlands have reduced functional value and are often heavily disturbed. They are, in general replaceable when appropriate hydrology can be created in an upland area. These wetlands typically have habitat scores <15 points and offer significant opportunity for enhancement. The value of these wetlands to a watershed can often be maintained while allowing multiple uses.

e) Unregulated wetlands. The following isolated wetlands are not regulated by this ordinance.

(i). Class III wetlands covering $\leq$ 2,500 square feet

(ii) Class IV wetlands covering $\leq$ 10,000 square feet.

f) Created wetlands. Wetlands created intentionally from a non-wetland site when such creation is not a result of required mitigation are not covered by this regulation. These constructed wetlands include farm and residential ponds, irrigation and/or drainage ditches, grass-lined swales, canals, detention facilities and wastewater treatment ponds.

g) Multiple ratings. In order to impose only those land-use restrictions necessary to protect low value wetlands and to increase protection of higher value areas of complex wetlands, Jefferson County will recognize multiple ratings of these complex wetland systems as long as the ratings do not compromise the functions and values of the highest rated wetland within the complex system.

7. Wetland Buffer Requirements for Regulated Activities.

a) Activities not specifically allowed under this Ordinance in Table 1 are not allowed in wetlands or their buffers unless specifically allowed by an

Alteration Approval as provided in this Ordinance. However, the Administrator shall be allowed to make a determination that a proposed use is similar to a listed use and allow it.

b) Buffers shall not be intentionally altered following the date of approval of this Ordinance. However, buffers may be enhanced through implementation of a buffer management plan approved by the Administrator provided that plan does not degrade the wetland's watershed functions and values.

c) Wetland and riparian buffer widths shall be measured horizontally on the ground perpendicular to the wetland's edge based on the hazard category defined in Table 2 and the base buffer widths defined in Table 3 using the following procedures.

(i) Rate the wetland using the most current version of the Washington State Wetland Rating System for Western Washington (WDOE, 2004). This will result in numeric values describing the wetland's hydrologic, water quality and habitat functional values.

(ii) Determine the hazard multiplier from Table 2 based on the proposed development activity.

(iii) Determine the wetland characteristic multiplier from Table 3.

(iv) For each wetland function, multiply the appropriate values in Table 1 by the value from Table 2 by the numerical score for that function obtained from the Washington State Wetland Rating System for Western Washington.

(v) This value defines buffer widths necessary to protect the wetland's hydrologic, water quality and habitat functions in feet. The largest of these three widths is applied to the wetland. The remaining functions will be protected within the widest of the three widths.

8. All uses and activities in wetlands or their buffers require an Alteration Approval from Jefferson County unless listed below. However, additional authorizations for these uses and activities may be required from state and federal agencies.

a) Class I, II, III and IV-Special forest practices conducted in accordance with the applicable standards of the Washington State Forest Practices Act (WAC 222-16), except where the land is proposed to be converted to a use other than the production of commercial forest products as provided in RCW 76.09.050.

b) Agriculture that is conducted pursuant to the requirements of Section XXX of this ordinance.

c) Maintenance of existing, legally established, landscaping.

d) Maintenance of existing, legally established structures.

e) Maintenance of existing roads.

f) Activities undertaken in compliance with an order or permit issued by state or federal agencies. The Administrator shall be supplied with a copy of all such orders and permits prior to undertaking the work.

g) Routine site investigation work including landscape surveys and soil test pits necessary for completing land-use applications.

h) Emergency responses to unanticipated threats to environmental health, human health, or to private and/or public property. The emergency response shall be limited to that necessary to stabilize conditions. Permanent repairs must comply with the provisions of this ordinance.

i) Restoration or enhancement projects completed in accordance with a habitat management plan approved by the Administrator and when necessary, by state and/or federal authorities.

j) Removal of hazard trees when they pose a hazard to life or property.

Table 1. Land use hazard multipliers based on types of development. Hazards are given numerical factors ranging from 2.5 for development activities posing a high risk for specified wetland functions to 0.0 for activities posing no identifiable risk to specific wetland functions.

	Hydrologic functions	Water quality functions	Habitat Functions
New high intensity animal husbandry (> one AMU/acre of pasture)	**0.5**	**2.5**	**1.5**
New moderate intensity animal husbandry (>one AMU/2.5 acres of pasture)	**0.5**	**1.5**	**1.5**
New low intensity animal husbandry (<one AMU/2.5 acres of pasture)	**0.5**	**1**	**1.0**
New high intensity agriculture involving significant soil disturbance	**2**	**1.5**	**0.5**
New low intensity agriculture involving less than biennial soil disturbance	**1**	**1.5**	**0.5**
Low density residential uses (one residence per > 5 acres	**0.5**	**0.75**	**0.5**
Moderately low density residential uses (one residence per one to five acres	**0.5**	**1.00**	**0.5**
Moderate density residential uses (one residence per quarter acre to one acres	**1.0**	**1.5**	**1.0**
High density residential uses (greater than one residence per quarter acre).	**1.0**	**2.0**	**1.5**
Low impact commercial development such as retail stores and personal services	**0.5**	**1.5**	**1.5**
Industrial development to include all forms of manufacturing and repair facilities	**1.0**	**1.5**[1]	**2.0**
Resource extraction activities including gravel pits, log sorting yards, agricultural product processing, etc.	**1.5**	**2.5**[1]	**2.0**
New low intensity roads (rural driveways and roads servicing <5 homes (with BMPs)	**0.5**	**1.5**	**1.5**
New moderate intensity roads servicing 5 to 100 homes	**1.0**	**2**	**1.5**
New high intensity roads servicing communities of >100 homes	**1.5**	**2.5**	**1.5**
Parks and other high intensity recreational facilities attracting large numbers of people such as ballparks, bicycle trails, campgrounds, etc.	**0.5**	**2**	**1.5**
Low intensity recreation such as interpretive centers, wildlife viewing platforms, improved, but unpaved walking trails, etc.	**0.5**	**1**	**0.5**
Forestry[2]			

[1]The water quality hazards posed by industrial development may vary significantly and are generally examined in detail by State Environmental Policy Act (SEPA), National Environmental Policy Act (NEPA) reviews and National Pollution Elimination Discharge Permit (NPDES) determinations made by the Washington State Department of Ecology.

[2] Forest Practices Act. Forest practices regulations differ from this ordinance, owners contemplating or engaged in forest related activities are urged to consult RCW 79-06 and WAC 222.

Table 2. Wetland rating multipliers by function and recommended voluntary additional wildlife buffer management areas.

Wetland Class	Hydrology Functions	Water Quality Function	Habitat Function
Class I			
Natural Heritage	0.5	2.0	2.5
Bogs	0.5	2.0	1.5
Mature Forest	0.5	2.0	0.5
Estuarine/coastal lagoon	1	3.0	2.5
High Habitat Score (>30)	0.5	2.0	2.5
Moderate Habitat Score (20 to 30)	0.5	1.5	1.5
Low Habitat Score (<20)	0.5	1.0	0.5
Class II			
High Habitat Score (>30)	0.5	2.0	2.5
Moderate Habitat Score (20 to 30)	0.5	1.5	1.5
Low Habitat Score (<20)	0.5	1.0	1.0
Class III			
High Habtat Score (≥ 30)	0.5	1.5	1.0
Moderate Habitat Score (20 to 29)	0.5	1.0	0.75
Low Habitat Score (<20)	0.5	1.0	0.5
Class IV	0.1	1.0	0.25

9. Reduced buffer widths. When consistent with 18.xx.xxx and the purpose of this Chapter, the Administrator may reduce buffer widths under the following conditions and provisions:

   a) Buffer averaging. The Department may administratively reduce the required buffer by up to 25% providing that the overall buffer area remains constant.

   b) The applicant submits a site specific wetland and wetland buffer management plan as described in Section XX of this Ordinance, prepared by a biologist recognized by Jefferson County as qualified to develop such plans, and the plan is filed with the Administrator. The applicant must demonstrate that the submitted plan will maintain or enhance the functional scores obtained by rating the wetland (Section XXX).

   c) The Administrator may administratively authorize a modification of up to fifty percent (50%) of the buffer width in specific areas to provide a reasonable buildable area for a single-family residence or accessory building on a lot legally established prior to the effective date of this

Chapter provided that such reduction does not reduce the watershed's functions and values.

10. Increased Buffer Widths: The width of the wetland buffer may be increased over the required minimum under the following condition:

    a) When the wetland is used by endangered or threatened species properly listed by state or federal authorities. (NOTE: Cross reference to other sections, i.e. Fish and Wildlife.)

    b) The contiguous land has slopes >30% and is susceptible to severe erosion and erosion control measures alone will not effectively prevent impacts to the wetland that would jeopardize the watershed's functions and values. (NOTE: Intended for geological hazard areas.)

    c) ADD: An all purpose catch all statement for other types of issues such as flood storage areas.

11. Wetland buffer markers. This section applies to those wetlands and their buffers that lie within 200 feet of regulated development activities.

    a) Wetland buffers shall be suitably marked in a highly visible manner to avoid unintentional disturbance during construction.

    b) Silt fences and/or plastic construction fences may be required to prevent sedimentation resulting from land clearing and grading on parcels located in areas having highly erodable soils as described by the U.S. Department of Agriculture in the Soil Survey of Jefferson County Area, Washington (latest edition).

12. Functionally isolated buffers. Where an existing road or other anthropogenic feature crosses a wetland buffer in a manner that functionally isolates the buffer lying on the side of the road opposite the wetland, the buffer shall terminate on the wetland side of the interdicting road or structure.

13. Wetland review process for a single-family residence. Applications for a single-family dwelling may receive expedited approval by the department without submitting a formal delineation report if there are no regulated wetlands within 200 feet of any proposed disturbance associated with the development. Ultimately, the property owner is responsible for determining whether or not there are wetlands on their property. It there is evidence of wetlands on the project in the Jefferson County Wetlands Inventory, National Wetland Inventory or other documentation, the applicant must accomplish one of the following options in order to take advantage of this provision:

    a) Obtain a letter of certification from Jefferson County or a biologist recognized as competent by the county for this determination, that no regulated wetlands are present within 200 feet of the project area: or

b) Have the wetland rated and its closest point of approach to any disturbance created as a result of the proposed activity identified. If wetlands are present within 200 feet of the project area, the applicant must provide certification from a biologist considered qualified by Jefferson County that all regulated activities associated with the single family dwelling to include septic facilities, outbuildings, driveways, etc. will occur outside the buffer identified for the wetland's rating and the functions being protected.

14. General Provisions: The following general provisions shall apply to wetlands and their buffers:

a) The buffer width shall be measured perpendicular to the wetland's edge in a horizontal plane.

b) No new lot shall be created that is wholly comprised of wetlands or that would require alteration of a regulated wetland or its buffer to provide a buildable area unless a conservation easement encompassing the lot is established and recorded.

c) In the case of existing lots into which a required buffer encroaches, clearing, grading and placement of structures shall respect the required buffer.

d) The wetland edge within the boundaries of the applicant's property shall be shown on all plats, short plats and site plans, together with any conservation easement(s) and appropriate covenants, all of which shall be recorded after the date of this ordinance..

e) Structure Setbacks. A structure setback line of 15 feet is required from the edge of any wetland buffer. Minor structural intrusions into the setback area may be permitted if the Administrator determines that such intrusions will not adversely impact the wetland or its watershed. The setback shall be identified on a site plan.

B. Wetland Mitigation. Wetland mitigation requirements for actions involving surface waters are defined in US Army Corps of Engineers' permits and/or Washington State Department of Wildlife and Fisheries Hydraulic Permit Approvals. Except where these surface water activities occur in adopted *habitats of local concern or involve species of local concern,* Jefferson County will defer mitigation requirements for surface waters to state and federal permitting agencies. Activities proposed within wetlands that are not subject to state or federal regulations and activities within all critical area buffers required by this ordinance, shall be managed consistent with mitigation sequencing as following:

1. *Mitigation sequencing.* All proposals that can adversely affect wetlands and/or their buffers shall be conducted with due consideration for *mitigation sequencing.* Specifically, the following approaches shall be considered in sequence:

    a) *Avoid of the disturbance:* Where the landscape and project design allows, incursions causing a loss of function or value in an existing wetland or wetland buffer shall be avoided;
    b) *Minimize the disturbance:* Where the activity cannot be excluded from a wetland, it shall be designed to minimize the impact by avoiding particularly sensitive areas and/or by incorporating *Best Management Practices* (see Section XXX) to reduce or eliminate the identified hazards to the function and values of the wetland and/or its required buffer.
    c) *Mitigate for the disturbance.* Where activities within wetlands or their buffers cannot be avoided and the activity is deemed to pose a significant threat to specific watershed functions and/or values, the administrator may require development of a *mitigation plan* to insure that specific watershed functions are not impaired by the activity.

2. *Mitigation requirements.* When disturbances of wetlands and/or their minimum buffers cannot be avoided or minimized to the point where they will not adversely affect the watershed's functions, the Administrator shall require appropriate mitigation to correct for specifically identified harm to hydrologic, water quality or habitat functions in conformance with an approved mitigation plan that accomplishes the following:

    a) Performance Standard for Mitigation Plans. Corrects an identified probable impact to a specific wetland function by restoring the affected environment such that the number of points in the Washington State Wetland Rating System for Western Washington for each function (hydrologic, water quality and habitat) will be equal to or greater than the points scored prior to the disturbance;
    b) Onsite mitigation is preferred. Mitigation may be accomplished off-site, but in the same watershed, when on-site mitigation is not possible or is not expected to be successful.
    c) Mitigation ratios. An increased area of mitigating landscape may be required when the probability of success of the mitigation plan is not certain. For instance, in creating a new Class II wetland in exchange for the loss of an existing Class II wetland, the probability of success may be low. If, in the best professional judgment of the mitigation planner, based on documented previous successes, the probability is 0.20, this would require that the mitigation cover an area five times (1/0.20) the area being lost or significantly degraded. On the other hand, if the mitigation plan calls for maintaining wildlife habitat associated with the loss of buffer adjacent to a Class IV wetland having a low habitat score, the mitigation

might involve the enhancement of the buffer by planting vegetation valuable to wildlife in another part of the buffer. In that case, the probability of success would be very high leading to a 1:1 ratio (i.e. an area of buffer would need to be enhanced that is equal to the low habitat area being compromised.

Watershed monitoring. Jefferson County will, during the next five years, develop and implement a county wide 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:

A. Jefferson 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 *Streamkeepers and Waterwatchers.*

B. The county will compile all of the marine and freshwater data applicable to Jefferson County in a single database to establish a baseline.

C. When the inventory described above is complete, a monitoring program will be designed to compliment existing efforts to assess the following endpoints:

1. Temperature
2. Dissolved Oxygen
3. pH
4. Fecal and total coliform
5. Total Suspended Solids
6. Total Volatile Solids
7. Nutrients, to include NH_4^+, NH_3, NO_3 and PO_4.

D. Monthly monitoring of all appropriate Type S and F streams will be accomplished near their entry into the marine environment beginning in January 2008 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).

E. Jefferson County will encourage biological monitoring using rapid bio-assessment procedures of the health of its watersheds by voluntary programs such as Waterwatchers.

F. 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.

G. 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.

Residential Best Management Practices. The following Best Management Practices 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.

a. Stormwater management.

1. Filter runoff from impervious surfaces through appropriate vegetation such as lawns or biofiltration swales prior to entering wetlands or wetland buffers.

2. Direct gutter downspouts into either biofiltration swales or gravel lined pits to sequester bacteria and atmospherically deposited contaminants.

3. Store petroleum, fertilizer and pesticide containers under cover and away from water sources and critical areas until properly disposed.

4. 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.

5. Avoid the use of chlorinated water for landscape use.

6. Avoid using salt on impervious surfaces such as walks and driveways during freezing weather.

7. Insure that all outside burning is controlled.

8. Avoid motorized vehicle incursions into the wetland and/or wetland buffer.

b. Management of household contaminants and yard waste.

1. Maintain all garbage and litter in enclosed containers that exclude wildlife.

2. Do not use poisons to control moles, rodents or other pests near wetlands.

3. Strictly adhere to label restrictions when using EPA approved pesticides.

4. Do not dispose of yard waste (grass clippings, trimmings, etc.) or any other waste in wetlands or wetland buffers.

5. 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.

6. Store all potential contaminants, including petroleum products, pesticides, cleaners, etc. under cover and properly dispose of empty containers.

c. Landscape management.

1. Do not plant invasive ornamental plants in or adjacent to wetland buffers.

2. Retain, where possible, large trees that shade wetland areas – even though they may grow outside the required buffer.

3. Leave permeable surfaces on as much of the landscape as possible.

4. Attempt to incorporate large woody debris into the landscape plan as a benefit to wildlife.

5. Shield outside lights so that they do not shine directly into nearby wetlands.

B. **Geologically Hazardous Areas**

The primary purpose of the geologically hazardous areas overlay zone is to protect the public health, safety and general welfare by minimizing the hazards related to development on or adjacent to steep slopes or geologically hazardous areas.

1. Geologically Hazardous Areas are defined pursuant to WAC 365-190-080 and are regulated pursuant to the following:

a) Erosion Hazard Areas shall comply with Chapters and JCC.

b) Landslide Hazard Areas shall comply with Chapters and JCC.

c) Seismic Hazard Areas shall comply with the International Residential Code and/or the International Building Code.

d) Coal Mine Hazard Areas have not been identified in Jefferson County.

e) Volcanic Hazard Areas have not been identified in Jefferson County.

f) (?) Tsunami Hazard Areas shall comply with Chapter JCC.

2. Development on steep slopes or geologically hazardous areas shall be site-and use-specific and shall comply with Chapter and JCC.

(**Note:** No changes to the existing geologic hazardous areas regulations are proposed.)

C. Fish and Wildlife Habitat Conservation Areas

1. **Designation**. The following are designated as Fish and Wildlife Habitat Conservation Areas:

a) Areas with which endangered, threatened, and sensitive species listed by the federal or state government have a primary association.

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.

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 Fish and Wildlife Habitat Conservation Areas (FWHCA) are protected according to stream type. (Note enter chapter cross reference here

c) Lands covered under the Forest Practices Act. Forested areas in Jefferson County provide protection as Fish and Wildlife Habitat Conservation Areas under the Forest Practices Act (RCW 76.09) and Forest Practices Regulations (Chapter 222 WAC).

d) Wetlands FHWCA buffers (will be established per Section 18.xx.xxx reference back to the Wetlands section).

e) Commercial and recreational shellfish beds.

f) Kelp and eelgrass beds.

g) Herring and smelt spawning areas.

h) State Natural Area Preserves.

There are no State Natural Area Preserves currently designated in Jefferson County

i) State Natural Resource Conservation Areas.

There no State Natural Resource Conservation Areas currently designated in Jefferson County in areas covered by this ordinance. (Note: DCD staff is to confirm this)

j) Species and Habitats of Local Importance.

This section deals with species and habitats of local importance that are not covered by the Federal and State regulations for sensitive, threatened or endangered. It details the requirements required to add, monitor and if necessary to remove species and habitats of local importance.

Requirements to add, monitor, or remove a Species, Habitat, or Wildlife Corridor designation to the Critical Areas Ordinance:

1. Any person/organization/or Jefferson County agency may nominate for designation a species or habitat of local importance. A nominating person or organization must be a resident of, or headquartered in, Jefferson County.
2. The person making the nomination shall provide information demonstrating that the species or habitat is native to Jefferson County existing on or prior to (_____ the date of adoption of this section of the ordinance.)
3. Nominated species must satisfy the following criteria:
   (a) Local populations which are in danger of extirpation based on documented trends since the adoption of the Growth Management Act.
   (b) The species is sensitive to habitat manipulation.
   (c) The species or habitat has commercial, game, or other special value such as locally rare species
   (d) Includes an analysis of the proposal using best available science; and
   (e) Specifies that protection by other county, state or federal policies, laws, regulations or non-regulatory tools is not adequate to prevent degradation of the species or habitat and for which management strategies are practicable; and without 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.

4. Habitats nominated as being of local significance must satisfy the following criteria:
   (a) Where a habitat is nominated to protect a species, the use of the habitat by that species is documented or is 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:
   (b) Long term persistence of the species in Jefferson and adjoining counties is dependent on the protection, maintenance or restoration of the habitat.
   (c) 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.
   (d) The nomination shall indicate the specific habitat features to be protected (for example, nest sites, breeding areas, nurseries, etc.). For wildlife corridors it shall indicate which features are required for the corridor to be viable to protect the nominated species.

5. The request for nomination of a species/habitat of local significance shall include:
   - Identification of the species including its scientific and locally common name(s).
   - 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.
   - 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.
   - A Management Strategy based on Best Available Science for the species or habitat.

- Indications as to whether the proposed management strategy has been peer reviewed, and if so, how was this done and by whom.
- Where restoration of habitat is proposed, a specific plan, including how the restoration will be funded, must be provided as part of the nomination.
- Recommendations for allowed, exempt, and regulated activities within the area.
- Recommended Buffer and setback requirements and their justification.
- Seasonal requirements.
- A monitoring plan that includes
  (1). The establishment of baseline data and 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.
  (2). A contingency plan for failure.
  (3). It shall also include a list of all parcels not included in the nomination but affected by the monitoring process.
  (4). It must show that the monitoring process is practical and achievable.
- The nomination must also include an economic impact, cost and benefits analysis. The nomination must also include an analysis of alternative solutions to creating the Critical Area.

6. Species or habitat of local significance may be removed at any time that it can be demonstrated that they no longer meet the criteria requirements of 3. or 4. They may also be removed in the event of a natural catastrophe or climatic change event.

7. Each ordinance creating a species or habitat of local importance shall include a 'sunset' clause requiring a periodic review of the ordinance to keep the ordinance in effect. The length of the periodic review may be dependent on the characteristics of the species or habitat.

8. The applicant is responsible for paying all fees and all expenses incurred by Jefferson County to process the application

9. The Planning Department shall determine whether the proposal is complete. For proposals, which are complete, it shall evaluate the proposal for compliance with the standards enumerated in the ordinance and make a recommendation to the Planning Commission based on those standards. It shall notify all parcel owners affected of the terms and contents of the proposal.

10. The Planning Commission will hold a Public Hearing for proposals found to be complete, and make a recommendation to the Board of Commissioners

11. Following the recommendation of the Planning Commission, the Board of Commissioners shall designate (in a separate ordinance) a Habitat or Species of Local Importance that satisfies the nomination criteria and includes the information required.

12. After adoption of the species, habitat and rules will be placed in the Jefferson County Code. (DCD staff will provide cross reference for the public.)

k) 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 Presently there are no areas designated in Jefferson County.

2. **Site Assessment Requirements**. When a development proposal is located on lands which may contain, based upon maps and other information maintained by the Department, 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. A HMP shall be prepared by the County or a qualified professional biologist, plant ecologist, or similarly qualified professional with experience assessing he relevant species and/or habitats. The level of detail in a BSA should be proportionate to the location, size and impacts of the project proposal. Unless modified by the Administrator, the HMP shall include:

a) A site plan indicating all Fish and Wildlife Habitat Conservation Areas falling on or within one-hundred (100) feet of the portion of the subject property proposed for development. For heron and osprey the distance shall be as follows:

i) Heron - One thousand (1,000) feet for non-residential development, three-hundred (300) feet for residential development; and

ii) Osprey - Six hundred (600) feet for non-residential development, two-hundred (200) feet for residential development.

b) Descriptions of all Fish and Wildlife Habitat Conservation Areas shown on the site plan;

c) Description of the proposed project, including, but not limited to, associated earthwork (grading, excavation, filling), structures, utilities, and existing habitat other than Fish and Wildlife Habitat Conservation Areas (wetlands, other vegetated areas, including areas which may act as corridors, ravines or steep slopes, etc.);

d) Analysis of impacts to the protected species or habitats. A discussion of impacts to all Fish and Wildlife Habitat Conservation Areas must be included;

e) Regulatory summary, identifying other agencies with jurisdiction;

f) If adverse impacts to protected species or habitats are likely to occur, a conceptual mitigation plan, including an analysis of feasible mitigation alternatives that would mitigate adverse impacts of the project. The effectiveness of the proposed mitigation measures shall be compared to other feasible alternatives. Mitigation alternatives shall be presented in the following order (in accordance with WAC 197-11-766):

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

(ii) Minimizing impacts by limiting the degree of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(iii) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

(iv) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

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

(vi) Monitoring the impact and taking appropriate corrective measures.

g) Best Management Practices (BMP), including a discussion of on-going maintenance practices that will assure protection of all Fish and Wildlife Habitat Conservation Areas on-site after the project has been completed. If monitoring is required, this section shall include a description of proposed monitoring criteria, methods, and schedule.

h) The recommendations of the HMP, once approved, shall be included as conditions of approval of the underlying permit.[4]

3. Protection Standards - Streams :

Standard Buffers and Classification. Streams as defined in _____ shall be classified in accordance with the Washington Department of Natural Resources classification system (WAC 222-16-030) shown in Table _____. Protective buffers shall be required to preserve stream/riparian functions. Buffer distances shall be measured horizontally from the ordinary high water mark of the stream. The following standard buffers apply to streams in lands not subject to Forest Practices regulations when, regulated under this ordinance.

TABLE __: STREAM WATER TYPING CRITERIA, WAC 222-16-030

Stream Type	Buffer (ft)
S or F greater than 75' banks full width	120
S or F less than 75' banks full width	90
F Less than 10' banks full width	60
F Less than 5' banks full width	30
Np and Ns	20

If Wetland buffers are delineated adjacent to streams, The buffer used shall be the widest buffer protecting the greatest area..

b) Increased Buffer Widths: The Administrator has the authority to increase the standard buffer widths on a case-by-case basis based on the intensity of the proposed use, the functions of the stream and the characteristics of the existing buffer when a larger buffer is determined to be necessary to protect stream water quality or a Protected Species. For example, stream buffers that are unstable slopes may require larger buffer widths; Planned Rural Residential Developments (PRRD) using density bonuses may warrant increased buffer widths. However, an applicant may enhance any such buffer (such as through bioengineering using native plants) to maintain the standard buffer width following the submittal, review, and approval of a HMP which demonstrates that the enhancement will provide a buffer which protects stream water quality or a Protected Species, as applicable. To increase a buffer width, the Administrator must be able to demonstrate that the buffer in the table will not be adequately protective and state the specific reason for the increase.

c) Decreased Buffer Widths: Decreased buffer widths will be allowed only if the applicant demonstrates in a Habitat Management Plan (HMP) that decreasing the buffer width will not adversely affect fish and wildlife habitat functions and values.

d) Averaging Buffer Widths. Buffer widths may be modified by "averaging." Buffer width averaging shall be allowed only where the applicant demonstrates through an approved BSA that the following criteria are met:

(i) Decreasing the buffer width will not adversely affect fish and wildlife habitat functions and values; and

(ii) If a portion of a buffer is reduced through averaging, an area of additional buffer, contiguous with the existing buffer, shall be designated that is equal in size to the reduced portion of the standard buffer so that the total buffer area remains unchanged.

e) Allowed Uses in Buffers. Low impact uses that are consistent with the purpose and intent of this Ordinance, and that do not detract from the buffer's ability to preserve stream and riparian functions are permitted as identified in (refer back to the earlier description of allowed and allowed with notification section in the Wetlands section).

f) Property owners may submit a site specific habitat management plan that, when approved, will supersede the prescriptive buffers in the table in 3.a). The habitat management plan will be in lieu of the prescriptive buffers.

4. Protection Standards – Wetlands: (Refer to wetlands section.)

5. Protection Standards - Shoreline: (These standards are included in the Shoreline Master Program.)

6. Protection Standards - Bald Eagle:

Bald Eagle habitats shall be protected pursuant to the Washington State Bald Eagle Protection Rules (Chapter 232-12-292 WAC). If the Administrator determines that the scope or timing of the proposal may create an adverse impact or adversely affect the eagle nest territory, he shall require the preparation of a Habitat Management Plan which must be approved by the Department of Fish and Wildlife and signed by the applicant prior to any clearing or construction whenever activities that alter habitat are proposed near a verified nest territory.

7. Protection Standards: Washington Natural Heritage Program Areas:

At the present time, there are no Washington Natural Heritage Program Areas defined for Jefferson County. (Tabled pending staff research on state standards.)

8. Protection Standards: Habitats, Species, and Wildlife Corridors of Local Importance:

These standards will be specified for each species, habitat, and wildlife corridor as they are adopted (JCC Section 18.h.i)

9. Habitat Management Plan:

HMPs shall be prepared by a professional ecologist, biologist or similarly-qualified professional, submitted, and approved. The HMP must consider Management Recommendations adopted by the Washington Department of Fish and Wildlife, and the specific attributes of the affected properties, such as, but not limited to, property size and configuration, surrounding land use, and the practicability of implementing the HMP, and the adaptation of the species to human activity. (See administration section for further specification of HMP, staff to provide cross reference.)

NEW SECTION - 18.__.___ Alteration of Wetlands, Fish and Wildlife Habitat Conservation Areas and Their Surrounding Buffers

A. General standards:

These standards shall apply to all applications for an alteration pursuant to JCC of a regulated wetland, deep water habitat, fish and wildlife habitat conservation areas or their buffers, unless modified by the Planning Administrator upon a determination that the anticipated alteration will preserve, improve and/or protect the wildlife habitat, natural drainage and/or other natural functions of the wetland, deep water habitat or fish and wildlife habitat conservation areas and will be consistent with the purposes of this Chapter without strict application of said standards. This determination may be made upon review of a study completed by a biologist, plant ecologist or similarly qualified professional. The study shall be prepared at the applicant's cost. As used in this section, wetlands shall refer to Category A and Category B wetlands.

1. Water quantity and quality. Uses permitted adjacent to wetlands and deep water habitats shall control stormwater runoff and protect the natural movement of water according to the following provisions:

a) General provisions:

(i) All surface water directed into wetlands and deep water habitats shall be passed through a vegetated detention pond or other stormwater management system incorporating a grass-lined swale approved by the Jefferson County Engineer in order to remove sediments;

(ii) The best available treatment practices shall be used to remove toxic wastes, petrochemicals or other pollutants from stormwater before it enters any wetland or deep water habitat;

(iii) The velocity of stormwater runoff entering a wetland or deep water habitat shall be limited to pre-development levels;

(iv) Where possible, natural water level fluctuations in wetlands or deep water habitats shall be minimized during spring breeding season (April through June);

(v) Category A and Category B wetlands shall not be modified to function as stormwater retention/detention sites.

b) Category A wetlands. In wetlands rated Category A with no natural point of inflow (i.e., stream), any surface water directed towards the wetland as a result of an approved drainage plan shall filter through the water table or a drain field to avoid erosion and excess nutrient inflow.

2. Human access.

The following provisions shall apply to controlling human access and encouraging appropriate use in wetlands:

a) No motorized vehicles shall be allowed within a wetland, fish and wildlife habitat conservation area or its buffer, except when allowed through Use Approval or as provided in section _____ and/or as the wetland or buffer may be traversed by a public or private roadway which existed on or before insert applicable date and the fish and wildlife habitat conservation area may be traversed by a public or private roadway which existed on or before insert applicable date;

b) Any trails within a wetland shall be constructed with minimum disruption to habitat.

3) Corridors.

Where possible, wetlands should be connected to streams, to other wetlands or to undeveloped areas such as forest or Puget Sound by undisturbed corridors.

B. Alteration Approval standards.

Alteration of a wetland, a deep water habitat, fish and wildlife habitat conservation area or their buffers may be permitted only by Alteration Approval unless otherwise authorized in this Chapter. If such development is permitted, the following development standards shall apply:

1. If alteration in fact will not preserve, improve or protect the functions of the wetland, deep water habitat, fish and wildlife habitat conservation area or their buffers, then a determination shall be made that mitigation or restoration is feasible, and that the mitigation or restoration requirements of JCC and/or 17.03.260 pertaining to a plan, monitoring and a bond or other security can be met; if such determination cannot be made, no alteration shall be authorized.

2. When mitigation is required as a condition of approval of a wetland fish and wildlife habitat conservation areas alteration, the following requirements shall apply:

a) An ecological assessment of the wetlands or fish and wildlife habitat conservation areas to be lost or adversely altered shall be made, at the expense of the applicant, to determine the gross area of loss and the functions, habitat, and types, sizes and quantities of vegetation lost.

b) A mitigation plan shall be prepared by the applicant and approved by the Planning Administrator, and in the event the construction of a new wetland is included as a part of that plan, the earth moving, hydrology and vegetation planting requirements of the plan will be completed prior to the commencement of the proposed alteration. The Planning Administrator may call on state or other agencies to provide technical support in evaluating the plan. The mitigation plan shall include but not be limited to, the following:

(i) Statements of goals. Such statements shall include a discussion of the functions and values lost and those planned for replacement;

(ii) Methods. Information discussing "what, where, when and how," i.e., acreage of mitigation, wetland or other habitat types to be constructed/restored, location, dates for beginning and completing the project, methods of construction and maintenance requirements shall be included.

(iii) Standards of success. A qualitative and, to the extent possible, a quantitative description of what will be considered a successful, functioning wetland or fish and wildlife habitat conservation area shall be provided.

c) Monitoring. Same as requirements set forth in section .

d) Contingency plan. A plan which complies with the requirements of may be required by the Planning Administrator to outline restorative measures to be taken should the mitigation fail or only partially succeed.

e) Bonding. A performance bond or other security in an amount to enable the County to carry out the mitigation plan should the applicant fail to do so shall be required.

3. The project should be located or designed to avoid habitats including wintering, breeding, rearing, feeding and nesting habitats and migration routes;

4. Native vegetation to replace lost habitat for a particular species shall be planted;

5. Artificial resting, hiding and breeding sites to replace losses shall be constructed;

6. Aquatic substrate may be altered to produce an increase in fish, waterfowl, and shorebird organisms to replace losses;

7. Dredge and/or fill of a wetland, a deep water habitat, stream, or their buffers shall not be permitted unless:

   a) The benefits of the proposed use outweigh the impacts associated with the proposed use or the proposed use is water-dependent; and,

   b) Mitigation areas will be provided which have greater value as a wetland, stream, or habitat than the area lost; and,

   c) The amount dredged or filled is the minimum necessary to accomplish the proposed use; and,

   d) Dredging is not solely for the purpose of obtaining fill; and,

   e) Leachate from polluted dredge spoil will be treated and will not enter surface waters; and,

   f) The project is timed to avoid interference with fish and wildlife migrations, rearing, spawning or nesting.

8. Habitat replacement should provide an insurance factor to take into account the risk of mitigation and the loss of fish and wildlife until the mitigation site becomes productive;

9. Cumulative impacts of the proposed development shall be considered. Thus development shall not be considered a precedent allowing further development; and,

10. Where possible, development should be located in the buffer rather than the wetland or fish and wildlife habitat conservation areas.

NEW SECTION - 18.__.___ Severability

If any section, provision or provisions of this Chapter or its/their application to any person or circumstances is held invalid, the remainder of this Chapter or the application of the provision or provisions to other persons or circumstances shall not be affected.

Water Quality Findings

1. Jefferson County's Conservation District developed baseline water quality data for 15 streams between 1986 and XXXX (Table 2).

Table 2. Jefferson County perennial (Type F) streams for which baseline data is currently available. Current data includes dissolved oxygen, pH, Temperature (grab and hourly), conductivity and fecal coliform bacteria. Baseline data for phosphate, dissolved inorganic nitrogen, turbidity and hardness are not yet complete for these streams.

Stream Segment Name	Township and Range	Year of Baseline Data
Andrews Creek		
Barnhouse Creek		
Big Quilcene River		
Cemetery Creek		
Contractors Creek		
Donovan Creek		
East Chimacum Creek		
Houck Creek		
Jakeway Creek		
Little Quilcene River		
Ludlow Creek		
Naylors Creek		
Putaansuu Creek		
Salmon Creek		
Tarboo Creek		

A preliminary review of DNR Stream Typing maps indicates that there are an additional 15 streams meeting the requirements of JCC 18.XX. I.2.a) i, ii and iii for which baseline data is not available (Table 3) in Eastern Jefferson County and 10 streams in Western Jefferson County. It is expected that with existing resources, it will take the Conservation District five years from the date of enactment of this ordinance to complete the additional baseline monitoring of perennial streams located in Eastern Jefferson County that are listed in Table 3. Monitoring of streams in Western Jefferson County will require additional human resources.

Table 3. Jefferson County perennial (Type F) streams meeting the requirements of JCC 18.15.I.2.a. for which baseline data is not currently available.

Stream Segment Name	Township and Range	Year of Baseline Data
East Jefferson County		
Camp Discovery Creek		
Dosewallips River		
Duckabush River		
East Tarboo (Coyle) Creek		
Fulton Creek		
Leland Creek		
Little Goose Creek		
Maple/Jackson Creek		
McDonald Creek		
Paradise Bay Creek		
Shine Creek		
Spencer Creek		
Thorndyke Creek		
Turner Creek		
Walker Creek		
Western Jefferson County		
Scott Creek		
Jackson Creek		
Falls Creek		
Goodman Creek		
Mosquito Creek		
Hoh River		
Cedar Creek		
Steamboat Creek		
Kalaloch Creek		
Queets River		

Note not for inclusion in the code. Jefferson County's Conservation District estimates the cost of monthly monitoring of 15 streams in Eastern Jefferson County for the recommended endpoints to be $71,000 in the first year, increasing to $78,300 in the third year of a three year program. Bi-monthly monitoring would cost $35,600 in the first year and $39,300 in the third year. If hourly temperature data is collected using data loggers, these costs would increase by $3,000.00 per year.

PROTECTED SPECIES

Common Name Classification

Fauna:

Eumetopias jubatus northern sea lion threatened
Haliaeetus leucocephalus bald eagle threatened
Pandion haliaetus peregrine falcon endangered
Eschrichtius glaucus gray whale sensitive
Brachyramphus marmoratus marmoratus marbled murrelet threatened

Flora:

Agroseris elata tall agroseris sensitive
Aster curtus white-top aster sensitive
Castilleja levisecta golden indian
paintbrush endangered
Circuta bulbifera bulb bearing
water hemlock sensitive
Fritillaria camschatcensis black lily sensitive
Meconella oregana white meconella
Puccinella nutkaensis Alaska alkaligrass sensitive

NON-NATIVE WETLAND SPECIES

Iris pseudocorus repens Yellow Iris
Juncus effusius Soft Rush
Myriophyllum spicatum Eurasian Millfoil
Ranunculus repens Creeping Buttercup
Phalaris arundinacea Reed Canarygrass

SPECIES OF LOCAL IMPORTANCE

Common Name Protected Habitat

Fauna:
Ardea herodias great blue heron nests
Gavia immer common loon nests
Pandion haliaetus osprey nests
Dryocupus pileatus pileated woodpecker nests
Cygnus buccinator trumpeter swan