FERRY COUNTY CRITICAL AREAS ORDINANCE #2008-02

AMENDING FERRY COUNTY RESOURCE LANDS AND CRITICAL AREAS ORDINANCE #2006-03

December 1, 2008
March 20, 2006
March 8, 1993

FERRY COUNTY
Planning Department
147 N. Clark, Suite 7
PO Box 305
Republic, WA 99166

417

FERRY COUNTY
CRITICAL AREAS ORDINANCE #2008-02

AMENDING FERRY COUNTY RESOURCE LANDS AND CRITICAL AREAS ORDINANCE #2006-03

An ordinance adopting development regulations as required by RCW 36.70A.030 (7).

WHEREAS, RCW 36.70A.040, part of the Growth Management Act, requires that jurisdictions subject to the Act create development regulations to implement comprehensive plans.

WHEREAS, RCW 36.70A.020 (6) states that "Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions."

WHEREAS, RCW 36.70A.030 Definitions (7) states that "Development regulations" or "regulation" means the controls placed on development or land use activities by a county or city, including, but not limited to, zoning ordinances, critical area ordinances, shoreline master programs, official controls, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances together with any amendments thereto. A development regulation does not include a decision to approve a project permit application, as defined in RCW 36.70A.020, even though the decision may be expressed in a resolution or ordinance of the legislative body of the county or city."

WHEREAS, RCW 36.70A.172 states "In designating and protecting critical areas under this chapter, counties and cities shall include the best available science in developing policies and development regulations to protect the functions and values of critical areas. In addition, counties and cities shall give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries."

WHEREAS, RCW 36.70A.170 states that each county shall designate where appropriate (a) agricultural land that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products; (b) forest lands that are not already characterized by urban growth and that have long-term significance for the commercial production of timber; (c) mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals, and (d) critical areas.

WHEREAS, the measures adopted though this ordinance are designed to meet these requirements.

NOW, THEREFORE, BE IT ORDAINED by the Board of Ferry County Commissioners, as follows:

TABLE OF CONTENTS

	PAGE
Acronym List	5
Section 1.00 Authority	7
Section 2.00 Purpose	7
Section 3.00 Definitions	7
Critical Areas	20
Section 4.00 Critical Areas Defined	20
Section 4.01 Best Available Science	20
Section 4.02 Use of Qualified Professionals	21
Section 5.00 Wetlands	21
Section 5.01 Functions	21
Section 5.02 Goals	22
Section 5.03 Classification	23
Section 5.04 Delineation	23
Section 5.05 Protective Buffer Zones	24
Section 5.06 Increased Buffer Width	24
Section 5.07 Buffer Width Averaging	25
Section 5.08 Regulated Activities	25
Section 5.09 Non-Regulated Activities	26
Section 5.10 Determination of Wetland Boundaries and Category	27
Section 5.11 Wetland Mitigation	28
Section 6.00 Aquifer Recharge Areas	28
Section 6.01 Goals	30
Section 6.02 Classification	31
Section 6.03 Designation	31
Section 6.04 Exempt Activities in Category I and II	31
Section 6.05 Conditionally Permitted Activities in Categories I and II	33
Section 6.06 Level I Site Evaluation Report/Approval Criteria	34
Section 6.07 Level 2 Site Evaluation Report/Approval Criteria	35
Section 7.00 Frequently Flooded Areas	35
Section 7.01 Goals	35
Section 7.02 Policies	35
Section 7.03 Classification	36
Section 7.04 Designation	36
Section 8.00 Geologically Hazardous Areas	36
Section 8.01 Goals	36
Section 8.02 Classification	39
Section 8.03 Designation	39
Section 9.00 Fish and Wildlife Habitat Conservation Areas	39
Section 9.01 Classification	

Section 9.02 Designation 41
Section 9.03 Protection Requirements-Streams, Rivers, and Lakes 41
Section 9.04 Mapped Priority Habitat Area & Species Observation Areas 45
Section 10.00 Administration 46
Section 10.01 Variances 45
Section 10.02 Reasonable Use Exemption 46
Section 10.03 Establishment of Development Permit 47
Section 10.04 Application for Development Permit 47
Section 10.05 Approval 48
Section 10.06 Fees 48
Section 10.07 Designation of Administrator 49
Section 10.08 Duties and Responsibilities of the Administrator 49
Section 10.09 Disapproval of Application 49
Section 10.10 Denial of Variance or Reasonable Use Exception 49
Section 10.11 Disapproval of Application Appeal Procedure 49
Section 10.12 Variance or Reasonable Use Appeal Procedure 50
Section 10.13 Violation 50
Section 10.14 Civil Remedy 50
Section 10.15 Criminal Penalty 50
Section 10.16 Colville Tribe 51
Section 10.17 Severability 51
Section 10.18 Supporting Documents 51
Appendix "A" Nomination Process for "Habitats and Species of Local Importance A-1
Appendix "B" Habitat Management and Mitigation Plan B-1
Appendix "C1" Wetlands Best Available Science C1-1
Appendix "C2" Best Available Science for Rivers, Streams, and Lakes C2-1
Appendix "C3" Demographic Assessment and Other Considerations C3-1
Bibliography D-1

ACRONYM LIST

The following acronyms are used in this document. Organizational affiliations in ()

BMP	Best Management Practices
BOCC	Board of County Commissioners
CARA	Critical Aquifer Recharge Area
CTED	Department of Community, Trade and Economic Development (Washington State)
DOE	Department of Ecology (Washington State)
DNR	Department of Natural Resources (Washington State)
DRASTIC	A soil classification methodology with the following seven soil parameters: (D) water table depth, (R) net recharge, (A) aquifer media, (S) soil media, (T) topography, (I) impact of the vadose zone, (C) hydraulic conductivity.
FEMA	Federal Emergency Management Agency
FIA	Federal Insurance Administration
FIRM	Flood Insurance Rate Map
GMA	Growth Management Act
NRCS	Natural Resources Conservation Service (USDA)
NWI	National Wetland Inventory
OFM	Office of Financial Management (Washington State)
OHWM	Ordinary High Water Mark
PFC	Properly Functioning Conditions
PHS	Priority Habitats and Species
RCW	Revised Code of Washington

RMZ	Riparian Management Zone
RPG	Registered Professional Geologist
SEPA	State Environmental Policy Act (Washington State)
SMA	Shoreline Management Act
SMP	Shoreline Master Program
UGA	Urban Growth Area
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife (Washington State)
WDOE	Washington Department of Ecology (Washington State)
WSU	Washington State University

FERRY COUNTY ORDINANCE 2008-02
CRITICAL AREAS ORDINANCE

Section 1.00 AUTHORITY

This ordinance is adopted pursuant the authority granted Ferry County under RCW 36.70, known as "Counties – Planning Enabling Act", and in accordance with RCW 36.70A, known as the Growth Management Act.

Section 2.00 PURPOSE

The purpose of this ordinance is to promote the general health, safety and welfare of county residents, public and private property and the natural environment inherent in Ferry County. This ordinance implements the policies of the Growth Management Act (RCW 36.70A) and the policies of the Ferry County Comprehensive Plan.

It is Ferry County's intention to enable the Federal and State agencies to coordinate their planning for intermingled state and federal lands with Ferry County's planning.

Section 3.00 DEFINITIONS

Above Ground Storage Tanks - See "underground storage tanks."

Administrator - The Planning Director, who shall be responsible for the administration and enforcement of the provisions of these regulations within the unincorporated territory of Ferry County.

Appeal - A request for a review of the Administrator's interpretation of any provision of this ordinance or a request for a variance.

Aquifer - A body of rock which transmits ground water in usable quantities to wells. (The "rock" may be sandstone, fractured basalt or granite, glacial sands or gravel, and river sands or gravel.)

Aquifer Recharge Area – Areas that, due to the presence of certain soils, geology, and surface water, act to recharge ground water by percolation.

Aquifer Susceptibility - The ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer unimpeded by chemical interactions with the vadose zone media.

Bank Full Width – means:

1) For streams - the measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth. In cases where multiple channels exist, bankfull width is the sum of the individual channel widths along the cross-section.
2) For lakes, ponds, and impoundments – line of mean high water.
3) For periodically inundated areas of associated wetlands – line of periodic inundation, which will be found by examining the edge of inundation to ascertain where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland.

Best Management Practices or **BMPs** - Those physical, structural, and managerial practices, and prohibitions of practices, that when used singly, or in combination, prevent pollution to groundwater and surface water.

Bog – Areas of peatlands (wetlands with organic soils) that have been classified according to their shape, chemistry, plant species and vegetation structure.

Buffer - An area contiguous to a critical area that is required for the continued protection, functioning, and/or structural stability of a critical area.

Channel – An open conduit for water either naturally or artificially created, but does not include artificially created irrigation, return flow, or stockwatering channels.

Creation of Wetland – The manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species. Creation results in a gain in wetland acres.

Critical Aquifer Recharge Areas - Areas where an aquifer which is an essential source of drinking water is vulnerable to contamination that would create a significant hazard to public health. Vulnerability is the combined effect of susceptibility of the aquifer to contamination (rate at which the water filters down to the groundwater table) and the contaminant-loading potential (type and amount of substances that the water carries down with it, such as pesticides or petroleum byproducts). In general, areas of permeable soils and geology are likely to be aquifer recharge areas.

Critical Areas – Include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas.

Critical Habitat - Habitat necessary for the survival of endangered, threatened, rare, sensitive or monitored species.

Dangerous Waste - Solid waste designated in Chapter 173-303-070 through 173-303-130 WAC as dangerous or extremely hazardous waste. The words "dangerous waste" will refer to the full universe of wastes regulated by Chapter 173-303 (including dangerous and extremely hazardous waste).

Demolition Waste - Largely inert waste, resulting from the demolition or razing of buildings, roads, and other manmade structures. Demolition waste consists of, but is not limited to, concrete, brick, bituminous concrete, wood, masonry, composition roofing and roofing paper, steel, and minor amounts of other metals like copper. Plaster (sheet rock or plaster board) or any other material, other than wood, that is likely to produce gases or a leachate during the decomposition process, and asbestos wastes are not considered to be demolition waste to this regulation (source: Chapter 173-304 WAC).

Development of Critical Areas - Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the critical area.

Enhancement of Wetland – The manipulation of the physical, chemical, or biological characteristics of a wetland site to heighten, intensify or improve specific functions(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention or wildlife habitat. Activities typically consist of planting vegetation, controlling non-native or invasive species, modifying site elevations or the proportion of open water to influence hydroperiods, or some combination of these. Enhancement results in a change in some wetland functions and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres.

Erosion Hazard Areas - At least those areas identified by the U.S. Department of Agricultural National Resources Conservation Service as having a "severe" rill erosion hazard.

Exotic - Any species of plant or animal that is foreign to the planning area.

Extremely Hazardous Waste - Dangerous wastes designated in Chapter 173-303-070 through 173-303-103 WAC as extremely hazardous.

Feed Lot - A year round confined dense concentration of livestock for the purpose of intense feeding.

Fish and Wildlife Habitat Conservation Areas - Fish and wildlife habitat conservation areas are defined as land management areas for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it

does mean cooperative and coordinated land use planning is critically important. (WAC 365-190-080(5))

Flood or Flooding – A general and temporary condition of partial or complete inundation of normally dry land areas from:

1) The overflow of inland or tidal waters and/or
2) The unusual and rapid accumulation of runoff of surface waters from any source.

Flood Insurance Rate Map (Firm) - The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Forest Practices - Any activity conducted on or directly pertaining to forest land and relating to growing, harvesting or processing timber. This does not include the conversion of forested land to a use incompatible with growing timber.

Formation - An assemblage of earth materials grouped together into a unit that is convenient for description or mapping.

Geological Hazardous Areas - Areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

Ground Water – Water in a saturated zone or stratum beneath the surface of land.

Group A Public Water System - Defined as community and noncommunity water systems.

1) Community water system means any Group A water system providing service to fifteen or more service connections used by year-round residents for one hundred eighty or more days within a calendar year, regardless of the number of people, or regularly serving at least twenty-five year-round (i.e., more than one hundred eighty days per year) residents. Examples of a community water system might include a municipality, subdivision, mobile home park, apartment complex, college with dormitories, nursing home, or prison.
2) Noncommunity water system means a Group A water system that is not a community water system. Noncommunity water systems are further defined as:
   a) Nontransient water system that provides service opportunity to twenty-five or more of the same nonresidential people for one hundred eighty or more days within a calendar year. Examples of a nontransient water system might include a school day care center, or a business, factory, motel, or restaurant with twenty-five or more employees on-site.
   b) Transient water system that serves:
      i) Twenty-five or more different people each day for sixty or more days within a calendar year;

ii) Twenty-five or more of the same people each day for sixty or more days, but less than one hundred eighty days within a calendar year; or

iii) One thousand or more people for two or more consecutive days within a calendar year.

Examples of a transient water system might include a restaurant, tavern, motel, campground, state or county park, an recreational vehicle park, vacation cottages, highway rest area, fairground, public concert facility, special event facility, or church.

Habitat of Local Importance - Priority Fish and Wildlife Habitat Conservation Areas that include a seasonal range or habitat element which, if altered, may reduce the likelihood that a species will maintain and reproduce over the long term. These might include areas of high relative density or species richness, breeding habitat, winter range and/or movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration, such as cliffs, talus and wetlands.

Hazardous Substances - Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in Chapter 173-303-090 or 173-303-100 WAC. The term hazardous substances does not include any of the following when contained in an underground storage tank from which there is not a release of: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local laws.

High-Impact Use - A business establishment that is regulated due to the probability and/or magnitude of its effects on the environment. For purposes of this chapter, these uses possess certain characteristics posing a substantial potential threat or risk to the quality of groundwater and surface waters within Category I Critical Aquifer Recharge Areas. High-impact uses shall include, but are not limited to, the following: (a) landfills; (b) Class V injection wells: Agricultural drainage wells; untreated sewage waste disposal wells; cesspools; Industrial process water and disposal wells; radioactive waste disposal; (c) radioactive disposal sites.

High Intensity Land Use - Land uses which are associated with high levels of human disturbances or substantial critical area impacts including high-intensity recreation such as golf courses, ball fields or master-planned resorts; feed lots; commercial or industrial uses other than "rural small scale business"; institutional uses; new subdivisions with lots less than 2.5 acres per residence and multi-family residential development.

Hydric Soil - A soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Infiltration - The downward entry of water into the immediate surface of soil.

Injection Well - There are five classes of injection wells, two of which are authorized within the state of Washington. Class I, III, and IV wells are prohibited. Class II wells are permitted under Chapter 173-218 WAC by the Washington State Department of Ecology in conjunction with the Washington State Department of Natural Resources. Class V wells generally do not require a permit; however, in some cases where these wells may inject industrial or commercial waste fluids that would cause a violation of Washington's ground water quality standards, a permit may be issued by the Department of Ecology or the activity will be prohibited.

"Class I injection well" means a well used to inject industrial, commercial, or municipal waste fluids beneath the lowermost formation containing, within ¼ mile of the well bore, an underground source of drinking water.

"Class II injection well" means a well used to inject fluids:

1) Brought to the surface in connection with conventional oil or natural gas exploration or production and may be commingled with wastewaters from gas plants that are an integral part of production operations; unless those waters are classified as dangerous wastes at the time of injection;
2) For enhanced recovery of oil or natural gas; or
3) For storage of hydrocarbons that are liquid at standard temperature and pressure.

"Class III injection well" means a well used for extraction of minerals, including but not limited to the injection of fluids for:

1) In-situ production of uranium or other metals that have not been conventionally mined;
2) Mining of sulfur by Frasch process; or
3) Solution mining of salts or potash.

"Class IV injection wells" means a well used to inject dangerous or radioactive waste fluids.

"Class V injection wells" means all injection wells not included in Classes I, II, III, or IV. Class V injection wells are commonly known as drywells.

Isolated Wetlands - Those regulated wetlands which are outside of, and not contiguous to any 100 year flood plain of a lake, river, or stream, and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

Lake - A naturally or artificially created body of standing open water, 20 acres or greater, that persists throughout the year.

Landfill - A disposal facility or part of a facility at which solid and demolition waste is permanently placed in or on the land that is not a land-spreading disposal facility. (source: Chapter 173-304 WAC). In addition, "landfill" means all continuous land and structures and other improvements on the land used for the disposal of solid waste, pursuant to Chapter 173-351 WAC.

Landslide Hazard Areas - Areas subject to severe risk of landslide based on a combination of geologic, topographic, and hydrologic factors.

Large Quantity Generators - Those businesses that generate more than two thousand two hundred (2,200) pounds of dangerous waste per month. They accumulate more than two thousand two hundred (2,200) pounds of dangerous waste at any time. They generate and accumulate more than 2.2 pounds of acutely hazardous waste or toxic extremely hazardous waste.

Low Intensity Land Use - Land uses which are associated with low levels of human disturbances or minimal critical area impacts including open space; passive recreation such as unpaved trails, nature viewing areas, camping or fishing sites with no permanent structures; agriculture; forest management; single family residence on a parcel greater than 5 acres and new subdivisions with lots larger than 5 acres.

Master Planned Resort – Major development as authorized under RCW 36.70A.360.

Medium Quantity Generators - Those businesses that generate more than two hundred twenty (220) pounds, but less than two thousand two hundred (2,200) pounds of dangerous waste per month. They are limited to the accumulation of less than two thousand two hundred (2,200) pounds of dangerous waste at any time. They are limited to the generation of, and accumulation of, less than 2.2 pounds of acutely hazardous waste or toxic extremely hazardous waste.

Mine Hazard Areas - Areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, tailings dams, or airshafts. Mine hazards can also include steep and unstable slopes created by open mines.

Mitigation - Avoiding, minimizing or compensating for adverse impacts to critical areas and/or their buffers. Mitigation, in the following order of preference is:

1) Avoiding the impact altogether by not taking a certain action or parts of an action;
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3) Rectifying the impact by repairing, rehabilitating or restoring the effected environment;
4) Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;
5) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
6) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;
7) Monitoring the impact and the compensation project and taking appropriate corrective measures. Mitigation for individual actions may include a combination of the above measures.

Moderate Intensity Land Use – Land uses which are associated with moderate levels of human disturbances or critical area impacts including more active recreation uses such as

paved trails, small scale tourism businesses, camp sites with permanent structures; single family residence on a parcel 5 acres or less; new subdivisions with lots between 2 ½ acres and 5 acres and "rural small scale business".

Native - Any wildlife species naturally occurring in the County for purposes of breeding, nesting, or foraging, excluding introduced species not found historically in Ferry County.

Native Vegetation - Plant species which are indigenous to the planning area in question.

New Construction - Structures for which the "start of construction" commenced on or after the effective date of this ordinance.

Off Site - A location with a different legal property description than that containing the specified wetland or affected portion thereof.

Off Site Compensation - To replace wetlands away from the site on which a wetland has been impacted by a regulated activity.

On Site - Anywhere within the property having the same legal description as the specified wetland or affected portion thereof.

On Site Compensation - To replace wetlands at or adjacent to the site on which a wetland has been impacted by a regulated activity.

Ordinary High Water Mark - The mark on streams which will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland in respect to vegetation.

Permeability - The capacity of an aquifer or confining bed to transmit water. It is a property of the aquifer and is independent of the force causing movement.

Pond – A body of water smaller than a lake.

Potable Water - Water that is safe and palatable for human use.

Practicable - Available and capable of being done after taking into consideration costs, existing technology and logistics in light of overall project purposes.

Pre-Existing and Ongoing Agricultural Activities - Agricultural uses and practices including but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in

a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment, maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the critical area than the original facility, and maintaining agricultural lands under production or cultivation. Agricultural products include but are not limited to: Horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty years of planting; and livestock including both the animals themselves and animal products including but not limited to meat, upland finfish, poultry and poultry products, and dairy products. Agricultural equipment and agricultural facilities include but are not limited to: (i) The following used in agricultural operations: Equipment; machinery; constructed shelters, diversion, withdrawal, conveyance, and use equipment and facilities including but not limited to pumps, pipes, tapes, canals, ditches, and drains; (ii) corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands; (iii) farm residences and associated equipment, lands, and facilities; and (iv) roadside stands and on-farm markets for marketing agricultural products. Agricultural land means those specific land areas on which agriculture activities are conducted.

Preservation – Permanently securing lands (using full-fee acquisition or conservation easements) to protect the important features of an ecosystem in an "un-impacted" condition. Preservation is essential when a feature of the ecosystem provides a high level of functions, is rare, or otherwise non-replaceable. It does not cause a gain in acreage nor function on the landscape.

Primary Association Area – The area used on a regular basis by, or in close association with, or is necessary for the proper functioning of the habitat of an endangered, threatened or sensitive species. Regular basis means that the habitat area is normally, or usually known to contain an endangered, threatened or sensitive species. Regular basis is species and habitat dependent. Species that exist in low numbers may be present infrequently yet rely on certain habitat types.

Priority Fish & Wildlife Habitat - Conservation areas that include a seasonal range or habitat element with which a priority species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alteration, such as cliffs, talus and wetlands. The Washington Department of Fish and Wildlife's Classification System of Priority Habitat may be used to identify these areas.

Priority Species - Species that are of concern due to their population status and their sensitivity to habitat manipulation. Priority species are designated by the Washington

Department of Fish and Wildlife; Priority Habitat and Species Program, and may include endangered, threatened, sensitive, candidate, monitored, or game species.

Qualified Ground Water Scientist - A hydrogeologist, geologist, engineer, or other scientist who meets all the following criteria:

1) Has received a baccalaureate or post-graduate degree in the natural sciences or engineering; and
2) Has sufficient training and experience in ground water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding ground water vulnerability.

Recharge - The process involved in the absorption and addition of water to ground water.

Re-establishment of Wetland – The manipulation of the physical, chemical or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland.

Regulated Substance - Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under Subtitle C of the Federal Solid Waste Disposal Act, or a mixture of such hazardous waste and any other regulated substances); and petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (sixty degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "regulated substance" includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils. The term "regulated substance" does not include propane or asphalt or any other petroleum product which is not liquid at standard conditions of temperature and pressure.

Rehabilitation of Wetland – The manipulation of the physical, chemical or biological characteristics of a site with the goal of repairing natural or historic functions of a degraded wetland.

Restoration of Wetland - The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland. For the purpose of tracking net gains in wetland areas, restoration is categorized as either "re-establishment" or "rehabilitation".

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

Riparian Area - Refers to a variable border width of moist soils and body of water. Riparian areas provide habitat for fish and wildlife for tl breeding, rearing, escape cover, important travel corridors, streamside spawning, etc.).

Rural Small Scale Business – Those businesses which do not exceed 1 per building for commercial use or 20,000 square feet per building per : not require the extension of urban government services and maintain a ru

Seismic Hazard Areas - Areas subject to severe risks of damage as a res induced ground shaking, slope failure, or soil liquefaction.

Soil Survey - The most recent National Cooperative Soil Survey for county by the Soil Conservation Service, United States Department of Ag

Solid Waste - All putrescible and nonputrescible solid and semi-solid ı but not limited to, garbage, rubbish, ashes, industrial wastes, swill, construction waste, abandoned vehicles or parts thereof, and discard This includes all liquid, solid and semi-solid materials that are not the ı of public, private, industrial, commercial, mining, and agriculture operati includes, but is not limited to, sludge from wastewater treatment pla septic tanks, wood waste, dangerous waste, and problem wastes.

State Candidate - These species are under review by the Departm Wildlife for possible listing as endangered, threatened or sensitive. A considered for State Candidate designation if sufficient scientific evider its status may meet criteria defined for endangered, threatened, or sensiti 12-297. Currently listed State Threatened or State Sensitive Specie designated as a State Candidate Species if their status is in question. Species will be managed by the Department, as needed, to ensure the lo of populations in Washington.

State Endangered - A species, native to the state of Washington, t threatened with extirpation throughout all or a significant portion of its : state. Endangered species are legally designated in WAC 232-12-014.

State Sensitive - A species, native to the state of Washington, that : declining and is likely to become endangered or threatened in a significa range within the state without cooperative management or the rem Sensitive species are legally designated in WAC 232-12-011.

State Threatened - A species, native to the state of Washington tl threatened with extirpation through all or a significant portion of its range without cooperative management or the removal of threats. Threatened sp designated in WAC 232-12-011.

Stream - Water contained within a channel, either perennial or intermittent, and classified according to WAC 222-16-031 effective 7/1/05 and as listed under "water typing system." Streams also include natural watercourses modified by man. Streams do not include irrigation ditches, waste ways, drains, outfalls, operational spillways, channels, storm water runoff facilities or other wholly artificial watercourses, except those that directly result from the modification to a natural watercourse.

Structure - A walled and roofed building including a gas or liquid storage tank that is principally above ground.

Underground Storage Tank or UST –

1) An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW; or means any one or combination of tanks (including underground pipes connected thereto) that are used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is ten percent or more beneath the surface of the ground.
2) The following UST systems, including any piping connected thereto, are excluded from regulation by this ordinance as "underground storage tank systems," but will be subject to regulation if the application meets other criteria as stated in Section 6.05.
    a) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
    b) Any UST system whose capacity is one hundred ten (110) gallons or less;
    c) Any UST system that contains a de minimus concentration of regulated substances.
    d) Any emergency spill or overflow containment UST system that is expeditiously emptied after use;
    e) Farm or residential UST systems of one thousand one hundred (1,100) gallons or less capacity used for storing motor fuel for noncommercial purposes (i.e. not for resale);
    f) UST systems used for storing heating oil for consumptive use on the premises where stored;
    g) Septic tanks;
    h) Surface impondments, pits, ponds, or lagoons;
    i) Stormwater or wastewater collection systems;
    j) Flow-through process tanks;
    k) Storage tanks situated in an underground area (such as a basement, cellar, vault, mineworking drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor; or
    l) Fresh water storage systems.

Variance - A grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

Volcanic Hazard Areas - Areas subject to pyroclastic flows, lava flows and inundation by debris flows, mud flows, or related flooding resulting from volcanic activity.

Vulnerability - The combined effect of susceptibility to contamination and the presence of potential contaminants.

Water Dependent - A structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

Water Table - That surface in an unconfined aquifer at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the aquifer just far enough to hold standing water.

Well - A bored, drilled or driven shaft, or a dug hole whose depth is greater that the largest surface dimension.

Wellhead Protection Area - The surface and subsurface area surrounding a well or well field that supplies a public water system through which contaminants are likely to pass and eventually reach the water well(s) as designated under the Federal Clean Water Act.

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

Wetland Buffer - A vegetated area bordering a wetland that provides separation from the adjacent or surrounding area to help minimize disturbances resultant from human activity.

Wetland Specialist – Someone who is a certified Professional Wetland Scientist or a non-certified professional wetland scientist who 1) has one or more college degrees in science, 2) has at least 2 years full-time work experience in wetlands, and 3) has completed wetland-specific training programs.

CRITICAL AREAS

Section 4.00 CRITICAL AREAS DEFINED

This ordinance sets forth policies and serves as development regulations for critical areas as defined in RCW 36.70A.030(5) and WAC 365-190-080. Critical areas include wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas and geologically hazardous areas.

For any agricultural activity subject to the moratorium on changes to critical area regulations as imposed by the Washington State Legislature in the 2007 Regular Legislative Session by Substitute Senate Bill 5248, then critical area regulations shall be according to the Ferry County Resource Lands and Critical Areas Ordinance 2006-03, March 20, 2006.

Section 4.01 BEST AVAILABLE SCIENCE

In designating and protecting critical areas, RCW 36.70A.172 requires cities and counties to include best available science (BAS) in developing policies and development regulations to protect the functions and values of critical areas. WAC 365-195-900-925 outlines the procedural criteria for considering best available science in Comprehensive Plans and development regulations. The Washington State Supreme Court has also addressed best available science and mandatory buffers (Ref.1 of C2). All references and resources consulted for this ordinance are listed in Appendix C1 and Appendix C2.

The Ferry County Board of County Commissioners has considered best available science in developing the policies of this ordinance. Appendix C1 documents the sources of science considered in requiring buffers to protect wetlands. Appendix C2 presents the record of science considered in requiring buffers to protect the values and functions of rivers, streams and lakes. Appendix C3 presents the demographics of Ferry County, and assesses the economic, custom and cultural conditions that lead to the recommendation of standard buffer widths.

Section 4.02 USE OF QUALIFIED PROFESSIONALS

In order to adequately assess potential impacts of proposed development to critical areas, the County may require an applicant to submit special reports, studies, surveys, mitigation and management plans, or tests. The reports will provide environmental information and may contain strategies and recommendations for maintaining critical areas and mitigating unavoidable impacts. Any such report shall be prepared by a qualified professional with documented expertise, as defined in this ordinance, in the specified field.

Each report shall include the resume of the person or persons preparing the report, including education and a list of any other relevant qualifications that document expertise in the requisite field. Where licensing, registration, or certification is required or

available from the state, a federal agency, or a professional organization, such licensing, registration or certification shall be accepted as demonstrating the required expertise. The criteria set forth in WAC 365-195-905(4) shall inform the determination of whether a person is a qualified professional within the meaning of this ordinance.

Section 5.00 WETLANDS

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

The official identification and delineation method is the state designed method specific to Washington. It is titled "Washington State Wetlands Identification and Delineation Manual" (Washington Department of Ecology Publication #96-94 dated March 1997).

Section 5.01 FUNCTIONS

1) Flood Control
2) Stormwater, Sediment and Pollution Control
3) Surface Water Supply
4) Groundwater Recharge/Discharge
5) Fish and Wildlife Habitat
6) Recreation/Education/Open Space
7) Shoreline Anchoring and Erosion Control

Section 5.02 GOALS

1) Maintain and protect existing wetland areas in Ferry County to insure no net loss of wetland function or area.
2) To recognize that while the loss of wetlands is undesirable, there may be certain cases where property rights conflict with the County's goal of protecting wetlands. In those cases, wetland impacts may be permitted provided that there is appropriate mitigation which may include restoration, enhancement, creation or off-site compensation for any net loss of wetland functions and values.

Section 5.03 CLASSIFICATION

Wetlands will be rated (identified as to type and class and assigned to a category) using the methodology described in the following publication: "Washington State Wetland Rating System for Eastern Washington" issued by the Washington State Department of Ecology (Publication #04-06-15 August 2004.)

This publication utilizes data sources provided from Washington Department of Natural Resources, Washington Department of Fish and Wildlife, and also requiring data collected using the publication.

The person or team evaluating the wetland will first identify the wetland type and wetland class and will then complete a rating form which enables calculating a numeric "functional score" comprised of three functional areas – water quality, hydrology, and habitat. The rating form also requires determining whether the wetland possesses any "special characteristics" or is associated with state or federally listed endangered, threatened, sensitive or priority species.

CATEGORY I:

Category I wetlands are those that score over 70 points on the rating system or are rated as Category I based on special characteristics. They generally 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; or 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of functions.

CATEGORY II:

Category II wetlands are those that score between 51-69 points on the rating system or are rated as Category II based on special characteristics. They generally are 1) forested wetlands in the flood plains of rivers, or 2) mature forested wetlands containing fast growing trees, or 3) relatively undisturbed vernal pools present within a mosaic of other wetlands, or 4) wetlands with a moderately high level of functions, or 5) a wetland identified by the State Department of Natural Resources as containing "sensitive" plant species.

CATEGORY III:

Category III wetlands are those that score 30-50 points on the rating system or are rated as Category III based on special characteristics. They generally are 1) vernal pools that are isolated, and 2) wetlands with a moderate level of functions.

CATEGORY IV:

Category IV wetlands have the lowest levels of functions and are often heavily disturbed. They score less than 30 points on the rating system.

Section 5.04 DELINEATION

Ferry County will be using the National Wetland Inventory Maps (NWI) and the Tri-County Wetlands Maps as preliminary tools for locating wetlands. Final site delineation will be based on the Washington State Wetlands Identification and Delineation Manual (Ecology Publ. #96-94 dated March 1997).

Section 5.05 PROTECTIVE BUFFER ZONES

Buffer areas surrounding wetlands are essential to maintenance and protection of wetland functions and values. Buffer areas protect wetlands from degradation by:

1) Stabilizing soil and preventing erosion;
2) Filtering suspended solids, nutrients and harmful or toxic substances;
3) Moderating impacts of stormwater runoff;
4) Moderating system microclimate;
5) Protecting wetland wildlife habitat from adverse impacts;
6) Maintaining and enhancing habitat diversity and/or integrity; and
7) Supporting and protecting wetlands plant and animal species and biotic communities.

A wetland buffer area of adequate width will be maintained between regulated activities and the wetland, to protect the integrity of the wetland.

Ferry County has adopted Ecology's three-dimensional system of buffer widths, considering three factors:

- Wetland Category
- Intensity of proposed land use adjacent to the wetland
- Functional score for wildlife habitat.

The following standard buffer widths apply to all wetlands regulated by this ordinance.

	Wetland Standard Buffer (feet) Based on Habitat Score		
Wetland Category / Land-use Intensity	**Low Habitat**	**Moderate Habitat**	**High Habitat**
Category I /			
Low intensity	50	75	100
Moderate intensity	75	110	150
High intensity	100	150	200
Category II /			
Low intensity	50	75	100
Moderate intensity	75	110	150
High intensity	100	150	200

Category III /			
Low intensity	40	75	N/A
Moderate intensity	60	110	N/A
High intensity	80	150	N/A
Category IV /			
Low intensity	25	N/A	N/A
Moderate intensity	40	N/A	N/A
High intensity	50	N/A	N/A

N/A indicates not applicable / a result that would not occur in the rating system.

Wetland Categories: as defined in Section 5.03

Land-Use Intensity: as defined in Section 3.0

Wildlife habitat scores:

Low wildlife habitat	=	less than 20 points for habitat function
Moderate wildlife habitat	=	20 – 28 points for habitat function
High wildlife habitat	=	29 – 36 points for habitat function

Exception: For any Category 1 wetland which is a bog, the buffer shall be 125' for low intensity, 190' for medium intensity, and 250' for high intensity.

Section 5.06 INCREASED BUFFER WIDTH

The standard buffer width stated in Section 5.05 shall be increased when the County finds, based upon a site specific wetland analysis, that impacts on the wetland from a proposed development can only be mitigated by a greater buffer width.

Section 5.07 BUFFER WIDTH AVERAGING

Buffer width averaging may be used to balance wetland protection requirements with "footprint" requirements of the proposed development. Averaging may also be used to protect an important natural feature which otherwise would fall outside of the standard buffer. The applicant must show that buffer averaging will improve, or at least not impair, overall buffer functions. Buffer width should be narrowed in an area where it will cause the least disturbance to wetland function and widened in an area where it will benefit the wetland the most.

Buffer width averaging will be allowed where a qualified professional wetland biologist / consultant demonstrates that:

1) Averaging will not reduce wetland functional performance;

2) The wetland contains variations in sensitivity due to physical characteristics or existing vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;
3) The total area contained in the buffer after averaging is no less than would be contained within the standard buffer;
4) The buffer width is not reduced, at any point, to be less than 75 percent of the width of the standard buffer.

Section 5.08 REGULATED ACTIVITIES

A permit shall be obtained from the Ferry County Planning Department as per Section10.02 ESTABLISHMENT OF DEVELOPMENT PERMIT, prior to undertaking the following activities in a regulated wetland or its buffer unless authorized by Section 5.09.

1) The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;
2) The dumping, discharging, or filling with any material;
3) The draining, flooding, or disturbing of the water level or water table;
4) The driving of pilings, with the exemption of fencing;
5) The placing of obstructions;
6) The construction, reconstruction, demolition, or expansion of any structure;
7) The destruction or alteration of wetlands vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland, provided that these activities are not part of a forest practice governed under chapter 76.09 RCW and its rules;
8) Activities that result in a significant change of water temperature, a significant change of physical or chemical characteristics of wetland water sources, including quantity, or the introduction of pollutants;
9) Agricultural activities that tend to degrade wetland quality, i.e. feed lots, excessive use of fertilizers; or
10) Recreational facility development.

Section 5.09 NON-REGULATED ACTIVITIES

The following uses shall be allowed within a wetland buffer to the extent that they are not prohibited by any other chapter or law and provided they do not disturb the natural functions of the wetland. Forest practices are under the jurisdiction of the Department of Natural Resource under the auspices of the Washington Forest Practices Act. Ferry County has no authority to regulate forest practices. However, Ferry County has authority over current conversions with DNR. Ferry County will review forest practices within designated shorelines.

1) Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife;
2) Recreational activities provided the activity does not alter the area by changing existing topography, water conditions or water source;

3) The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the wetland by changing existing topography, water conditions or water sources;
4) Pre-existing and ongoing agricultural activities;
5) The maintenance (but not construction nor enlarging) of drainage ditches;
6) Education, scientific research, and use of nature trails;
7) Navigational aids and boundary markers;
8) Boat mooring buoys;
9) Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, wetland impacts shall be minimized and disturbed areas shall be immediately re-established;
10) Normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. Maintenance and repair does not include any modification that changes the character, scope or size of the original structure, facility, or improved area and does not include the construction of a maintenance road.

Section 5.10 DETERMINATION OF WETLAND BOUNDARIES AND CATEGORY

Determination of wetland boundaries and category will ultimately be the responsibility of the property owner, to be determined from a field survey by a wetland specialist applying the wetland definition and category types using the methods found in Section 5.00 and 5.03. When the County finds sufficient information is available, the requirement for a full or partial delineation and category determination may be waived.

Single family dwelling units are exempt from the requirement of hiring a professional Wetland Biologist/Consultant for determination of Classification/Delineation of wetlands as per this section.

This exemption may require Classification/Delineation steps for identification of wetland categories and their associated buffers. In the event of this exemption, the landowner will consult the Planning Department for classification and delineation at the time of permit application with no additional fees other than the actual cost of the permit.

Ferry County, when requested by the applicant, may perform the delineation in lieu of direct action by the applicant. The delineation shall be performed by a wetland specialist and shall comply with Sections 5.00 and 5.03. Ferry County may, at its discretion, consult with biologists, hydrologists, soil scientists, or other experts as needed to perform the delineation. The County shall be promptly reimbursed for all expenses incurred for performing delineation, except single family dwelling units which will be provided for by the County for the cost of the Development Permit.

Where the applicant has provided a determination of wetland boundary, Ferry County shall verify the accuracy of, and may render adjustments to, the boundary delineation. In

the event the adjusted boundary delineation is contested by the applicant, the County may attempt to set mutually agreeable boundaries; or when such an attempt is unsuccessful, shall, at the applicant's expense, obtain competent expert services from professionals approved by Ferry County to render a final delineation.

Section 5.11 WETLAND MITIGATION

Wetland alteration shall not cause significant adverse impacts to wetland ecosystems or surrounding areas, unless the impacts are unavoidable and necessary to the feasibility of the project. In such cases, the resultant impacts shall be offset through the deliberate restoration, creation, or enhancement of wetlands or other mitigation acceptable to the County utilizing standards found in Wetland Mitigation in Washington State, Part 1: Agency Policies and Guidance (Version 1, Publication #06-06-011a, March 2006) and Wetland Mitigation in Washington State, Part 2: Developing Mitigation Plans (Version 1, Publication #06-06-011b, March 2006).

The level of impacts will be determined by "mitigation sequencing". This is a process to avoid, minimize, rectify or compensate losses, in that order. It entails: redesign the project to avoid losses; change the project size or shape to minimize its impact; fix (rectify) impacts of a temporary nature after the development is complete; and finally, compensate for losses that were truly unavoidable. The preferred order of compensation is restoration of lost wetlands, creation of new wetlands, enhancement of degraded wetlands, and preservation of existing high quality wetlands, or some combination.

Compensatory Mitigation / Replacement Ratios

Mitigation plans may include any or all of the following – creation, re-establishment, rehabilitation or enhancement. Replacement ratios shall be lower to higher based on the type of mitigation proposed. The lowest ratios shall apply to creation of a new wetland or re-establishment of a former wetland which no longer exists. Higher ratios shall apply to rehabilitation of an existing, degraded wetland. The highest ratios shall apply to enhancement of an existing functioning wetland. Enhancement improves some wetland functions but does not provide a net gain in wetland functional area.

When losses to wetlands are unavoidable, compensation shall be applied on a case by case basis using the referenced guidance documents. The following ratios are intended as a starting point in determining mitigation requirements and are based on in-kind, same-site and category, prior to or concurrent with the alteration and having a high probability of success.

Category I –Forested	6:1	(units of replacement to 1 unit lost)
Category I – Other	4:1	
Category II – Forested	4:1	
Category II – Other	3:1	
Category III	2:1	
Category IV	1.5:1	

However, the ratios may be decreased or increased up to a multiplier of four depending on other various factors involved in the mitigation plan. Some factors that may be considered could be the combination of replacement / enhancement, differing wetland categories involved, the demonstrated success of the compensatory mitigation chosen, the time frame involved in mitigation and the permanence of the compensation, among others.

Mitigation ratios for bogs shall be on a case by case basis using the referenced guidance documents.

Prior to any development that would result in wetland loss, or issuance of a development permit or authorization, the proposed mitigation shall be submitted as per the requirements in Section 10.04.

Section 6.00 AQUIFER RECHARGE AREAS

Section 6.01 GOALS

The goal of the Aquifer Recharge Area is to designate areas and adopt development regulations for the purpose of protecting areas within Ferry County which are critical to maintaining ground water recharge and quality. The Growth Management Act, Chapter 36.70A RCW; Water Pollution Control Act, Chapter 90.48 RCW; Water Resources Act of 1971, Chapter 90.54 RCW; Regulation of Public Ground Waters, Chapter 90.44 RCW; and the Ground Water Quality Standards, Chapter 173-200 WAC require that these actions be taken to protect ground water quality and quantity such that it's use as potable water can be preserved for current and future uses.

Ferry County chooses to protect ground water quality in addition to the fact that the Growth Management Act requires counties to adopt development regulations to protect areas with a critical recharging effect on aquifer's use for potable water. The Department of Ecology has provided guidelines as to how the county is to identify and protect these areas. For an aquifer to be vulnerable and to require protection from a proposed land use, three conditions must be present:

1) Susceptibility to pollution as the aquifer is recharged;
2) Source of pollution;
3) Use of the aquifer for potable water.

It is the goal of this ordinance to designate areas where the three components of critical aquifer vulnerability occur, and to regulate activities so that pollution of the aquifer is avoided.

Susceptibility

The aquifer underlying a particular location in the county may be more or less "susceptible" to pollution. Susceptibility is essentially the likelihood that a pollutant could be carried down into the aquifer along with the water that recharges the aquifer. Susceptibility is a function of geology (the types and depths of soil and other geological formations lying between the surface and the ground water). The degree of susceptibility is expressed as an index number and categorized as very low, low, moderate, high, or very high susceptibility.

For northern Ferry County, susceptibility was determined through a comprehensive 1992 research study by the Eastern Washington University Department of Geology. They used the method called DRASTIC (defined below in Section 6.02 Classification). This classification method resulted in a set of maps identifying "susceptibility index" for each land area in the north part of the County. Areas which have an index in the moderate, high, or very high range will be considered to be "Susceptible". That is, if a pollution source were to be placed over the aquifer, it would be moderate to highly likely that the pollution could reach the aquifer.

The above Eastern Washington University study was only completed for the north part of the county. Due to this fact, for fee property within the bounds of the Colville Indian Reservation, Planning will consult Appendix Two and Three of the Department of Ecology Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances (defined below in Section 6.02) to determine if the land has a high susceptibility.

Pollution source

Certain types of development activities are recognized to bring with them a potential to create ground water pollutants. These activities are listed in Section 6.05.

This does not mean that every undertaking of these activities will cause pollution. Many techniques of construction and operation are available to prevent pollution. These are known as Best Management Practices. In most cases there are already regulations in place through State and/or Federal agencies which require that activities with potential to pollute ground water must be developed and restricted in such a manner that pollution is avoided.

Potable Use of the Aquifer

This essentially means all groundwater per Chapter 173-200 WAC. However, there will be cases when (enough information is present) that will be declared as non-potable and meet those qualifications per 173-200 WAC.

Review

The Ferry County Planning Department is responsible to review any proposal for a new development activity to determine whether the three conditions for critical aquifer vulnerability may apply. If it is determined that they may apply, then a Critical Aquifer

Recharge permit may be required in conjunction with other required development permits.

Specifically, for Northern Ferry County, Planning will consult the maps prepared through the DRASTIC study to determine if the land has a susceptibility index above the threshold for moderate susceptibility. For fee property within the bounds of the Colville Indian Reservation, Planning will consult Appendix Two and Three of the Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances to determine if the land has a high susceptibility.

If so, then Planning will determine whether the proposed type of development is one of those listed as polluting potential.

If the activity is a type which requires pollution-control permitting by a state or federal agency, a state or federal permit will be issued in conjunction with all the requirements of this section.

If Planning has established that a permit to develop in the aquifer area is required then it will be processed per Sections 6.06 and 6.07.

Section 6.02 CLASSIFICATION

In Northern Ferry County, classification is based on the DRASTIC method for mapping hydrogeologic conditions and pollution potential. The DRASTIC method outlines seven parameters: depth to water table (D), net recharge (R), aquifer media (A), soil media (S), topography (T), impact of the vadose zone (I), and hydraulic conductivity (C). These parameters identify a range that shall be used to determine the relative susceptibility to contamination of an area.

1) Sites identified by this Section as having a medium, high, or very high susceptibility rating shall be subject to the protection measures of this Section. Group A public water system protective radius are also protected under this Section.
2) Category I is the highest priority critical aquifer recharge area. Category I are those areas having a high or very high susceptibility rating. High susceptibility rating are those areas that have a rating of 177 through 180 and very high susceptibility rating are those that have a rating of 181 and above on the Aquifer Recharge Maps on file in the Planning Department. Also the100' protective radius around Group A water wells and the 200' protective radius around Group A water springs are classified as Category I.
3) Category II is the primary critical recharge area. This consists of those areas having a medium susceptibility rating. Medium susceptibility ratings are those areas that have a rating of 114 through 176 on the Aquifer Recharge Maps on file in the Planning Department.

Due to the fact that a DRASTIC study was not completed for the south half of the county, classification on fee property within the bounds of the Colville Indian Reservation is

based on ratings of susceptibility using the basic parameters presented in Appendix Two and Three of a July, 2000 Department of Ecology Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publication #97-30 prepared by Kirk V. Cook, RPG Hydrogeologist. This guidance document uses overall permeability, geologic matrix, infiltration, and depth to water to estimate susceptibility. Each of the major parameters used to estimate susceptibility has been evaluated and rated.

1) Sites identified by this evaluation as having a high susceptibility shall be subject to the protection measures of this Section.
2) High susceptibility ratings are those areas that have a rating of 8-12.

Section 6.03 DESIGNATION

1) Ferry County has designated aquifer recharge areas based on aquifer maps in a December1992 report titled Evaluation of Groundwater Pollution Susceptibility in Northern Ferry County, Washington using the DRASTIC Method produced by Eastern Washington University Geology Department Professor, John Buchanan. Any geographic area designated by the DRASTIC classification as having a high or medium susceptibility rating shall be designated a Critical Aquifer Recharge Area. In addition, the 100' protective radius around a Group A Public Water Well System and the 200' protective radius around a Group A Public Water Spring System will be designated a Critical Aquifer Recharge Area. Since the above Eastern Washington University study was only completed for the north part of the county, designation for fee property within the bounds of the Colville Indian Reservation will be done on a case-by-case basis using the ratings of susceptibility for aquifers as described in Appendix Two and Three of a July, 2000 Department of Ecology Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publication #97-30 prepared by Kirk V. Cook, RPG, Hydrogeologist.
2) A map or maps maintained by the Ferry County Planning Department shall set forth such areas.

Section 6.04 EXEMPT ACTIVITIES IN CATEGORY I AND II

1) The following activities are exempt: Existing activities that currently and legally exist at the time of adoption of this section; and
2) All uses other than 6.05.

Section 6.05 CONDITIONALLY PERMITTED ACTIVITIES IN CATEGORIES I AND II

1) The following activities are conditionally allowed in both Category I and II and require a Critical Aquifer Recharge Area permit. For those activities that are permitted and regulated by the State or Federal Government, their site evaluation permit will be issued in conjunction with all the requirements of this Section.
   a) Above- and below-ground storage tanks (tanks and pipes used to contain an accumulation of regulated substances (see Section 3.00);

b) Facilities that conduct biological research;
c) Boat repair shops;
d) Aircraft servicing;
e) Chemical research facilities;
f) Dry cleaners;
g) Gasoline service stations;
h) Pipelines;
i) Printing and publishing shops (that use printing liquids);
j) Below-ground transformers and capacitors;
k) Sawmills (producing over ten thousand (10,000) board feet per day);
l) Solid waste handling and processing;
m) Vehicle repair, recycling, and auto wrecking;
n) Funeral services;
o) Furniture stripping;
p) Motor vehicle service garages (both private and government);
q) Photographic processing;
r) Chemical manufactures and reprocessing;
s) Creosote and asphalt manufacture and treatment;
t) Electroplating activities;
u) Petroleum and petroleum products refining, including reprocessing;
v) Wood products preserving;
w) Golf course;
x) Regulated waste treatment, storage, disposal facilities that handle hazardous material;
y) Medium quantity generators (dangerous, acutely hazardous, and toxic extremely hazardous waste);
z) Large quantity generators (dangerous, acutely hazardous, and toxic extremely hazardous waste);
aa) Feed lots;
bb) Mining Operations;
cc) Landfills;
dd) Class II injection wells;
ee) Class V injection wells;
ff) Radioactive sites;
gg) Wastewater treatment facility; or
hh) Oil or gas production and gathering operations.

2) The permitting fee for a Critical Aquifer Recharge Area permit shall be established by the Board of County Commissioners. A State Enviornment Policy Act (SEPA) checklist will also need to be completed.
3) To receive a Critical Aquifer Recharge Area permit, the applicant must demonstrate, through a Level 1 site evaluation report, how they will integrate necessary and appropriate best management practices to prevent degradation to groundwater. The applicant must also meet existing local, state, and federal laws and regulations. A Level 1 site evaluation report shall be completed and submitted to the planning

department. Review and approval shall be by the Planning Commission, pursuant to Section 6.06.

4) Alternately, the applicant may process a Level 2 site evaluation report and develop and implement a monitoring program that consists of the following:
   a) Demonstrate, through a Level 2 site evaluation report, how they will prevent degradation to groundwater. The applicant must also meet existing local, state and federal laws and regulations. A Level 2 site assessment report shall be completed and submitted to the planning department. Review and approval shall be by the Planning Commission, pursuant to Section 6.07; and
   b) Develop and implement a monitoring program with quarterly reporting to the Planning Department. The Planning Department will evaluate the monitoring program and may require periodic changes based on the monitoring results, new technology, and/or best management practices.

Section 6.06 LEVEL 1 SITE EVALUATION REPORT/APPROVAL CRITERIA

1) The site evaluation report shall be done by the applicant, and will meet all local, state, and federal rules and regulations. The report will identify appropriate best management practices and show how they will prevent degradation of groundwater. All necessary technical data, drawings, calculations, and other information to describe application of the best management practice must be supplied. If unable to provide all the information required, or if the applicant preferred, the applicant may hire a licensed hydrogeologist at their own expense and do a Level 2 Evaluation Report. Examples of best management practices include, but are not limited to, the following guidance documents:
   a) Dry Cleaning Hazardous Waste Do's and Don't (WDOE, 91-012c);
   b) Electroplating (WDOE, 91-0129);
   c) Guidance for Remediation of Petroleum Contaminated Soils (WDOE, 91-030);
   d) Empty Pesticide Container Disposal (WDOE; 92-br-008);
   e) Managing Hazardous Waste for Radiator Shops (WDOE, 92-br-009);
   f) Managing Hazardous Waste for Transmission Shops (WDOE, 93-br-010);
   g) Managing Hazardous Waste for Tire Dealers (WDOE, 93-br-015);
   h) Tank Owners and Operators Guide to Using Ground Water Monitoring for UST Release Detection (WDOE, 93-012);
   i) A Guide for Lithographic Printers (WDOE, 94-139);
   j) A Guide for Photo Processors (WDOE, 94-138);
   k) A Guide for Screen Printers (WDOE, 94-137);
   l) Best Management Practices to Prevent Stormwater Pollution at Vehicle Recycling Facilities (WDOE, 94-146);
   m) Prevention of Stormwater Pollution at Log Yards—Best Management Practices (WDOE, 95-053);
   n) Best Management Practices for Auto Dealerships—Auto Wastes and Containers (WDOE, 95-405A);
   o) Best Management Practices for Auto Dealerships—Waste Processes (WDOE, 95-405B);

p) Irrigation Management Practices to Protect Ground Water and Surface Water Quality (WSU, EM4885, April, 1995);
q) Frequently Asked Questions Concerning Solvent and Cleaner Disposal (WDOE, 96-422);
r) Management Requirements for Special Waste (WDOE, 96-1254);
s) Drycleaners (WDOE, F-HWTR-93-541); and
t) Selecting Best Management Practices for Stormwater Management (WDOE, WQ-R-93-011).

2) The report will also identify how the applicant will follow the requirements of the Dangerous Waste Regulations, Chapter 173-303 WAC, in the event hazardous material is released onto the ground or into groundwater.
3) The report will include site specific hydro geologic information to support a conclusion of no degradation to groundwater. Hydrogeologic information may be available from existing U.S. Geological Survey Reports; U.S. Department of Agriculture, Natural Resources Conservation Service (Soil Survey of North Ferry Area, Washington, 1979; Ferry County); the Northeast Tri-County Health District; and from local purveyors.
4) The report will be reviewed by the Planning Commission or a consultant hired by the County, at the applicant's expense, for this review. The County may consult with the Northeast Tri-County Health Department; State of Washington Departments of Health or Ecology, independent reviewer, or any other parties it sees fit.
5) The Planning Commission can require a Level 2 Site Evaluation Report, at the owner's expense, for major projects that cannot address the issues by just using best management practices.

Section 6.07 LEVEL 2 SITE EVALUATION REPORT/APPROVAL CRITERIA

A licensed hydrogeologist will determine whether the proposed activity will have any adverse impacts on groundwater in Critical Aquifer Recharge Areas based upon the requirements of the Safe Drinking Water Act and the Wellhead Protection Area Program, pursuant to Public Water Supplies, Chapter 246-290 WAC; Water Quality Standards for Ground Waters of the State of Washington, Chapter 173-200 WAC; and Dangerous Waste Regulations, Chapter 173-303 WAC.

1) The Level 2 site evaluation report will include the following;
   a) Identification of the proposed development plan, along with potential impacts (e.g., on-site septic systems and other on-site activities) that may adversely impact groundwater quality underlying or down gradient of the project or project area;
   b) Drawing in an appropriate scale (1:2,400 or 1 inch to 200 feet) showing the location of abandoned and active wells, springs, and surface water bodies within one thousand (1,000) feet of the project or project area; and
   c) A description of the geologic and hydrologic characteristics of the subject property including the following:
      i) Lithologic characteristics and stratigraphic relationships,
      ii) Aquifer characteristics including recharge and discharge areas, depth to and static water-flow patterns, and an estimate of groundwater-flow velocity,

iii) Contaminant rate and transport including probable migration pathways and travel time of potential contaminant release from the site through the unsaturated zone to the aquifer(s) and through the aquifer(s), and how the contaminant(s) may be attenuated within the unsaturated zone and the aquifer(s),

iv) Appropriate hydro geologic cross-sections which depict lithology, stratigraphy, aquifer, units, potential or probable contaminant pathways from a chemical release, and rate of groundwater flow, and

v) Existing groundwater quality, a plan for monitoring groundwater to detect changes and the corrective actions that will be taken if monitoring results indicate contaminants from the site have entered the underlying aquifer(s).

2) The report will be reviewed by the Planning Commission or a consultant hired by the County, at the applicant's expense, for this review. The County may consult with the Northeast Tri-County Health Department; State of Washington Departments of Health or Ecology, an independent reviewer, or any other parties it sees fit.

Section 7.00 FREQUENTLY FLOODED AREAS

Section 7.01 GOALS

Ferry County aims to promote the public health, safety and general welfare of its citizens, and to minimize public and private losses due to flood conditions in specific areas.

Section 7.02 POLICIES

The Ferry County Flood Ordinance 2002-01 adopted in accordance with the Federal Emergency Management Agency, will continue to be used by the Planning Dept. staff to designate frequently flooded areas.

The Federal Emergency Management Agency supplied Ferry County with Flood Insurance Rate Maps. Ferry County will be using these maps as tools to determine areas of special flood hazard.

Section 7.03 CLASSIFICATION

Class I:

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Class II:

Area of special flood hazard: Land in the flood plain subject to a one percent or greater chance of flooding in any given year.

Section 7.04 DESIGNATION

Class I: Activities allowed in the floodway are described in section 5.3 of Ferry County Flood Ordinance 2002-01.

Class II: Building in areas of special flood hazard will require a Development Permit as stated in section 4.0 of Flood Ordinance 2002-01. Any building performed in the areas of special flood hazard will be built according to standards spelled out in section 5.0 of Flood Ordinance 2002-01.

Section 8.00 GEOLOGICALLY HAZARDOUS AREAS

Section 8.01 GOALS

1) Avoid potential disasters which damage homes and property, degrade water quality and quantity, and increase flood hazards. Determine characteristics in soil, slope and geology that will indicate areas where development should be prohibited, restricted or controlled.
2) Prevent or control hazards such as open mine workings, portals, shafts and other open holes that may present significant risk of harm to individuals, wildlife and livestock. Where these features may adversely affect water quality, mitigate the conditions.

Section 8.02 CLASSIFICATION

Geologically hazardous areas can be caused by many different conditions. The following categories will be described under the sub-title of Geologically Hazardous Areas, and will be classified on a case-by-case basis with the assistance of the Ferry County Soil Survey Maps, Department of Natural Resources Geological Survey Maps, and other available information.

1) Erosion Hazard Areas
2) Landslide Hazard Areas
3) Seismic Hazard Areas
4) Mine Hazard Areas
5) Volcanic Hazard Areas

Geologically Hazardous Areas

The Washington State Department of Community, Trade and Economic Development's classification system of risk to structural development as follows in its entirety shall be used as needed. Given the possibility that a geologic activity will happen in a hazard area, the "risk" is an estimate of how much danger will be posed by the activity.

GH1 - Areas where adequate information indicates that no significant geological hazard is present or where it is judged that there is little likelihood for its presence.

GH2 - Areas where adequate information indicated that significant geological hazard is present or where it is judged that there is a high likelihood for its presence.

GH3 - Areas containing a geological hazard the significance of which cannot be evaluated from available data.

GH4 - Areas where available information to evaluate a geological hazard is inadequate.

The Washington Department of Ecology's Geologic Hazard Rating system will be used to identify the level of risk for those areas identified as GH2:

Low Risk: Standard foundation systems and site preparation techniques are expected to result in an acceptable level of risk.

Intermediate Risk: Standard foundation systems and site preparation techniques may be acceptable, but only with confirmation by a geotechnical report.

High Risk: Standard foundation systems and site preparation techniques are unlikely to be acceptable. A geotechnical report is required for recommendation of special foundation designs and site preparation techniques.

1a. Erosion Hazard Areas:

Erosion problems related to development fall into three classes:

1) Natural erosion processes that can be powerful enough to dislocate big chunks of land;
2) Exposure of soil during construction, including road construction, making it susceptible to water and wind erosion; and
3) Increased runoff, because of the increase in impermeable surfaces in development area or because of the removal or destruction of vegetation, causing concentration of water in places where it can cause erosion, typically by forming rills, gullies or deepening ravines.

Runoff management is essential in erosion control. Erosion may cause problems at the source and/or at the destination.

1b. Landslide Hazard Areas:

1) Areas with all three of the following characteristics:

a) Slopes greater than 15%; and
b) Impermeable soils (typically silt and water-expansive clay) frequently interbedded with permeable soils. These clays can destabilize a slope very quickly with sufficient hydration. Such clays are common in Ferry County as a byproduct of weathering of volcanic rocks. The quantity of water-expansive clay will be the key point. In such case, consulting with an experienced Geotechnical Engineer for rock mechanics of slopes may be required for questionable development; and
c) Springs or groundwater seepage; or

2) Any area which has shown movement during the Holocene epoch (from 10,000 years to present) or which is underlain by mass wastage debris of that epoch; or
3) Any area potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting; or
4) Areas that have snow avalanche potential; or
5) Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials; or
6) Areas located in canyons; or
7) Areas on active alluvial fans, presently subject to or potentially subject to inundation by debris flows or catastrophic flooding; or
8) Any area with a slope of forty percent or steeper and with a vertical relief of ten or more feet, except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

1c. Seismic Hazard Areas:

1) Areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction or soil faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington.

1d. Mine Hazard Areas:

1) Mining in Ferry County has resulted in an extensive network of abandoned mines. All mine operations present a hazard to people, wildlife, and livestock. Stabilization of newer mine openings may actually make these areas safer during a seismic event than that of an unstabilized slope. Because of the strong mining heritage in Ferry County, many mine openings and other mine-related hazards exist. Such hazards include, but are not limited to; portals, shafts, open stopes, steep slopes caused by mining activities, impoundments, dumps, stockpiles, abandoned mine buildings and facilities, abandoned workings and surface drill holes.

1e. Volcanic Hazard Areas:

1) The potential risk from volcanic hazards for any particular area is generally related to how far the area is from a volcanic vent. At the present time Ferry County has no volcanic vents within a large radius.

Section 8.03 DESIGNATION
Ferry County will be utilizing the U.S. Soil Conservation Service and other agencies' existing surveys. These surveys along with the soils surveys will be tools used by the Planning Department to assist in judging the possible risk that may exist on a case-by-case basis.

Section 9.00 FISH AND WILDLIFE HABITAT CONSERVATION AREAS
Fish and wildlife habitat conservation areas are defined as land management areas for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important. (WAC 365-190-080(5))

This section does not attempt to protect the specific species listed as endangered, threatened or sensitive by federal or state agencies but supports habitat protection for those species.

Section 9.01 CLASSIFICATION
The following six habitat areas shall be considered fish and wildlife habitat conservation areas.

1) **Areas with which endangered, threatened and sensitive species have a primary association.** Current status of federally-listed species, which may occur in Ferry County, can be obtained from the U.S. Fish and Wildlife Service, and is available on-line at www.FWS.gov/EasternWashington/ESA.html. State listed species are those native fish and wildlife species legally designated as Endangered (WAC 232-12-014), Threatened (WAC 232-12-011) or Sensitive (WAC 232-12-011). The Washington Department of Fish and Wildlife Priority Habitats and Species (PHS) Program provides wildlife and fisheries information for land-use planning purposes. In identifying areas with which endangered, threatened and sensitive species ("ETS" species) have a primary association, Ferry County will use WDFW/PHS data products (lists and maps) along with other tools. The PHS data represent known occurrences or known use areas, but will be submitted to WDFW for current validation prior to being used for land-use decisions.

2) **Habitats and species of local importance.** These are habitats or species that due to their declining population, sensitivity to habitat manipulation or other values make them important on a local level. Habitats of local importance may include a seasonal range or habitat element with which a given species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. (WAC 365-190-080(5)(c)(ii). State or local agencies,

individuals or organizations may submit a petition to nominate an area or species for approval by the BOCC. The nomination process is outlined in Appendix "A".

3) **Naturally occurring ponds under 20 acres that provide fish or wildlife habitat.** This category does not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds and landscape amenities. This category does include artificial ponds intentionally created from dry areas as part of mitigation.

4) **Rivers, Streams and Lakes.** Rivers, streams and lakes are as categorized in WAC 222-16-031, the Forest Practice Rules and Regulations, administered by the DNR. There are three water types within this classification, which are fish bearing waters, Types 1, 2 and 3. There are two types that are not fish bearing waters, Types 4 and 5. Appendix C3 presents the demographics of Ferry County, and assesses the economic, custom and cultural conditions that lead to the recommendation of standard buffer widths.

The following is a summary of the five water types categorized in WAC 222-16-031, the Forest Practices Rules and Regulations:

a) **Type 1 Water:** Means all waters, within their ordinary high-water mark, inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW but not including those waters' associated wetlands as defined in chapter 90.58 RCW.
b) **Type 2 Water:** Means segments of natural waters which are not classified as Type 1 Waters and have a high fish, wildlife or human use.
c) **Type 3 Water:** Means segments of natural waters which are not classified as Type 1 or 2 Waters and have a moderate to slight fish, wildlife, and human use.
d) **Type 4 Water:** Means all segments of natural waters within the bank-full width of defined channels that are perennial waters of nonfish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.
e) **Type 5 Water:** Means all segments of natural waters within the bank-full width of the defined channels that are not Type 1, 2, 3, or 4 Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 Water. Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters. A defined channel is indicated by evidence of soil scouring.

Ferry County will use DNR's Water Type Maps to designate water types and classifications to the extent they are consistent with WAC 222-16-031 effective 7/1/05.

5) **Lakes, ponds, streams, and rivers planted with game fish by a governmental or Tribal entity.** The Washington Department of Fish and Wildlife Maps will be a reference to locate lakes, ponds, and Type 1, 2, and 3 Waters of streams and rivers planted with game fish by governmental entities. The Colville Tribe will be consulted concerning the lakes, ponds, streams and rivers planted with game fish on Tribal Lands.

6) **State Natural Area Preserves and Natural Resource Conservation Areas.** Natural area preserves and natural resource conservation areas are defined, established, and managed by the Washington State Department of Natural Resources. There are currently no designated State natural area preserves or natural resource conservation areas within Ferry County.

Section 9.02 DESIGNATION

Habitat areas that meet the above classification criteria are designated as fish and wildlife habitat conservation areas.

Section 9.03 PROTECTION REQUIREMENTS – STREAMS, RIVERS AND LAKES

1) **Standard Buffer Widths**

It is the goal of this Ordinance to provide buffers that will provide maintenance for fish and wildlife habitat functions. To ensure adequate protection of existing fish and wildlife habitat conservation areas, the buffer requirements shall apply to all development proposals that require approval under existing or subsequently adopted Ferry County regulations, even when a lesser standard might be approved by another agency.

The following buffers shall be required:

Type 1 Waters	150 feet	
Type 2 Waters	100 feet	
Type 3 Waters	75 feet	streams on which indigenous Bull Trout have been validated,will have a buffer of 100 feet
Type 4 Waters	50 feet	
Type 5 Waters	50 feet	

Development proposals within a mapped habitat area for Endangered, Threatened and Sensitive (ETS) species or within 1000 feet of a validated point observation for ETS species may be subject to additional requirements pursuant to Section 9.04 below.

2) **Activities Not Regulated in Buffers**

Uses and activities, which are consistent with the purpose and functions of the buffer, shall be allowed within the buffer. Activities should not impact the functions or value of the buffer beyond its ability to recover. The following shall be permitted within a buffer:

1) Ongoing activities associated with legal and established land uses including maintenance, repair, rebuilding, or operation of existing legal structures, facilities, or improved areas. Maintenance and repair does not include any modification that changes the size of the original structure, facility, or improved area and does not include the construction of a new maintenance road;
2) Existing and on-going agriculture activities;
3) Forest practice activities regulated by the DNR;
4) Water wells and surface water withdrawal systems;
5) Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests or other related activities. In every case, buffer area impacts shall be minimized and disturbed areas shall be immediately re-established;
6) Maintenance, reconstruction, repair or operation of existing private access road/driveways, streets, highways, roads, trails, landscape areas, utilities, floating docks, boat moorings, and buoys;
7) Scientific or educational activities;
8) Wildfire fuel reduction and diseased vegetation removal;
9) Removal of invasive or noxious weeds;
10) Recreational activities provided the activity does not alter the area by changing existing topography, water conditions or water source;
11) Pedestrian trails, less than 4 feet in width, unpaved and with no bark or fill;
12) Swales planted with native plants;
13) The harvesting of wild crops in a manner that is not injurious to natural reproduction;
14) Non-permanent wildlife-watching/hunting blinds;
15) Buffer alterations for view corridors are allowed with emphasis placed on limbing and with selective timber removal minimized to the extent possible. Proposed alterations shall be the minimum to afford views within the area and shall minimize shrub vegetation removal and ground disturbance while maintaining the large mature trees; or
16) Emergencies that threaten public health and safety and that require remedial or preventative action in a time frame too short to allow for compliance with the requirements of these regulations. The Ferry County Planning Department shall be notified following resolution of the emergency situation so appropriate mitigations/restoration measures may be pursued.

3) Regulated Activities

The following activities should generally be sited outside of buffer areas; however, if a proposed land use includes special conditions which require the placement or conduct of these activities within the buffer area, then a development permit will be required, with the intent of minimizing impact to the values and functions of the

buffer area, and providing mitigation for impacts which may not be avoidable.

The permit shall be obtained from the Ferry County Planning Department as per Section 10.03, Establishment of a Development Permit, prior to undertaking the following activities unless authorized by Section 9.03(2). The Director, if necessary, may also require a Habitat Management and Mitigation Plan pursuant to Section 9.04. This section does not require any permit in addition to those otherwise required by county ordinances. Uses and activities in which no permit or approval is required by any other county ordinances remain subject to the standards and requirements of this section. This section does not exempt uses and activities from any state or federal permits that may be required. For any agricultural activity below, see Section 4.00 for current regulations.

1) Creation of new lots through land subdivision;
2) The construction, reconstruction, demolition or expansion of any structure;
3) The destruction or alteration of buffer areas through clearing, excavating, grading, paving, dumping, filling, intentional burning, vegetation removal or landscaping that would alter the functions and values of the buffer area, unless part of a project which has been permitted or a project which is non-regulated under this Section;
4) The draining, flooding or disturbing of the water level or water table. This does not include residential drilled or dug ground water wells;
5) Recreational facility development;
6) Feed lots (feed lots do not include ordinary winter feeding);
7) Road, expansion of existing corridor road or bridge;
8) Road, new public or private access road/driveway. Roads shall be kept to a minimum. Whenever possible, roads within buffer areas shall not run parallel with the water body and where crossings are necessary, shall cross buffer areas as near right angles as possible;
9) Equestrian/pedestrian/bike trails and associated facilities may be permitted in buffer areas but should be set back 50 feet from the ordinary high water mark, if possible, and shall be a maximum of 14 feet in width. The trails shall be left as soft paths and parking will not be permitted within the buffer area;
10) Bulkheads or retaining walls, where no other practical alternative exists, may be allowed. Beach nourishment and bio-engineered erosion control projects are considered a normal protective bulkhead; or
11) Where no other practical alternative exists to the excavation for the placement of wells, tunnels, utilities, or on site septic systems in a buffer area. Wells and on site septic systems shall be in conformance with local and state requirements.

Buffer vegetation disturbances within the buffer area shall be re-established within one growing season with native vegetation or as recommended by local sources, such as the Ferry Conservation District, the Natural Resource Conservation Service or the Washington State University Ferry County Cooperative Extension Office.

4) **Increase of Standard Buffer Widths**
The standard buffer width may be increased when the County finds, on a case-by-case basis, that a larger area is necessary to protect the critical area functions and values.

5) **Buffer Width Reduction**
   1) The buffer width may be reduced on a site-by-site basis when it is determined that a smaller area is adequate to protect the functions and values based on site-specific characteristics.
   2) Buffer width reduction may be considered for, but not limited to, the following circumstances:
      a) The applicant may demonstrate that the buffer cannot provide certain functions because of soils, geology or topography existing at the site prior to adoption of this ordinance;
      b) A legally established roadway transects the standard buffer, provided that the applicant shows that the part of the buffer on the other side of the roadway provides insignificant biological or hydrological function in relation to the portion of the buffer on the water side of the roadway.
   3) Buffer reductions shall be based upon best available science appropriate for the site. Buffer reductions should be used on a limited basis and should be granted only when it has been determined that the functions and values of the critical area can be maintained.
   4) Applications for buffer width reduction shall follow Variance procedures as outlined in Section 10.01.

6) **Buffer Width Averaging**
Standard buffer widths may be modified by averaging buffer widths or a combination of averaging and reduction. Buffer width averaging shall be allowed only where the applicant demonstrates the following:
   1) Averaging will not decrease the functions and values of the buffer necessary to protect the biological, chemical and physical components of water quality, and
   2) The total area contained within the buffer after averaging is no less than that contained with the standard buffer prior to averaging. The buffer width shall be reduced to not less than 75 percent of the standard buffer unless authorized under Section 10.02.

7) **Land Division**
In order to avoid the creation of non-conforming lots, each new lot shall contain at least one building site that meets the requirements of this ordinance. In long plats, buffers may be dedicated as permanent open space tracts, functioning as fish and wildlife habitat conservation areas.

8) **Non-Conforming Structures and Improvements**
Existing and ongoing structures and improved areas within the buffer which are legally existing at the time of the adoption of this ordinance are hereby declared to be non-conforming and shall be subject to the following:

Structural modification of, addition to or replacement of any structure legally established before the adoption of this ordinance which do not meet the buffer requirements are permitted under 9.03(3) if no portion of the modification, addition or replacement extends farther into the buffer. All development adjacent to both "Shorelines" and "Shorelines of State-wide Significance" shall be subject to the provisions in the Ferry County Shorelines Master Program.

This section does not in any way limit or affect those activities and uses specifically exempted from regulation under Section 9.03(2).

Section 9.04 MAPPED PRIORITY HABITAT AREAS AND SPECIES OBSERVATION AREAS

Specific habitat protection measures apply to mapped habitat areas with which Endangered, Threatened and Sensitive (ETS) species have a primary association.

1) Validated point observations. For any development proposal within 1000 feet of a mapped or documented point observation for ETS species, Ferry County shall forward the information to the Washington State Department of Fish and Wildlife for current validation. If the point observation is validated, then the protection measures specified in this section shall apply.
2) Validated polygon observations. For any development proposal for a moderate or high intensity land-use, the Planning Director shall consult the Washington State Department of Fish and Wildlife mapping of polygon locations for ETS species. If these maps indicate that the subject property may be within such a polygon, the Director shall forward the information to the Washington State Department of Fish and Wildlife for current validation. If the observation is validated, showing that an ETS species has a primary association within the subject property, then the protection measures specified in this section shall apply.
3) Habitats and species of local importance. Areas determined by Ferry County when designating a habitat or species of local importance will be considered to be mapped priority habitat areas for the protection measures specified in this section.

Upon validation by Washington State Department of Fish and Wildlife, documentation of the findings and best available science supporting the validation shall be provided to the Planning Director to be forwarded to the landowner.

For development proposals in these three categories of mapped priority habitat areas, Ferry County will require a report from a qualified professional setting forth management recommendations specific to the site and the proposed development. The County shall forward each such report to the Washington State Department of Fish and Wildlife for comment.

Ferry County will require a Habitat Management and Mitigation Plan for the proposed development, based on the report of the qualified professional and best available science appropriate for the site (See Appendix B for details).

Section 10.00 ADMINISTRATION

Section 10.01 VARIANCES

A permit for a variance provides the opportunity for a landowner to make reasonable use of his property when adherence to the requirements of these regulations discriminates against the individual. A variance may be granted an individual property owner when the Planning Commission finds that all of the following are met:

1) That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not generally applicable to other lands, structures, or buildings in the same designated area;
2) That literal interpretation of the provisions of this ordinance would deprive the applicant of rights commonly enjoyed by other properties in the same designated area under the terms of this ordinance, and prevent an otherwise reasonable use of the property;
3) That special conditions and circumstances do not result from actions of the applicant;
4) That granting the variances requested would not confer on the applicant any privilege that is denied by this ordinance to other lands, structures, or buildings in the same designated area;
5) The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity of the subject property;
6) The variance granted is the minimum necessary to accommodate the use;
7) The use will not conflict with local or state health regulations;
8) The granting of the variance is consistent with the general purpose and intent of this ordinance, of the Ferry County Comprehensive Plan and adopted development regulations; and
9) In granting of the variance, the county may prescribe such conditions, safeguards or mitigation measures necessary to secure protection of critical areas from adverse impacts.
10) The decision to grant the variance includes consideration of Best Available Science.

A variance approval shall be good for five years from the date of approval.

Section 10.02 RESONABLE USE EXCEPTION

If an applicant for a development proposal demonstrates to the satisfaction of the Planning Commission that application of these regulations would deny all reasonable

economic or beneficial use of the subject property, reasonable economic development of the property will be allowed if the applicant also demonstrates all of the following:

1) The application of this section would deny all reasonable economic or beneficial use of the property;
2) There is no other reasonable configuration or placement of the proposed development with less impact on the buffer;
3) The proposed development does not pose an unreasonable threat to the public health, safety or welfare on or off the development proposal site and is consistent with the general purposes of this ordinance; and
4) Any alterations permitted to the critical area or buffer shall be the minimum necessary to allow for reasonable use of the property.

Section 10.03 ESTABLISHMENT OF DEVELOPMENT PERMIT

A development permit shall be obtained before construction or development begins on a regulated activity within any critical area or critical area buffer. The permit shall be for all construction including filling and dredging and other regulated activities as defined in this ordinance. Construction shall not begin until issuance of the required development permit, and must be conducted in compliance with the terms of such permit. A development permit will be applied for from the Ferry County Planning Department along with other State or Federal permits that may be required for such construction. A State Environmental Policy Act (SEPA) checklist may be required for development in a critical area.

Section 10.04 APPLICATION FOR DEVELOPMENT PERMIT

Application for a development permit shall be made on forms furnished by the administrator. The application shall include at least the following information:

1) The location of the proposed site;
2) Existing structures, improvements and landscape features including the name and location of all water bodies;
3) The relationship of the site to surrounding topographic and built features;
4) Soil types and conditions, vegetation, and if available photographs showing pertinent information;
5) A description of the nature, density and intensity of the proposed use or activity in sufficient detail to allow analysis of such a land use change upon identified critical areas including the proposed amounts of excavation, grading, and vegetation disturbance;
6) Specifications for proposed building locations, construction and materials, filling, dredging, grading, storage of materials, water supply and sanitary facilities;
7) Data showing that the functions and values of the critical area will not be substantially decreased by the proposed development; and
8) Certification by a qualified professional of the classification and delineation of the critical areas in compliance with this Ordinance; and

9) If applicable, a mitigation and monitoring plan providing for no net loss of critical areas functions and values, the requirements of this Ordinance, and the referenced guidance documents.

Prior to any development that would result in critical areas loss, or issuance of a development permit or authorization, the proposed mitigation shall be submitted as per the requirements in this section. The plans will include baseline information, goals and objectives, performance standards against which to measure success, a construction plan, a monitoring program to measure the results, and a contingency clause in case of failure to meet the standards. The monitoring plan shall monitor any mitigation sites for at least five years. A performance or maintenance bond to assure implementation may also be required for an amount sufficient to assure the construction of the mitigation and maintenance for five years.

Assessment Relief

The County Assessor shall consider wetland regulations in determining the fair market value of land. Any landowner of an undeveloped wetland who has dedicated an easement or other legal restriction regarding wetland protection shall have that portion of land assessed consistent with those restrictions. Such land shall also be exempt from special assessments.

The Administrator may request additional information needed to decide if the permit should be issued.

Section 10.05 APPROVAL

Within thirty (30) days following the filing of a complete application the Administrator shall approve, or disapprove, the application for a permit. The Administrator shall base his/her decision on whether the application meets the purpose and goals of this ordinance. If approved the Administrator shall promptly issue a variance, or permit; if not he/she shall promptly notify the applicant in writing of the specific reasons for disapproval. Authorization to conduct development activities shall terminate five years after the effective date of the development permit. Provided, the administrator may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date. Development adjacent to Shorelines of the State will be subject to the guidelines and timeframe in the Ferry County Shoreline Master Program.

Section 10.06 FEES

Fees for variances and appeals shall be as established by resolution of the Board of County Commissioners.

Section 10.07 DESIGNATION OF ADMINISTRATOR
The Administrator of this ordinance shall be the Ferry County Planning Director, or his designee.

Section 10.08 DUTIES AND RESPONSIBILITIES OF THE ADMINISTRATOR
1) Permit Review - Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
2) Review all development permits to determine that the necessary permits have been obtained from those Local, State, or Federal governmental agencies from which prior approval is required.
3) Review all development permits to determine if the proposed development is located in the riparian area or a wetland or its associated buffer zone.
4) Review all variance applications and submit to the Planning Commission.
5) If wetlands class designation/delineation data has not been provided in accordance with Section 5.10, the Administrator shall obtain, review and make reasonable use of any data available from Local, State, Federal or other sources.

Section 10.09 DISAPPROVAL OF APPLICATION
Within twenty (20) days of the Administrator's issuance of a written disapproval of permit application or other determination made under this ordinance, the applicant or interested party adversely affected by the determination may file a written notice of appeal with the Ferry County Planning Commission. Failure to file the notice of appeal within twenty (20) days serves to waive the right of appeal. "Interested party" is defined to include any public officer or agency and any person who owns a substantial interest in property directly affected by the determination.

Section 10.10 DENIAL OF VARIANCE OR REASONABLE USE EXCEPTION
Within twenty (20) days of the Administrator's issuance of a written denial of an application for variance or reasonable use exception, the applicant or interested party adversely affected by the determination may file a written notice of appeal with the Ferry County Board of County Commissioners. Failure to file the notice of appeal within twenty (20) days serves to waive the right of appeal. "Interested party" is defined to include any public officer or agency and any person who owns a substantial interest in property directly affected by the determination.

Section 10.11 DISAPPROVAL OF APPLICATION APPEAL PROCEDURE
With receipt of the notice of appeal the Ferry County Planning Commission shall request, and the Administrator shall provide, a copy of his/her complete file to the Planning Commission. The Planning Commission shall then set a date and time for a public hearing on the appeal. The Planning Commission shall give all parties, including the

Appellant and Administrator; thirty (30) days advance notice of the date, time and place of the public hearing on the appeal. The hearing shall be recorded.

The Planning Commission shall consider all information submitted by the Administrator, Appellant and Planning Commission, together with any other evidence it deems relevant. The Planning Commission must consider the same requirements as stated in this ordinance for the individual permit. It shall then affirm or reverse the Administrator's decision, or remand the matter for further investigation or action by the Administrator. The Ferry County Planning Commission may attach such conditions, as it deems consistent with the purpose of this ordinance to the granting of variances or approval of permits.

Section 10.12 VARIANCE OR REASONABLE USE APPEAL PROCEDURE
With receipt of the notice of appeal the Ferry County Board of County Commissioners shall request, and the Planning Administrator shall provide, a copy of his/her complete file to the Board. The Board of County Commissioners shall then set a date and time for a public hearing on the appeal. The Board of County Commissioners shall give all parties, including the Appellant, Administrator, and the Planning Commission; thirty (30) days advance notice of the date, time and place of the public hearing on the appeal. The hearing shall be recorded.

The Board of County Commissioners shall consider all information submitted by the Administrator and Appellant, together with any other evidence it deems relevant. They must consider the same variance requirements as stated in Section 10.01. It shall then affirm or reverse the Planning Commission's decision, or remand the matter for further investigation or action by the administrator or the Planning Commission. The Ferry County Board of Commissioners may attach such conditions, as it deems consistent with the purpose of this ordinance to the granting of variances or approval of permits.

Section 10.13 VIOLATION
Any person who commences a regulated activity in a critical area or critical area buffer without a valid permit, or any person who commences a regulated activity beyond the stated conditions of the person's permit or variance, shall be in violation of this ordinance.

Section 10.14 CIVIL REMEDY
This ordinance may be enforced by civil action for injunctive, declaratory or other such relief as necessary to insure compliance. The court may impose a civil penalty of up to $5,000.00.

Section 10.15 CRIMINAL PENALTY
Any person convicted of violating this ordinance shall be guilty of a misdemeanor.

Section 10.16 COLVILLE TRIBE
Ferry County has regulatory authority over Fee lands within the Colville Reservation as provided in Brendale v. Yakima Indian Reservation (492 U.S. 408 [1989]).

Section 10.17 SEVERABILITY
If any provision of this ordinance or its application to any person or circumstance is held invalid, the remainder of this ordinance or the application of the provisions to other persons or circumstances is not affected.

Section 10.18 SUPPORTING DOCUMENTS
References to regulations, maps, or documents from agencies other than Ferry County apply to this ordinance only if dated prior to adoption of this ordinance.

APPENDIX "A"

NOMINATION PROCESS FOR "HABITATS AND SPECIES OF LOCAL IMPORTANCE

These habitats and species may be identified or nominated by state or local agencies, individuals, or organizations. The petition shall be accompanied by the appropriate fees in accordance with the fee schedule established by the Board of County Commissioners. The Petition to nominate an area or a species to this category shall contain all of the following:

A completed environmental checklist which includes the following:

1) Demonstrate a need for special consideration based on declining population, sensitivity to habitat manipulation, commercial or game value, or other special value, such as public appeal;
2) Propose specific and relevant protection regulations that meet the goals of this ordinance;
3) Propose relevant, feasible management strategies considered effective and within the scope to this ordinance;
4) Provide species habitat location(s) on a map that works in concert with other County maps;

Items 1 through 4 shall be prepared by an agency or qualified professional. Supplemental information may be prepared by the petitioners(s).

And supplemental information showing the following:

1) Documentation of reasonable public notice methods that the petitioner(s) have used to inform the affected area. Examples of reasonable methods are:
   a) Posting the property.
   b) Publishing a paid advertisement in a newspaper or newsletter of circulation in the general area of the proposal, where interested persons may review information on the proposal. Information in the notice must contain a description of the proposal, general location of the affected area and where comments on the proposal may be sent.
   c) Notification to public or private groups in the affected area which may have an interest in the petition.
   d) News media articles that have been published concerning the proposal.
   e) Notices placed at public buildings or bulletin boards in the affected area.
   f) Mailing of informational flyers to property owners within the affected area.
2) Contain the signatures and addresses of all petitioners.

The Administrator will review submitted proposals for completeness. Complete proposals will be reviewed under Ferry County Ordinance No. 94-05 (the SEPA review).

Copies will be forwarded to WDFW, DOE, DNR or other State and local agencies of expertise for comments and recommendations regarding accuracy of data, stated need and the effectiveness of proposed management and protection strategies.

Upon completion of the SEPA review, the Ferry County Board of County Commissioners shall hold a public hearing for proposals found to be complete, accurate, feasible, potentially effective and within the scope of this ordinance. The petitioner(s) shall be responsible for advertising costs of all public notices.

Approved nominations will become designated "Habitats and Species of Local Importance", and will be subject to the provisions of this ordinance. Habitats and species nominated and afforded protection under the category "Habitats and Species of Local Importance" shall then be subject to review under this ordinance.

APPENDIX "B"

HABITAT MANAGEMENT AND MITIGATION PLAN

The Habitat Management and Mitigation Plan shall be approved or denied in writing by the Administrator within 60 days of receipt of application and shall contain but not be limited to the following information:

1) A map (s) prepared at an easily readable scale, showing:
   a) The location of the proposed site;
   b) The relationship of the site to surrounding topographic and built features;
   c) The nature and density of the proposed use or activity;
   d) Proposed building locations and arrangements;
   e) A legend which includes:
      i) A complete and accurate legal description. The description shall include the total acreage of the parcel;
      ii) Title, scale, north arrow; and
      iii) Date
   f) Existing structures, improvements and landscape features including the name and location of all water bodies; and
   g) Location of habitat for priority species.
2) A report which contains:
   a) A description of the nature, density and intensity of the proposed use or activity in sufficient detail to allow analysis of such a land use change upon identified critical wildlife habitat including the proposed amounts of excavation, grading, and vegetation disturbance;
   b) An analysis of the effect of the proposed use or activity upon fish and wildlife species and their habitats; and
   c) A plan which explains how the applicant will avoid, minimize or mitigate adverse impacts to fish and/or wildlife habitats created by the proposed use or activity. Mitigation measures within the plan may include, but are not limited to:
      i) Protection of critically important plants and trees;
      ii) Limitation of human access to habitat area;
      iii) Seasonal restriction of construction activities;
      iv) Clustering of development and establishment of habitat protection areas;
      v) Signs marking habitats or habitat protection areas;
      vi) Title notice or plat dedication warning statements;
      vii) Conservation easements;
      viii) Protect native plant species which serve as food and shelter from climatic extremes and predators and structure and cover for reproduction and rearing of young for critical wildlife; and
      ix) In the revegetation or landscaping of disturbed or developed areas and in any enhancement of habitat or buffer area the use of native species or species as recommended by local sources, such as the Ferry Conservation District, the

x) Natural Resource Conservation Service, the Washington State University Ferry County Cooperative Extension Office, or by the Washington State Department of Fish and Wildlife shall be used.

Review comments by a habitat biologist from the Washington State Department of Fish and Wildlife will be considered.

The Washington State Department of Fish and Wildlife shall respond in writing to the Administrator with review comments or a request for additional time for review within 14 days from the date of mailing of a draft Habitat Management and Mitigation Plan. The Administrator may grant an additional 7 days for an agency to provide review comments. If review comments or a request for additional time to provide review comments is not received in the prescribed time frame, the State review comments on the Habitat Management and Mitigation Plan shall not be considered.

The Administrator shall have the authority to approve or deny Habitat Management and Mitigation Plans or require additional information based upon criteria within this attachment and review comments from relevant agencies. The Administrator shall base his/her decision on written findings of fact and conclusions. The Administrator's written decision shall be forwarded to the Washington State Department of Fish and Wildlife, other agencies or tribal entities which provided comments to the Department and to any other agency/individual(s) who request a copy of the written decision.

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

Any person aggrieved by the Administrator's decision can file an appeal subject to the provisions as stated in Section 10.00 of this ordinance.

The following Appendixes C-1, C-2 and C-3 provide an overview of best available science and other considerations, such as demographics, in deriving at buffer recommendations. These appendixes should not be considered as regulations or a regulatory part of this ordinance.

APPENDIX "C1"

WETLANDS BEST AVAILABLE SCIENCE

Ferry County initially adopted buffer requirements for wetlands in the County's 1993 Interim Critical Areas Ordinance. Buffer widths were based on studies available at that time, which pre-dated the GMA mandate to include best available science (BAS).

An extensive two-volume study relevant to the science and management of wetlands in Washington State was published in 2005 and is recommended by Ecology as the most current and most comprehensive scientific guidance for protecting wetlands. The citations are:

"Wetlands in Washington State, Volume 1: A Synthesis of the Science", Sheldon, Hruby, et al, March 2005, Ecology Publication # 05-06-006 (Ref. 1).

"Wetlands in Washington State, Volume 2: Guidance for Protecting and Managing Wetlands", Sheldon, Hruby, et al, April 2005, Ecology Publication # 05-06-008 (Ref. 2).

Based on the guidance of these two documents, Ferry County has adopted Ecology's three-dimensional system of establishing buffer widths, considering three factors:

- Wetland Category
- Intensity of proposed land use
- Wildlife habitat score

An important feature of the three-dimensional approach is that it facilitates assigning buffer widths tailored, in part, to a particular wetland's characteristics and situation – an improvement over previous "one size fits all" methods which accommodated only a single standard buffer width for each wetland category.

Ecology's recommended buffer widths, as adopted in this ordinance, are shown by the following table, summarized from Ref. 2, Wetlands in Washington State, Volume 2, Appendix 8D, Tables 8D-4, 8D-5, 8D-6 and 8D-7.

	Wetland Buffer (feet) Based on Score for Habitat		
Wetland Category / Land-use Intensity	**Low Habitat**	**Moderate Habitat**	**High Habitat**

Category I			
Low intensity	50	75	100
Moderate intensity	75	110	150
High intensity	100	150	200
Category II			
Low intensity	50	75	100
Moderate intensity	75	110	150
High intensity	100	150	200
Category III			
Low intensity	40	75	N/A
Moderate intensity	60	110	N/A
High intensity	80	150	N/A
Category IV			
Low intensity	25	N/A	N/A
Moderate intensity	40	N/A	N/A
High intensity	50	N/A	N/A

N/A indicates not applicable

Wetland categories and the score for wildlife habitat are calculated by the method presented in Ref. 3, *"Washington State Wetlands Rating System for Eastern Washington – Revised"*, Hruby, Thomas, August 2004, Ecology Publication # 04-06-15.

Wetland Categories:

Category I = wetlands scoring 70 points or more for all functions or having the "special characteristics" identified in the rating system.

Category II = wetlands scoring 51 – 69 points for all functions or having the "special characteristics" identified in the rating system.

Category III = wetlands scoring 30 – 50 points for all functions and isolated vernal pools.

Category IV = wetlands scoring less than 30 points for all functions.

Wildlife habitat scores:

Low wildlife habitat	=	less than 20 points for habitat function
Moderate wildlife habitat	=	20 – 28 points for habitat function
High wildlife habitat	=	29 – 36 points for habitat function

Notes regarding buffer widths for special wetlands:

Exceptional buffer widths are recommended for several types of wetlands which are categorized based on special conditions. These include Natural Heritage Wetlands, bogs, vernal pools, and alkali wetlands. These special types of wetlands are either non-existent or rare in Ferry County. Should the existence of one of these special wetlands be determined during the wetland delineation process, the exceptional buffer requirements, if justified, could be accommodated through this ordinance's provision for increasing buffer width on a case-by-case basis.

Natural Heritage Wetlands

"Natural Heritage" wetlands are those that have been identified by scientists of the Washington State Natural Heritage Program managed by the DNR. These are high-quality, relatively undisturbed wetlands and wetlands that support state threatened, endangered, or sensitive plant species (Ref. 1, page 5-20).

For Natural Heritage Wetlands, Ecology recommends buffer widths of 125, 190, and 250 feet respectively, by land-use intensity, for any habitat score (Ref. 2, Table 8D-7).

The DNR posts an internet-accessible data base (list) of land sections in Washington State which include features of interest to the Natural Heritage program. For this BAS review, Ferry County consulted the DNR list and determined that there are a number of citations of section-township-range which lie within the County's boundaries. The coordinator of the Natural Heritage program was contacted, and replied that the listings include wetlands which are of interest to Ecology because of the observation of particular plant species, but there is only one wetland located within Ferry County which is actually considered to be in the Natural Heritage Wetlands program, and that wetland is located on the Colville Tribal Reservation - (Ref 4) - personal correspondence between the Ferry County Planning Department and Ms. Sandy Swope Moody, Environmental and Grants Coordinator, Washington Natural Heritage Program of the Department of Natural Resources. According to Ms. Moody: "We have only one where the high quality wetland ecosystem is the feature on record with our program."

Bogs

Bogs are peatlands (wetlands with organic soils) that have been classified according to their shape, chemistry, plant species and vegetation structure. There has not been extensive research on bogs in Washington State. Researchers in Northern Europe and Canada have found that restoring bogs is difficult. A 1958 geological study identified 44 peatland areas in Northeast Washington, including fens and bogs. Thus bogs may be found in Ferry County (Ref. 1; page 5-17 thru 5-19).

For bogs, Ecology recommends buffer widths of 125, 190, and 250 feet respectively, by land-use intensity, for any habitat score (Ref. 2, Table 8D-7.)

Vernal Pools

Vernal pools occur in Eastern Washington primarily in scablands. The pools are formed when small depressions in bedrock or in shallow soils fill with snowmelt or spring rains. The pools retain water until the late spring when they dry out completely. They hold water long enough to allow some strictly aquatic organisms to flourish but not long enough to develop a typical wetland environment (Ref. 1, page 5-20).

For vernal pools, it is recommended that the local jurisdiction identify the most important group of pools and assign buffer widths 100, 150, 200 ft. Other vernal pools may use 40, 60, 80 ft. buffers (Ref. 2, Table 8D-7). Ferry County inquired of the Department of Ecology and was advised that an occurrence of a vernal pool would be unlikely in the County (Ref. 5).

Alkali Wetlands

Alkali wetlands are characterized by the occurrence of non-tidal, shallow saline water. In Eastern Washington, these wetlands contain surface water with specific conductance (that is, a measure of salinity). They have unique plants and animals that are not found anywhere else in Eastern Washington (Ref. 1, page 5-19).

For alkali wetlands the buffer recommendation is 100, 150, 200 ft., by land-use intensity, for any habitat score (Ref. 2, Table 8D-7). Ferry County inquired of Ecology and was advised that an occurrence of an alkali wetland would be unlikely in the County (Ref. 5).

Considerations for Modifying Buffer Widths

Ecology recognizes a number of appropriate circumstances in which the standard widths recommended for wetland buffers should be increased, or may be decreased, on a case-by-case basis.

Buffer Averaging

Buffer averaging is a technique through which the buffer is reduced from the standard width at some point with an off-setting width increase at another point such that the total area within the buffer is the same, or greater, as would have been the area with a standard width throughout the buffer.

The widths of buffers may be averaged if this will improve the protection of wetland functions, or if it is the only way to allow for reasonable use of a parcel. Considerations for buffer width averaging are presented in Ref. 2, Appendix 8 pages 12 and 13, and have been incorporated into this ordinance.

Conditions for Increasing the Width of, or Enhancing, the Buffer

The authors of Ref. 2 discuss conditions which may indicate the desirability to either increase a buffer beyond the standard width or to implement enhancement measures. Conditions which could trigger such an enhancement include a buffer not vegetated with plants appropriate for the region, a buffer with a steep slope, or a buffer used by a species sensitive to disturbance (Ref. 2, Appendix 8, page 12). This ordinance recognizes the potential need to increase or enhance a buffer on a case-by-case basis.

Conditions for a Possible Reduction in Buffer Width

The authors of Ref. 2 suggest that buffers adjacent to a proposed high-intensity land use could be reduced to the standard buffer required for a moderate-intensity use, if the development were to incorporate mitigating measures which would lower the actual intensity of the potential impacts. Such measures may include, but are not limited to, directing lights away from the wetland, locating activity that generates noise away from the wetland, limiting toxic runoff, using appropriate management techniques for runoff from impermeable surfaces or lawns, privacy fencing or dense vegetation to delineate the buffer edge (Ref. 2, Table 8D-8).

The authors of Ref. 2 recognize that it may be appropriate to reduce the buffer width where an existing road or a legal existing structure lies within the buffer (Ref. 2. Appendix 8, page 11).

The authors of Ref. 2 suggest that a local government consider a voluntary program termed "An Individual Rural Stewardship Program" (Ref. 2, Appendix 8, page 11). Such a program is described as a collaborative effort between rural property owners and the local government to tailor a management plan specific to a rural parcel of land. The goal of an individual rural stewardship program is better management of the wetlands than would be achieved through strict application of regulations. In exchange, the landowner gains flexibility. Such a program would include provisions for restoration, monitoring, and long-term maintenance.

Ferry County does not currently offer this option, but this review of BAS included reviewing the specifications of a Rural Stewardship Program in King County (Ref. 6 and Ref. 7).

References:

1. "*Wetlands in Washington State, Volume 1: A Synthesis of the Science*", Sheldon, Hruby, et al, March 2005, Ecology Publication # 05-06-006

2. "*Wetlands in Washington State, Volume 2: Guidance for Protecting and Managing Wetlands*", Sheldon, Hruby, et al, April 2005, Ecology Publication # 05-06-008.

3. *"Washington State Wetlands Rating System for Eastern Washington – Revised"*, Hruby, Thomas, August 2004, Ecology Publication # 04-06-15.

4. Personal correspondence between the Ferry County Planning Department and Ms. Sandy Swope Moody, Environmental and Grants Coordinator, Washington Natural Heritage Program of the Department of Natural Resources; November 27, 2007.

5. Personal communication, Ferry County Planning Department with Jeremy Sikes, Department of Ecology, Spokane office; November 20, 2007

6. King County Code, Section 21A.24.055, Rural stewardship plans; March, 2005.

7. King County Public Rules and Regulations; Title: Rural Stewardship Plans; Document Code No.: PUT 8-20 (PR); Issuing Agency: Department of Natural Resources and Department of Development and Environmental Services; Effective Date: February 24, 2005.

APPENDIX "C2"

BEST AVAILABLE SCIENCE for RIVERS, STREAMS and LAKES

Ferry County recognizes the GMA requirement to include best available science in developing regulations to protect critical areas. Sources of best available science are consistent in recommending buffers adjacent to water areas. This is clear from Ferry County's review of scientific literature and applicable cases from growth management hearings boards and the Washington courts. (Ref. 1) However, other than the general recognition of a requirement for buffers of some width, there is not agreement as to buffer width or other specific application of "best available science".

Buffers perform many functions that are essential to fish survival and productivity and are critical in supporting suitable in-stream conditions. Vegetation in buffers shade streams maintaining cool temperatures needed by most fish. Plant roots stabilize stream banks and control erosion and sedimentation, and vegetation creates overhanging cover for fish. Buffers contribute leaves, twigs and insects to streams, thereby providing basic food and nutrients that support fish and aquatic wildlife. Large trees that fall into streams create pools, riffles, backwater, small dams and off-channel habitat that are necessary to fish for cover, spawning, rearing and protection from predators. Pools help maintain riffles where gravel essential for spawning accumulates. Buffer vegetation, litter layers and soils filter incoming sediments and pollutants thereby assisting in the maintenance of high water quality needed for healthy fish populations. Buffers moderate stream volumes by reducing peak flows during flooding periods and by storing and slowly releasing water into streams during low flows.

BEST AVAILABLE SCIENCE RESEARCH

In developing regulations to protect rivers, streams and lakes Ferry County began its search for best available science by consulting the publication "Citations of Best Available Science for Designating and Protecting Critical Areas", published in March, 2002, by Washington State Office of Community, Trade and Economic Development (CTED) (Ref. 2). It is notable that this CTED document does not include any citation for protecting the values and functions of "waters of the state". Citations are included for protecting riparian habitat under the heading of "Endangered, Threatened and Sensitive Species and Habitats".

Based upon guidance of state agency personnel, Ferry County understands that the publication generally considered to be the preferred source of science in protecting critical area waters types is:

> *"Management Recommendations for Washington's Priority Habitats: Riparian"*, by Knutson and Naef, December 1997, Washington Department of Fish and Wildlife. (Document reference abbreviated in the following summary as "Knutson/Naef" for convenience.) (Ref. 3)

While incorporating most of the recommendations, it has been necessary to keep in mind that Knutson/Naef make it clear that their recommendations go beyond the mandate to protect the values and functions of the waters and that they include recommendation for very wide buffers which may be desirable for terrestrial wildlife but which fall outside of the requirement to protect the designated critical areas (rivers, streams and lakes).

See Knutson/Naef, page 85, under the heading "Recommendation: Protect Riparian Habitat Areas –"

"...Recommended RHA widths are designed first to retain riparian habitat functions necessary to maintain in stream habitat for fish and aquatic wildlife. These functions include control of stream temperature, provision of large woody debris and other organic material to the stream system, regulation of stream flow, filtration of sediments and pollutants, and erosion control.

"Secondly, RHAs are designed to provide sufficient habitat for terrestrial species, including sufficient travel corridor widths, sufficient buffers to adjacent disturbance during critical times (e.g., breeding), and sufficient area to provide cover and foraging habitat."

The authors do not make a consistent distinction between their two general purposes for "riparian buffers". Thus it is necessary to evaluate each of the Knutson/Naef recommendations and to consider other sources of science as well.

Knutson/Naef also make it clear that their recommendations are statewide in scope with no provision for regional or local conditions and they acknowledge that their priorities and perspective are those of the Department of Fish and Wildlife and do not consider any other local goals or possibly conflicting priorities.

Two tables and several appendices of the Knutson / Naef document demonstrate the wide variation in recommendations as to appropriate buffer widths.

Appendix B lists buffer widths from 13 feet (for nutrient reduction) to half a mile for logging during the breeding season of sand hill cranes. The authors have done extensive work in grouping and averaging the recommendations.

Knutson / Naef Table 4, page 89, presents average buffer width recommendations by function:

Riparian habitat function	Range of reported widths	Average (feet)
Temperature control	35 – 151	90
Large woody debris	100 – 200	147

Sediment filtration	26 – 300	138
Pollution filtration	13 – 600	78
Erosion control	100 – 125	112
Microclimate maintenance	200 – 525	412
Wildlife habitat	25 – 984	287

The first five functions pertain to the protection of in stream habitat and aquatic wildlife, as defined by Knutson / Naef, whereas the last two functions address the requirements of terrestrial wildlife which generate much wider buffer widths.

Aquatic Wildlife Requirements, Knutson / Naef Appendix C

Studies listed in Appendix C show that a buffer width of 100 feet is found by many scientists to be adequate to protect habitat of fish and other aquatic wildlife:

Aquatic Insects	100 ft	Erman et al, 1977
Benthic Invertebrates (food supply)	100 ft	Erman et al, 1977
Macro invertebrate density	100 ft	Newbold et al, 1980
Macro invertebrate diversity	100 ft	Gregory et al, 1987
Riparian invertebrates	100 ft	Erman et al, 1977 Roby et al, 1977 Newbold et al, 1980
Brook trout	100 ft	Raleigh, 1982
Cutthroat trout	100 ft	Hickman & Raleigh, 1982
Rainbow trout	100 ft	Raleigh et al, 1984

Knutson / Naef Table 2, pages 84 and 85, presents examples of riparian habitat buffer recommendations found in the literature, including:

Johnson and Ryba	Recommends 50 – 100 ft buffer to protect most stream functions

Ecosystem Standards Advisory Committee (1994)	Recommends 100 ft buffer for water types 1 to 4 and 50 ft buffer for water type 5 for state-owned agricultural and grazing land
Washington State Forest Practices Board (1992)	Recommended Riparian Management Zones in Eastern Washington 30 to 50 ft for partial harvest units Note that these recommendations have been updated
Cederholm (1994)	Recommendations reported in "A suggested landscape approach to salmon and wildlife habitat protection in western Washington riparian ecosystems". Recommends buffer widths by water type:

Types 1 and 2	250 ft
Type 3 (5 to 20 ft stream width)	200 ft
Type 3 (less than 5 ft stream width)	150 ft
Types 4 & 5 (low mass wasting)	150 ft
Types 4 & 5 (high mass wasting)	225 ft

Ecology (1985)	Recommends 200 ft buffer on all streams to protect riparian ecosystems

From the array of buffer recommendations cataloged in this table, Knutson / Naef adopt the Cederholm recommendations: "WDFW found that the riparian habitat buffer recommendations presented by Cederholm most closely agreed with WDFW's synthesis of the literature."

Observation: Knutson / Naef do not discuss the process by which they moved from a review of hundreds of studies, to their unqualified selection of Cederholm as the sole basis for the WDFW recommendation. They do not provide a basis for duplicating their decision process nor an explanation of the high width recommendations which generally exceed the recommended widths from the reviewed literature.

Additional Science reviewed by Ferry County

In addition to Knutson/Naef, Ferry County reviewed several other statewide and local studies. Included in this review was a document which reported the results of a managed experiment in the effectiveness of various buffer treatments:

> O'Connell, Margaret A; Hallet, James G; West, Stephen D; et al; "*Effectiveness of Riparian Management Zones in Providing Habitat for Wildlife*"; Final Report, Timber, Fish and Wild-life; May 2000. (Ref.4)

The O'Connell experiment was an important contribution to the findings of the "Forest and Fish" project, which resulted in the current Forest Practice Regulations of the Washington Department of Natural Resources, as documented for Eastern Washington in WAC 222-30-022.

There were several findings which surprised the study's authors, including the finding that there was less difference between plant and wildlife communities in riparian zones and in uplands, than they had expected to find, and there was less disruption to species richness, diversity and abundance due to activities within the riparian zones, than they had expected to find.

In their conclusions, the O'Connell team pointed out the error of attempting to use studies from western Washington to draw conclusions for eastern Washington, and pointed out that the width of streamside buffers might not need to be so wide if managed appropriately for wildlife use and particularly if connections existed to upland areas. These findings are significant to Ferry County, as the nature of the County's landscape is such that the great majority of buffer areas are connected to upland areas, even after typical rural development takes place.

Wendell Gilliam, a professor of soil science at North Carolina State University, along with Deanna Osmond, a soil science specialist and assistant professor at North Carolina State University, have been involved with research on buffers for more than two decades. Professor Gilliam is recognized as an international expert on conservation buffers. The point of view of these two professors concerning buffer widths is "There is no question that wide buffers are likely to be more effective than narrow buffers. Diminishing returns, however, in pollutant removal per added foot of buffer width are quickly reached. There is no one ideal buffer width for all landscape situations...It would be better to have 50 or 100 foot buffer widths along a longer stream reach than to have the wider buffers over a shorter distance" (Ref. 5)

In the National Council for Air and Stream Improvement Technical Bulletin #799 – "Riparian Vegetation Effectiveness", Castell & Johnson (2000), (Ref. 6), state that "For five of the six functions considered, the effectiveness of riparian buffers increases with buffer width. Most of the potential contributions of the riparian vegetation to these functions are realized within the first 5 to 25 m from the stream bank. Buffer widths in this range typically provide at least 50 percent of potential effectiveness, and often 75 percent effectiveness or greater. Disproportionately wider buffers are needed to achieve greater effectiveness (i.e., the marginal benefit of making buffers wider usually declines rapidly as buffer widths increase beyond 5 to 25m).

Another source of BAS is the study titled "Kettle Tri-Watershed Water Quality Study" (Ref. 7), which provides a truly local and current perspective of riparian area conditions in a scientifically designed study. The objective of the study was to determine what it would take to remove three Ferry County streams from the "303D" list of the U.S. Environmental Protection Agency. This is a list of streams declared to be impaired as to water quality under the Federal Clean Water Act (Ref. 8) and the Washington State surface water quality standards (Ref. 9).

As part of the Kettle Tri-Watershed study, conducted by the Ferry County Conservation District, the team evaluated the riparian areas of three streams for "Properly Functioning

Conditions" (PFC). PFC is a scientifically recognized classification system for determining the "health" of a riparian area. The local study found that the vast majority of stream reaches were operating in properly functioning condition. Of the 22 stream reaches only 3 were found to be "non-functioning" and in each of these the primary cause of non-functionality was natural disturbance – the 1998 flood and the recent Copper Butte fire. The significance of this finding is that it validates the fact that traditional rural and agricultural development patterns of Ferry County have not been a cause of degradation as has been the case throughout many areas of the State. In those stream reaches where landowner practices were felt to contribute to non-functionality or "at risk" status of the riparian area, the Ferry Conservation District is currently working voluntarily and cooperatively with the landowners to develop and implement Best Management Practices. There is a tradition of land stewardship, which is demonstrated continually through cooperative projects with agencies such as the Ferry Conservation District, the Washington State University Cooperative Extension Service, and the U.S. Department of Agriculture and Natural Resource Conservation Service.

The Washington State Department of Natural Resources (DNR) regulates forest practices throughout the state and has worked extensively with industry, research organizations, and other state agencies in evaluating best available science relating Riparian Management Zones (RMZ's). Because much of the Ferry County land base is within or adjacent to forested areas, particular attention was paid to the DNR's experience with the relevant science.

The Eastern Washington Forest Practice Regulations (WAC 222-30-022) prescribe a Riparian Management Zone (RMZ) for any forest practices bordering on water types:

	Core Zone	Inner Zone	Outer Zone	Total RMZ
For fish-bearing water types Less or equal to 15 ft wide	30'	45'	0' to 55'	75' to 130'
For fish-bearing water types Greater than 15 ft wide	30'	70'	0' to 30'	100' to 130'

Variation in "outer zone" is a function of "site class", which is a system to classify the age, density and quality of the timber on a site.

	Equipment Limitation Zone	Total RMZ
Non fish-bearing Perennial waters	30'	50'
Non fish-bearing Intermittent waters	30'	30'

For all water types, there are some RMZ reductions allowed for parcels 20 acres or less, or for forest land owners with less than 80 acres in single ownership.

Comparison of Buffer Width Recommendations Fish bearing / Non-fish bearing

Recommendation Source:	Types 1, 2, & 3 waters	Types 4 & 5 waters
Biologist Don McKnight Recommendation based on Ferry County local conditions (Ref. 10)	100 ft.	50 ft.
Washington State Forest Practice Riparian Management Zone (Core plus inner zone)	--- 100 ft. for streams > 15 ft. wide --- --- 75 ft. for streams <= 15 ft. wide --- 50 ft. for Type 4 and 30 ft. equipment limitation for Type 5	
Gilliam & Osmond (2003)	--- 50 ft to 100 ft ---- (Not separated by fish or non-fish bearing)	
KNUTSON/NAEF*	250 ft for Types 1 & 2 150 – 200 ft for Type 3	150 – 225 ft.

*The study does not provide a basis for duplicating their decision process nor an explanation of the high width recommendations, which generally exceed the recommended widths from the reviewed literature.

In exploring the differing views concerning the widths of buffers, the Knutson/Naef document expresses these differences on page 83 as quoted:

"There is agreement in the literature that restricted use of riparian habitat is needed to retain the functions of aquatic and riparian ecosystems. Schaefer and Brown (1992) stated that width is one of the most important variables affecting riparian corridor functions. However, there is less agreement on the specific width needed to protect riparian and stream habitat (O'Connell et al. 1993). Nor is there agreement on which land use activities might be compatible with fish and wildlife in riparian habitat."

Fixed Buffer Widths vs. Site – by –Site Variable Width

There is general acknowledgement in the literature that a fixed buffer width ("one size fits all") is not an ideal solution, as it does not recognize the site-by-site variability in physical conditions, land uses, and requirements of fish and wildlife communities. It is acknowledged that more effective protection could be afforded to habitat areas if each buffer requirement could be based on site-specific and watershed-level studies.

However, it is recognized that a site-specific approach for each development proposal would impose a major financial burden on both property owners and local government and is therefore not practical at this time.

ADDITIONAL CONSIDERATIONS

Much of the literature regarding fish and wildlife habitat area protection is directed toward counties where river and stream banks are threatened with intense urbanization. Many of the concerns expressed as the basis for recommending extremely wide buffers have to do with the pressures of subdivision or industrial developments in which all or most native vegetation is cleared and converted to impervious surfaces. The Knutson/Naef document, page 67, states:

> *"Modern urban settlement near water and throughout watersheds usually entails large-scale removal of native vegetation and its replacement with buildings, pavement, roads, and manicured plantings, all consisting primarily of impervious surfaces. Unlike the effects of forestry, the loss of natural vegetation and consequences to riparian and stream habitats in urbanized area are usually permanent (Booth 1991)."*

That scenario simply does not apply in Ferry County. Outside of the existing city limits of the City of Republic there is no urban growth area in the County.

Ferry County provides abundant acreage useful for the protection and propagation of fish and wildlife due to the high percentage of the land base, which is national, state or private forest land.

According to the U.S. Census, Ferry County is comprised of 2,204 square miles (1,410,560 acres), (Ref. 11). From the time that Ferry County undertook comprehensive planning in 1995, data sources have been consistent in showing that only 16 % to 18% of the total land base is in private ownership and taxable, and that most of the private land, as well as the public land, are in resource use.

The Washington Resource and Conservation Office (formerly the Interagency Committee for Outdoor Recreation) compiled estimates of public lands, by county, in the "*1999 Public and Tribal Lands Inventory*", (Ref. 12). The inventory includes a Ferry County Profile indicating 481,610 acres in national forest with an additional 80,699 acres controlled by other federal, state and local land management agencies, plus 649,808 acres of tribal lands. For approximately 200,000 of the public acres, the principal use is "outdoor recreation, habitat, or environmental protection" rather than resource production. With no resource harvesting intended, it would be expected that there would be little or no road building or other development on those lands.

Resource production occupies a very high percentage of private lands. In 2007, the Ferry County Assessor's Office includes 258,500 acres on the tax rolls. Seventy percent of the land is in preferential-tax status as Designated Forestland, Current-Use Timber, Current-Use Farm and Agriculture, and Open Space. These types of land uses typically provide habitat for fish and wildlife. The remaining 78,715 acres, fully-taxable land which includes the County's private homes and businesses, represents only five-and-a-half percent of the total county land base.

Due to data-collection techniques, the Public and Tribal Lands Inventory does not provide an exact match in acreage totals compared to the U.S. Census and the Assessor's data. However, there is total agreement on the message: the vast majority of the Ferry County land base is undeveloped and dedicated to resource uses including recreation and habitat protection.

A theme running throughout the scientific literature is a fear that wildlife habitat area will become fragmented by development and that wildlife will be limited to existing in a finite buffer strip cut off from upland areas. With this view it is perhaps understandable that the Knutson/Naef recommendations would seek to make the buffer strip as wide as possible in order to provide some mobility to the inhabitants.

This isolated buffer strip scenario does not apply in Ferry County where typically there is ample connectivity between upland and buffer areas. For the vast majority of length of buffer areas there is no break or "edge" between the buffer area and the upland. The inhabitants of buffer and upland communities have ample opportunity for mobility.

One of the recommendations deemed most important in the Knutson/Naef document is that land use planning should seek to limit impervious surface to less than 10% of the watershed. In Ferry County it would be difficult to envision a watershed, which might develop with even a fraction of 1% as impervious surface. Knutson/Naef recommendations are general and statewide, and do not directly apply to conditions in Ferry County. The recommendations of Knutson/Naef are based solely on requirements of fish and wildlife. Ferry County must balance these recommendations with other priority goals, including economic well-being of the County and the need to support and encourage continuation of the resource-industry economy, specifically agriculture, timber and mining.

Although the GMA acknowledges that counties need to consider human and economic factors as well as fish and wildlife habitat conservation, there is generally felt to be an imbalance in agency and regulatory perspective favoring habitat conservation objectives. The Knutson/Naef document is candid in stating its perspective, on page 2:

"In summary, management recommendations for Washington's priority habitat and species . . .

Are:	*Are not:*
Guidelines	*Regulations*
Generalized	*Site specific*
Updated with new information	*Static*
Based on fish and wildlife needs	*Based on other land use objectives*
To be used for all occurrences	*To be used only for mapped occurrences"*

In recognition of the depressed local economy, Ferry County must accord economic issues a greater urgency than might be required in more prosperous urbanized counties of the State. When implementing any land use regulation, Ferry County must consider the

impact on the economy – both the traditional resource based economy and the potential for attracting replacement industries, as mandated by GMA by RCW 36.70A.011 and RCW 36.70A.020(5). The Knutson/Naef recommendations fail to include consideration of economic or human factors and as such need to be carefully weighed against other Ferry County land use objectives.

The State Legislature accorded a recognition of the needs of economically depressed regions of the State in passing House Bill 2697 – "An Act relating to incorporating effective economic development planning in GMA" (Ref. 13). Jurisdictions, in their planning, are directed to encourage growth in areas experiencing insufficient economic growth. Jurisdictions are directed to enhance recreational opportunities, to increase access to natural resource lands and water and to develop parks and recreation facilities. The public policy mandate to encourage and facilitate new recreational and other economic development must be balanced with requirements to protect fish and wildlife habitat.

An economic diversification study done for Ferry County in 1994 found that resource industries (timber, mining and agriculture) accounted for approximately half of the earnings of Ferry County workers (Ref. 14). Most of the remainder of the earnings was from employment in government services and retail – jobs that largely support the primary industries. Of particular note was the difference in typical wage levels between manufacturing jobs and retail jobs – with a manufacturing worker earning more than three times as much per hour as a retail worker.

Between 2000 and 2005, with the loss of a major saw mill, Ferry County lost more than one-fourth of it's manufacturing job base (Ref . 15).

The tenuous status of the Ferry County economy is presented dramatically by statistics prepared by the Washington State Office of Financial Management (OFM). Annually the OFM compares the median personal; income by county (Ref. 16). In 1989 the typical Ferry County citizen was positioned precisely in the economic center of the State: Ferry County was the median county; personal income in Ferry was higher than that in 19 counties and lower than in 19 counties. By 2005, Ferry County had declined to last place – number 39 out of the 39 counties.

This should make it clear that the economic survival of Ferry County depends on retaining as much as possible the resource industries and attracting replacement industries with similar wage scales. Ferry County must carefully weight any additional restrictions on these vital sectors of the economy when adopting new regulations such as the critical area ordinance.

The Board of County Commissioners also finds that it is imperative to avoid further burdening Ferry County's agricultural operations with additional land use restrictions and that to do so would thwart the intent of the goal of discouraging conversion from agriculture to development. The exemption of agricultural activities does not imply that

Ferry County farmers and ranchers are not mindful of the benefits of buffer areas, nor does it imply that the County does not support the voluntary implementation of Best Management Practices.

Conclusion

Ferry County will almost certainly face pressures in the future for development, which differs from the traditional rural development pattern. For this reason, it is important that the Critical Area Ordinance be put in place to assure that future development does not degrade the currently healthy buffers of the County's streams.

After considering the above best available science, economic factors, minimal private land base, extremely low population density, current land uses, legislative intent and GMA regulations and State Supreme Court decisions, the Board of County Commissioners finds that the standard buffer widths, plus the additional regulatory measures, protect critical areas.

Resources Cited in this Ordinance:

1. Washington State Supreme Court, Docket #76339-9, *Swinomish Indian Tribal Community v. Western Washington Growth Management Hearings Board*, 09/13/2007, pages 12-15.

2. Washington State Office of Community Trade and Economic Development: Citations of Recommended Best Available Science for Designating and Protecting Critical Areas, March 2002.

3. Washington State Department of Fish and Wildlife: Management Recommendations for Washington's Priority Habitats – Riparian; Edited by K. Lea Knutson and Virginia L. Naef, December 1997.

4. O'Connell, Margaret A., et al.: "Effectiveness of Riparian Management Zones in Providing Habitat for Wildlife", Timber, Fish and Wild-life Final Report, May 2000.

5. "Buffer Notes", October 2003, editorial by Professor's Wendell Gilliam and Deanna Osmond of North Carolina State University.

6. Castelle and Johnson, Technical Bulletin #799: "Riparian Vegetation Effectiveness", published by the National Council for Air and Stream Improvement, (2000).

7. Kettle Tri-Watershed Water Quality Project: Ferry County Conservation District, Department of Ecology Grant No. G0000145, November 2001.

8. Federal Clean Water Act of 1977, 33 USC 1251.

9. WAC 173.201A, Water Quality Standards for Surface Waters of the State of Washington.

10. Dr. Donald E. McKnight, letters reviewing riparian protection and possible ordinance input.

11. U. S. Census Bureau: Ferry County Washington, 2000.

12. Washington Interagency Committee for Outdoor Recreation, 1999 Public and Tribal Lands Inventory, Ferry County Profile.

13. Substitute House Bill 2697, Laws of 2002, AN ACT Relating to incorporating effective Economic development planning into growth management planning; and amending both RCW 36.70A.020 and RCW 36.70A.070.

14. Ferry County Economic Diversification Study, Final Report, Prepared for Ferry County by BST Associates, September 7, 1994.

15. Web Site: Washington State Office of Financial Management (OFM), County and City data for Ferry County, Washington–OFM, www.OFM.wa.gov/localdata/FERR.asp. Link: Washington State Department of Employment Security Workforce Data (October 2000-October 2007), posted to web site as of 11/19/2007.

16. Web Site: OFM – Link: OFM Median Household Income Estimate by County, 1989-2005.

Other Resources Reviewed and Considered:

1. Washington Department of Fish and Wildlife Priority Habitats and Species, Management Recommendations for Washington's Priority Habitats: Riparian, Executive Summary.

2. Washington State Interagency Committee for Outdoor Recreation, Public Lands Inventory, Appendix D, July 3, 2001.

3. Evergreen Freedom Foundation, Olympia Washington, "Living Liberty", October 2007, *Source: U.S. Department of Commerce Bureau of Economic Analysis.*

4. Timber/Fish/Wildlife Original Agreement – Final Report, February 17, 1987.

5. Forest and Fish Report, April 29, 1999.

6. Johnson, Alan W. and Ryba, Diane M., A Literature Review of Recommended Buffer Widths to Maintain Various Functions of Stream Riparian Areas, Prepared for King County Surface Water Management Division, February 1992.

7. Bolton, Susan and Shellberg, Jeff: Ecological Issues in Floodplains and Riparian Corridors, White Paper, University of Washington, Center for Streamside Studies, May 1, 2001.

8. Washington State Conservation Commission: Ecosystem Standards for State-Owned Agricultural and Grazing Land, December 1994, prepared by the Ecosystem Standards Advisory Committee, at the direction of the 1993 Washington State Legislature for Bill 1309.

9. Broderson, J.M.: Sizing Buffer Strips to Maintain Water Quality, M.S. Thesis, University of Washington, 1973.

10. U. S. Census Bureau, Census 2000 Summary File 1 (SF 1), GCT-PH1, Population, Housing Units, Area and Density: 2000.

11. U. S. Census Bureau: State and County QuickFacts, last revised August 31, 2007.

12. Bureau of Economic Analysis, Regional Economic Accounts, Total full-time and part-time employment by NAICS industry, Ferry Washington, 2001 to 2005.

13. O'Connell, M.A., J.G. Hallett and S. D. West: Wildlife use of riparian habitats, a literature review, 1993, Washington Department of Natural Resources, Olympia.

14. Washington State University Forest Stewardship Notes, Volume 10, No. 1, Spring 2001.

15. U.S. Department of the Interior, Bureau of Land Management, Natural Applied Resources Science Center, Riparian Area Management, 1998.

16. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, "Monitoring the Vegetation Resources in Riparian Areas", April 2000.

17. Ferry Conservation District, "The Riparian Handbook – A Landowner's Guide to Riparian Health and Improvement", 2001.

18. Designating and Protecting Critical Areas Under Growth Management Act After *Swinomish Indian Tribal County. V. Western Washington Growth Mgmt. Hearings Bd.,* Brian T. Hodges, Staff Attorney of Pacific Legal Foundation, prepared for the Washington Farm Bureau, November 12-15, 2007, Spokane, Washington.

19. Washington Farm Bureau News, "Farm Bureau Urges Caution by Local Governments", November 2007.

20. Kitsap Peninsula Business Journal, "Property Owners prevail in Supreme Court – GMA does not require mandatory buffers", October 8, 2007.

21. Building Industry Association of Washington, Building Insight: "WA Supreme Court axes GMA mandates", September 2007.

22. Supreme Court of the State of Washington, Docket #77150-2, *Biggers v. City of Bainbridge Island*, October 11, 2007.

23. Supreme Court of the State of Washington, Docket #80396-0, *Futurewise, et al, v. City of Anacortes, et. al,* Scheduled.

24. Supreme Court of the State of Washington, Docket #77995-3, Review Deferred; *Clallam County v. W. Wash. Growth Mgmt. Hearings Bd.*, July 6, 2006.

25. Supreme Court of the State of Washington, Docket #75493-4, *Ferry County v. Concerned Friends of Ferry County,* November 17, 2005.

26. Supreme Court of the State of Washington, Docket #76581-2, *1000 Friends of Washington v. McFarland*, December 21, 20006.

27. Other cases quoted in above list of Supreme Court cases are: *Pilchuck v. Snohomish County, Whidbey Environmental Action Network v. Island County,* and *Honesty in Environmental Analysis and Legislation v. Central Puget Sound Growth Mgmt. Hearings Bd.*

28. Futurewise Comment, January 7, 2008

APPENDIX "C3"

FERRY COUNTY DEMOGRAPHIC ASSESSMENT AND OTHER CONSIDERATIONS

Demographic Assessment

A review of the demographic characteristics of Ferry County provided perspective for consideration of the needs for protection of fish and wildlife in the county. The following "best available data" for area and population data were taken from the U.S. Census Bureau year 2000 census data and Census Bureau projection for the 2005/06 period, the Ferry County Profile of the 1999 Public and Tribal Lands Inventory, and Ferry County Assessors Office. Because of different data bases and time periods, some data differences required adjustments to reconcile the data.

In the following, the current County Assessors data for privately owned lands in Ferry County was substituted for like data from the Ferry County Profile resulting in a positive variance. Lacking any basis for distributing the variance among public and tribal lands, and because more detail was available making up the total of the Public Lands category, the full variance was subtracted from the data available on Tribal Lands. This results in a modestly higher calculated population density in tribal areas, which in any case is very low. It is believed that the margin of error in the reconciliation is within 9%. Considerable additional research could be expended to refine the following, but for this purpose the level of accuracy is sufficient to provide a reasonable picture of site conditions.

Land Data:

Total area: *	1,410,547 land acres, or 2,203.98 square miles	100 %
Tribal lands**+	589,738 acres, or 921.48 square miles	41.81 %
Public lands**++	562,309 acres, or 878.61 square miles	39.86 %
Privately owned lands +++	258,500 acres, or 403.9 square mile	18.33 %

Gross
Privately owned lands =403.9 Sq Mi -5(Urban & RSA)-47.5 Sq Mi$^{\times}$ = 351.4 Sq Mi
Net (in north county) =351.4 X 640 = 224,896 Acres

Population Data:

Total population 2006*	7, 560 (Estimated from U.S. Census Bureau Quick Facts) less:
Tribal population (County)	1,440 (Current Tribal Planning Estimate) leaving:
Other population	6,120 less:
Urban*	954 (City of Republic, WA) and:
Rural Service Areas ++++	3,100 leaving:
Rural	2,066
Home occupancy*	2.49 persons per home

There are about 125 square miles (including about 5 square miles of urban/RSA land) of privately owned land in Ferry County that are fully taxed and not used under reduced tax rates for agriculture or forest land. Of this small amount (5.6%), there are some owners who have chosen not to enroll their land in lower taxed "land use programs" therefore their agriculture and forest lands are included in this percentage. By any reasonable set of assumptions, private development can occur on only a miniscule portion of the county land area.

Population Densities (calculated from above data)

Total County (Average)	3.3 per square mile*
Tribal lands	1.56 per square mile (1,440/921.48)
Rural private lands	5.87 per square mile, (2,066/351.4) 109 acres/person
Number of rural homes	830 (On private property, 2,066/2.49)
Rural home density	2.36 per square mile, (830/351.4 Sq Mi) 271 acres/home

As noted above, there are vast areas of the County (39.9 %) that are unoccupied by humans, an additional area (41.8%) occupied at a rate averaging 1.56 persons/square mile. Of the (18.3 %) land that is privately owned less than five square miles (estimated) would be considered urban, or somewhat developed Rural Service Areas. The balance is rural land with an average of 2.36 homes per square mile or 271 acres/home.

While these figures are averages, they do demonstrate conclusively that the rural home density is so low that there is no barrier to wildlife moving to/from water sources (streams, ponds and wetlands) on private lands nor do the rural home densities (2.36/sq. mile) represent any reasonably significant threat to water side riparian areas even if all were concentrated along streams and around ponds. Areas within 50-100 feet of streams tend to be poor home building sites because of the steepness of many of the ravines and canyons that most Type 3, 4 and 5 streams pass through and/or close proximity of county roads which also tend to follow adjacent to the streams in the canyon/ravine bottoms thus creating defacto buffer on one side (usually the better side) of long stretches of streams.

*U.S. Census Data from 2000 Census
** Ferry County Profile, 1999
***Ferry County Assessor, 12.3.07
+Reduced from Ferry Co. Profile projection of 649,808 acres to reconcile data as noted above
++Includes Federal 521,624 acres, State 38,377 acres and local 2,308 acres
+++Includes about 49,000 acres of privately owned (probably timber) land in the reservation area
++++Includes towns, crossroads commercial and developed shoreline areas defined in Ferry County Development Ordinance #2007-06 as follows: aerial photo count of residences (by Ferry County Planning Dept) totaling 1,245 residences in RSAs X 2.49 = 3,100 persons. Not included were 76 residences in Inchelium, WA and 56 in Keller, both on the Colville Reservation. Accurate data on the number of non-tribal persons living in the Colville Reservation area were not available. A rough estimate indicated that about 800-1,000 persons may live on the reservation. For simplicity, all Tribal persons were assumed to live on the reservation; all non-tribal on the private land north of the reservation which was considered a conservative method making the population density on private lands greater than is actually the case.
×See end notes, page C3-6

++

Other Considerations

In the 2000 U. S. Census, Ferry County had the lowest population and population density of all of the Counties in the State. In considering the facts that the County has:

- 42% of its land mass in tribal lands at 1.6 tribal persons/square mile
- 40% of its land mass in public lands that are uninhabited
- A population density with 2.36 homes/square mile on rural privately owned (18.3%) lands
- Has had only a 3.3% growth in population in the last seven years
- Has experienced serious loss of 120 direct jobs and some families recently by loss of its major sawmill (one small specialty cedar mill remaining)
- Has lost several major businesses, including one of two Republic grocery stores and a major hardware/building materials business
- Has lost railroad service in the west part of the County
- Has experienced a declining farm proprietorship and farm labor staff
- Has a struggling timber harvest industry facing further possible curtailment of logging by proposals to convert large areas of the Colville National Forest in Ferry County to roadless/wilderness areas and other (private) areas of Ferry County timberland to an international wildlife corridor,

and further, after extensive review of the Best Available Science literature, (Appendix C1 and C2) find that:

- Scientific information (BAS) is general, and not area and site specific to Ferry County.
- BAS is premised and focused on protecting against much higher population concentrations (hundreds to thousands per square mile vs. 3.3 persons/square mile in Ferry County) and areas where stream side incursions by commercial, industrial, residential developments and frequently cultivated agricultural areas do actually exist.
- State agencies acknowledge that their demands for large wildlife and water protection buffer widths (Knutson & Naef, WDFW, Pg 2) do not consider any other (sometimes conflicting) GMA goals (RCW 36.70A.020 (6) (5) (8) etc) such as provision of jobs, local economic development, protection of private property, maintenance and enhancement of natural resource industries, etc.

In consideration of the above, it is the conclusion of Ferry County that:

- Existing low population densities in rural privately owned (18% of County) areas, existing roadways beside streams, and terrain steepness of adjacent lands abrogate the need for continuous setbacks referred to as buffers.

- The attractiveness of larger streams (Types 1 and 2), lakes and ponds for development and the County's rural 2.5 acre building site requirement do indicate the potential need for selective buffering on those waterways.

- The County should not burden its private forest land owners, agriculture nor struggling timber harvesting industries, with buffers along its extensive Types 3, 4 and 5 streams in the limited areas that those streams flow through private property. Private forest owner's ability to create income has declined significantly. The cause is the loss of the County's only major saw mill requiring longer shipping distances to mills, and high highway fuel/trucking costs which have greatly increased shipping costs paid by the land owner from log sales. Timber harvesting tends to be localized and temporary, (with DNR regulation requiring temporary logging area buffers) thereby limiting the impact on stream banks to short sections at a time, and allowing very adequate time for recovery before the next harvest cycle which typically is years later. The County's agricultural industry has historically raised cattle and cattle feed crops which do not require multiple annual tilling and soil disturbances.

In consideration of the Best Available Science, very sparse population distribution, and struggling local economy, and in accordance with RCW 36.70A.3201 and recent Supreme Court decisions, Ferry County recommends the following standard buffer widths "...in full consideration of local circumstances."

Types 1 Waters	150 feet

Type 2 Water	100 feet
Type 3 Water	75 feet – streams on which indigenous Bull Trout have been validated, will have a standard buffer of 100 feet
Type 4 & 5	50 feet

The Ferry Conservation District has had programs of water quality testing in progress since 2000 under grant sponsorship of the Washington State Department of Ecology. In November 2001, the Kettle Tri-Watershed project was completed and reported. In December 2007, a two year study of the San Poil river watershed was completed and a two year study of the Kettle River watershed is just beginning.

Actual stream water quality data from these studies in Ferry County have shown little indication of human caused degradation.

The San Poil study was conducted to gain insight into why the mainstem of the San Poil River is included on the "303(d)" list of the Environmental Protection Agency (EPA) as being quality impaired: and all eight of the San Poil tributaries are on the EPA's list of concern: that is, waters for which there is some indication of diminished water quality but there is not enough information to put them on the 303(d) list.

The study included year-round monitoring for two years with the intent to create a statistical baseline for the five parameters that were monitored. (Note that fecal coliform was not included as a monitored parameter.) The study report includes "a short but very accurate description" of the San Poil water quality; "Overall water quality is very good. However, there are some areas that could use some direct help and some that bear watching." The areas of concern were in or near the mainstem of the river, not in the tributaries which all enter the river in very good condition.

The Kettle Tri-Watershed study was conducted on three streams tributary to the Kettle River. The study was undertaken to provide insight into why those streams were listed by the EPA on their 303(d) list. Of 22 stream reaches studied, only three were found to be "non-functioning" and they were temporarily within that class because of natural conditions, such as the 1998 floods and recent forest fires on government land. Fecal coliform contamination was found to be predominately from wildlife sources rather than from farming/grazing. The Kettle Tri-Watershed study did not include sampling of the mainstem of the Kettle River, nor did it include tributaries east of the Kettle Range.

The Ferry Conservation District is currently embarked on a two year study which will include sampling of the mainstem of the Kettle as well as tributaries on both the east and west sides of the Kettle Range and should provide useful baseline data for the Kettle River.

The two studies completed to date do not indicate systemic problems caused by current land use practices on the tributary streams. Existing uses appear to be compatible with the maintenance of the streams as habitat conservation areas. This finding applies directly to Type 3 streams, and by extension indicates the streams are receiving good quality water from the Types 4 and 5 streams upstream of the monitored reaches.

++

Appendix C 3 End Notes
Demographic Assessment Notes and Assumptions

Assumptions Used in Calculations:

1. Of the 52,800 acres of Indian Allotment Land established in 1900 by Presidential decree, no actual data is available on the amount still in Indian family or tribal ownership. Discussions with a local title company indicate that less than 1/3 (18,440 acres) may still be Indian owned land. That figure cannot be confirmed, but is used for these calculations.

2. Of 52,700 acres of fee land in the Inchelium District of the Colville Reservation, it is known that large timber companies and others have private holdings. Exact data is not available, so it is assumed that 2/3 of that land is privately held (34,255 acres) and 1/3 (18,445 acres) is owned by the Tribe or tribal members.

3. Of 22,500 acres of fee land in the Keller District of the Colville Reservation, it is known that large timber companies and others have private holdings. Exact data is not available, so it is assumed that 2/3 of that land is privately held (14,625 acres) and 1/3 (7,875) is owned by the tribe or tribal members.

4. The figure of 562,309 acres of public land and its allocation to Federal, State and Local government agency holders obtained from the 1999 Ferry County Profile is accurate.

The net balance of property ownership between the north half of the county and the reservation is:

Net=34,255 + 14,625 - 18,480 = 30,400 acres more privately held land in the south reservation area than tribal land in the north half of the county.

In other words, there are about 30,400 acres (47.5 square miles) more private land in the reservation area than tribal land in the north half of the county.

++

Supporting Information

The County does not legislate land use and care requirements for the 40% of the county land area that is federally or state owned, nor the 42% of the land mass that is owned by the tribes or held in Federal trust for the tribes.

The GMA has multiple and unprioritized mandates that impact preparation of County plans and ordinances. It has dual mandates related to the critical areas portion of the Critical Areas Ordinance: GMA mandates the county to conserve existing ongoing agricultural activity, RCW 36.70A.020(8)(9), and GMA requires that the county protect critical areas, RCW 36.70A.060(1)(2). To add to these already complicated mandates for the county, the county must also not take private property, Washington State Constitution, Art. I, Sec. 16., United States Constitution, Amendment V, and RCW 36.70A.020(6).

RCW 36.70A.3201 states that the legislative intent for cities and counties in doing their planning is that "....Local comprehensive plans and development regulations require counties and cities to balance priorities and options for action in full consideration of local circumstances. The legislature finds that while this chapter requires local planning to take place within a framework of state goals and requirements, the ultimate burden and responsibility for planning, harmonizing the planning goals of this chapter, and implementing a county's or city's future rests with that community."

BIBLIOGRAPHY

The following documents are referred to in this ordinance and are included by reference for use or guidance. Changes to these documents by the author or authoring agency require review by Ferry County for effect on this ordinance and possible need for other adjustments to the ordinance before being approved for inclusion in the ordinance by act of the Board of County Commissioners:

Section 1.00:

- RCW 36.70, Planning Enabling Act, 1963;
- RCW 36.70A, Growth Management Act, 1990 and as amended through 2007;

Section 2.00:

- Ferry County Comprehensive Plan, September 18, 1995;
- RCW 36.70A, Growth Management Act, 1990 and as amended through 2007;

Section 3.00:

- RCW 90.76, Underground Storage Tanks, 1989;
- Soil Conservation Service, National Cooperative Soil Survey,
- U.S. Code Title 33, Federal Clean Water Act;
- WAC Chapter 173-303, Dangerous Waste Regulations, 10-05-07;
- WAC 173-218, Underground Injection Control Program, 01-03-06;
- WAC 173-304, Minimum Functional Standards for Solid Waste Handling, 10-04-88;
- WAC 173-351, Criteria for Municipal Solid Waste Landfills, 10-26-93;
- WAC 222-16-031, Interim Water Typing System, 07-01-05;
- WAC 232-12-011, Wildlife Classified as Protected Shall Not be Hunted or Fished, 01-30-06;
- WAC 232-12-014, Wildlife Classified as Endangered Species, 01-30-06;
- WAC 232-12-297, Endangered, Threatened, and Sensitive Wildlife Species Classification, 01-28-02;
- Washington Department of Fish and Wildlife, Classification System for Priority Habitat, updated 2/4/98;
- Washington Department of Fish and Wildlife, Priority Habitat and Species Program, initiated 1989;

Section 4.00:

- RCW 36.70A.030(5), 1994;
- RCW 36.70A.172, Critical Areas - Designation and protection, 1995;
- RCW 36.70A.360, Master Planned Resorts, 1998;
- Section 101(14), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 1980;

- WAC 365.190.080, Minimum guidelines to classify agriculture, forest, mineral lands and critical areas, 03-15-91;
- Supreme Court of the State of Washington, Docket # 76339-9 "Swinomish Indian Tribal Community v. Western Washington Growth Management Hearings Board", September 13, 2007;
- WAC 365-195-900, Background and Purpose, 05-03-01;
- WAC 365-195-910, Criteria for Obtaining Best Available Science, 08-27-00;
- WAC 365-195-915, Criteria for Including Best Available Science in Developing Policies and Development Regulations, 08-27-00;
- WAC 365-195-920, Criteria for Addressing Inadequate Scientific Information, 08-27-00;
- WAC 365-195-900-925, Criteria for Demonstrating "Special Consideration" Has Been Given to Conservation or Protection Measures to Preserve or Enhance Anadromous Fisheries, 08-27-00;

Section 4.02:

- WAC 365-195-905, Criteria for Determining Which Information is the Best Available Science, 08-27-00;

Section 4.04:

- Tri-County Wetland Map, July, 1991;
- National Wetland Inventory Map, 1987;

Section 5.00:

- Washington State Department of Ecology, Washington State Wetlands Identification and Delineation Manual, Publication #96-94, March 1997;

Section 5.03:

- Washington State Department of Ecology, Washington State Wetland Rating System for Eastern Washington, Publication #04-06-15, August 2004;

Section 5.04:

- Washington State Department of Ecology, Washington State Wetlands Identification and Delineation Manual, Publication #96-94, March 1997;

Section 5.08:

- RCW 76.09, Forest Practices, 1999;

Section 5.11;

- Washington State Department of Ecology, et al, Wetland Mitigation in Washington State, Part 1: Agency Policies and Guidance (Version 1, Publication #06-06-011a, March 2006);

- Washington State Department of Ecology, et al, Wetland Mitigation in Washington State, Part 2: Developing Mitigation Plans (Version 1, Publication #06-06-011b, March 2006);

Section 6.01:

- Buchanan, John, Eastern Washington University, Geology Department, Evaluation of Groundwater Pollution Susceptibility in Northern Ferry County, WA, December 1992;
- Cook, Kirk V., RPG Hydrogeologist, DRASTIC study info; Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publication #97-30, July 2000;
- RCW 36.70A. Growth Management, 1990;
- RCW 90.44, Regulation of Public Ground Waters, 1945;
- RCW 90.48, Water Pollution Control, 1989;
- RCW 90.54, Water Resource Act 1971, 2002;
- WAC 173-200, Water quality standards for the ground waters of the state of Washington, 10-31-90;

Section 6.02:

- Cook, Kirk V. RPG Hydrogeologist, Washington Department of Ecology, Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publ. No. 97-30, dated July, 2000;

Section 6.03:

- Buchanan, John, Eastern Washington University, Geology Department, Evaluation of Groundwater Pollution Susceptibility in Northern Ferry County, WA, December 1992;
- Cook, Kirk V. RPG Hydrogeologist, Washington Department of Ecology, Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publ. No. 97-30, dated July, 2000;

Section 6.06:

- WAC 173-303, Dangerous Waste Regulations, 10-05-07;
- WDOE, Best Management Practices for Auto Dealerships-Auto Wastes and Containers, #95-405A;
- WDOE, A Guide for Lithographic Printers, 94-139;
- WDOE, A Guide for Photo Processors, #94-138;
- WDOE, A Guide for Screen Printers, #94-137;
- WDOE, Best Management Practices for Auto Dealerships-Waste Processes, #95-405B;
- WDOE, Best Management Practices to Prevent Stormwater Pollution at Vehicle Recycling Facilities, #94-146;
- WDOE, Drycleaners, F-HWTR-93-541;
- WDOE, Dry Cleaning Hazardous Waste Do's and Don'ts, #91-012c;

- WDOE, Electroplating, #91-0129;
- WDOE, Empty Pesticide Container Disposal, #92-br-008;
- WDOE, Frequently Asked Questions Concerning Solvent and Cleaner Disposal; #96-422;
- WDOE, Guidance for Remediation of Petroleum Contaminated Soils, #91-030, November, 1995;
- WDOE, Management Requirements for Special Waste, #96-1254;
- WDOE, Managing Hazardous Waste for Radiator Shops, #92-br-009;
- WDOE, Managing Hazardous Waste for Transmission Shops, #93-br-010;
- WDOE, Managing Hazardous Waste for Tire Dealers, #93-br-015;
- WDOE, Prevention of Storm Water Pollution at Log Yards-Best Management Practices, #95-053;
- WDOE, Release Detection, #93-012;
- WDOE, Selecting Best Management Practices for Stormwater Management, WQ-R-93-011;
- WDOE, Tank Owners and Operators Guide to Using Ground Water Monitoring for UST, #930012;
- Washington State University, Irrigation Management Practices to Protect Ground Water and Surface Water Quality, EM4885, April, 1995;

Section 6.07:

- WAC 173-200, Water Quality Standards for Ground Waters of the State of Washington, 10-31-90;
- WAC 173-303, Dangerous Waste Regulation, 10-05-07;
- WAC 246-290, Public Water Supplies, 07-03-07;

Section 7.02:

- Ferry County Flood Ordinance 2002-01, January 7, 2002;
- Flood Insurance Rate Maps, May 2, 2006;

Section 7.04:

- Ferry County Flood Ordinance 2002-01, January 7, 2002;

Section 8.02:

- Ferry County Soil Survey Maps;
- Department of Natural Resources Geological Survey Maps;
- Washington Department of Ecology Geologic Hazard Ratings System;
- Washington Department of Community, Trade and Economic Development, Classification of Risk to Structural Development;

Section 9.00:

- WAC 365-190-080(5), Minimum guidelines to classify agriculture, forest, mineral lands, and critical areas, - Critical Areas, Fish and wildlife conservation areas, 04-15-91;

Section 9.01:

- RCW 90.58, Shoreline Management Act, 1971;
- WAC 222-16-031, Interim water type system, 07-01-05;
- WAC 232-12-011, Wildlife classified as protected shall not be hunted or fished, 01-30-06;
- WAC 232-12-014, Wildlife classified as endangered species, 01-30-06;
- WAC 365-190-080 (5) (c)(ii), Minimum guidelines to classify agriculture, forest, mineral lands and critical areas, - Critical Areas, Sources and methods – species of local importance, 04-15-91;
- Washington Department of Fish and Wildlife Maps (Fish Planting);

APPROVED this 1st day of December, 2008.

FERRY COUNTY BOARD OF COMMISSIONERS
FERRY COUNTY, WASHINGTON

Objected
Ronald J. Bond, Chairman

Brad L. Miller
Brad L. Miller, Vice-Chairman

Mike L. Blankenship, Member

ATTEST:

Debbie Bechtol
Debbie Bechtol, Clerk of the Board

APPROVED AS TO FORM:

Michael Sandona
Michael Sandona, Prosecuting Attorney