

CHAPTER XX.36
ENVIRONMENTALLY SENSITIVE AREAS

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xx.36.010 Purpose. The purpose of this Chapter is to identify and protect environmentally sensitive areas, also known as critical areas, and to supplement the County's development requirements by providing additional land use controls without violating the constitutional rights of property owners.

- A. This Chapter is intended to meet the requirements of:
1. The Washington State Growth Management Act, RCW 36.70A; and
 2. The Washington State Shoreline Management Act, RCW 90.58.
- B. In the event of conflicts between this Chapter and the Chapter implementing the County's Shoreline Master Program, the provisions of the updated Shoreline Regulations shall prevail.

xx.36.020 Applicability. All development activities including new uses of land and buildings and changes of use must comply with all provisions of this Chapter and this Title as well as all applicable provisions of local, state, and federal law.

- A. Environmentally sensitive areas, or critical areas, subject to the provisions of this Chapter shall consist of:
1. Wetlands;
 2. Geologically Hazardous Areas;
 3. Fish and Wildlife Habitat Conservation Areas;
 4. Frequently Flooded Areas; and
 5. Critical Aquifer Recharge Areas.

- B. It is important to note that the shoreline areas within 200' of the ordinary high water mark of many of the rivers, streams, and lakes in the County and their associated wetlands are under the jurisdiction of the Washington State Shoreline Management Act and in addition to the requirements of this Chapter, proposed development activities involving these areas must also comply with the provisions of the Pend Oreille County Shoreline Master Program and the implementing regulations in Chapter xx.-34.
- C. It shall be the responsibility of Property Owners and the sponsors of proposed development activities to know the location of environmentally sensitive areas and jurisdictional shoreline areas on and near their property and to comply with the provisions of this Chapter at all times.
1. Property Owners and Project Sponsors that may be proposing development activities in proximity of environmentally sensitive areas are strongly encouraged to schedule an appointment with County Staff to discuss the applicability of these regulations prior to preparing and submitting land use applications to the County.
 2. The County shall maintain public maps that may assist in the identification of environmentally sensitive areas. However, it shall be the responsibility of the Property Owner or Project Sponsor to identify and map all environmentally sensitive areas on their property.
 - a. The presence of environmentally sensitive areas and jurisdictional shoreline areas or associated buffers on a parcel triggers the requirements of this Chapter, regardless of whether or not an environmentally sensitive area or buffer is depicted on an official map.

xx.36.030 General Provisions.

- A. Mitigation Sequencing. Property Owners or Project Sponsors shall, when designing proposed new development activities that may potentially affect environmentally sensitive areas, use the following measures, listed in priority order, to avoid, minimize, and/or mitigate adverse impacts:
1. Avoiding the adverse impact altogether by not taking a certain action or parts of an action or moving the proposed action;
 2. Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts;

3. Rectifying the adverse impact by repairing, rehabilitating or restoring the affected environment;
4. Reducing or eliminating the adverse impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

B. Environmentally Sensitive or Critical Areas Reports.

1. The cost of preparing any required environmentally sensitive areas report(s) shall be borne by the Applicant.
2. Environmentally sensitive areas reports shall be prepared by a qualified professional(s) as determined by the County.
3. The cost of a professional peer review of any required environmentally sensitive areas report, if required by the County, shall be borne by the Applicant.
4. Individual environmentally sensitive areas reports may be combined with other required environmentally sensitive areas or shoreline reports, in a format approved by the County.

C. Application Requirements.

1. It shall be the responsibility of Property Owners and the Sponsors of proposed development activities to identify all environmentally sensitive areas and jurisdictional shoreline areas on their property and within 300 feet of their property lines on all application materials including required environmental checklists.
 - a. If a proposed development activity that may have a potential adverse impact on an environmentally sensitive area(s) does not require a specific permit such as a building permit, short plat approval, etc, compliance with the provisions of this Chapter is still required.
 - (1) If a specific permit is not required, the County may require the Project Sponsor to submit an application for a Critical Areas Authorization.

- (2) Project Sponsors are strongly encouraged to schedule an appointment and meet with County Staff to discuss development plans before application materials are prepared and submitted.
2. All land use applications submitted to the County involving environmentally sensitive areas must include a SEPA Checklist and at a minimum such information identified in WAC 173-27-180.
3. In order to fully assess the potential impact on environmentally sensitive areas and the effectiveness mitigation sequencing methods the County may require the preparation of an Environmentally Sensitive Areas Report(s) and supporting technical studies prepared by a qualified professional as determined by the County.

ED. Overlapping Buffer Requirements. In the event that more than one buffer applies to a proposed development, the buffer affording the highest level of protection as determined by the County should apply where the buffers overlap, unless specifically authorized by the County.

1. For example, if a development proposal involves a parcel that includes a jurisdictional shoreline, a jurisdictional wetland, and a non-jurisdictional fish bearing stream there could be three different buffer requirements applicable to the site. Where the buffer areas overlap, the widest buffer area would apply, unless a lesser buffer area is approved in accordance with the provisions of this Title.

E. Emergency Measures to Protect the Public Health and Safety. Nothing in this Title shall prevent a public agency or a private property owner from taking emergency actions necessary to protect persons and property from immediate or urgent threats to the public health and safety.

1. Emergency measures should be limited to reasonable measures necessary to protect the public health and safety from the immediate or urgent threat.
2. The County, and other state and federal agencies, such as the Washington State Department of Fish and Wildlife, should be contacted as soon as practical after the emergency action to determine if any additional measures are required and what if any permits may be required.
3. Remediation may be required after the fact to restore the site to pre-emergency conditions. Once the immediate threat has been addressed, any adverse impacts on critical areas should be minimized and mitigated according to the provisions of this Chapter.

4. Property owners are advised that the failure to take appropriate preventative measures, the failure to secure required permits in advance, the failure to meet conditions of approval including the maintenance of erosion control measures, and/or the failure to act in a timely manner may not constitute an emergency and may result in the imposition of civil penalties and/or remediation measures.

F. Performance Bonds. In an effort to ensure the successful installation, operation, and maintenance of compensatory mitigation measures or other requirements under this Title, the County may require a performance bond(s) or comparable financial guarantee.

1. The performance bond or guarantee may be up to 150% of the estimated cost of the required improvement.
2. The duration and form of the financial guarantee shall be determined by the County in consultation with the County Prosecuting Attorney.

xx.36.040 Wetlands.

A. The purposes of this Section are to:

1. Recognize and protect the beneficial functions performed by many wetlands, which include, but are not limited to, providing food, breeding, nesting and/or rearing habitat for fish and wildlife; recharging and discharging ground water; contributing to stream flow during low flow periods; stabilizing stream banks and shorelines; storing storm and flood waters to reduce flooding and erosion; and improving water quality through bio-filtration, adsorption, and retention and transformation of sediments, nutrients, and toxicants.
2. Regulate land use to avoid adverse effects on wetlands and maintain the functions and values of wetlands.
3. Establish review procedures for development proposals in and adjacent to wetlands.

B. Identification of wetlands and the delineation of their boundaries pursuant to this Chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within Pend Oreille County meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Chapter.

1. Wetlands shall be delineated by a qualified wetland professional in accordance with the U. S. Army Corps of Engineers publication *Regional Supplement to*

the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (WMVCR), Regional Supplement to the 1987 Wetland Delineation Manual (Corps Publication # ERDC/ EL TR-10-03).

2. Wetland delineations are valid for five years; after five years the County shall determine whether a revision or additional assessment is necessary.
- C. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #04-06-015, or as revised and approved by Ecology), provided that the County may utilize the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Western Washington* (Ecology Publication #04-06-025, or as revised and approved by Ecology) if warranted by local conditions.
1. Category I wetlands include:
 - a. Alkali wetlands;
 - b. Wetlands that are identified by scientists of the Washington Natural Heritage Program/DNR as high quality wetlands;
 - c. Bogs;
 - d. Mature and old-growth forested wetlands over ¼ acre with slow-growing trees;
 - e. Forests with stands of aspen; and
 - f. Wetlands that ~~perform many functions very well~~ (scores of ~~70~~22 points or more for all functions or having "Special Characteristics" identified in the rating system).

(Note: Category I Wetlands typically represent a unique or rare wetland type; are more sensitive to disturbance than most wetlands; are relatively undisturbed and contain ecological attributes that are difficult if not impossible to replace; or, provide a high level of function).

2. Category II wetlands include:
 - a. Forested wetlands in the floodplains of rivers;

- b. Mature and old-growth forested wetlands over ¼ acre with fast-growing trees;
- c. Vernal pools; and
- d. Wetlands that perform for all functions well (scores between 19 to 21 points or having “Special Characteristics” identified in the rating system 51-69 points).

3. Category III wetlands include:

- a. Vernal pools that are isolated; and
- b. Wetlands with a moderate level of functions (scores score between 1630-1850 points or more for all functions identified in the rating system).

(Note: Category III wetlands oftentimes have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands).

4. Category IV wetlands have the lowest level of functions, scoring less than 16 points for all functions identified in the rating system (scores fewer than 30 points).

(Note: Category IV wetlands are typically heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected).

5. Wetland rating categories shall not change due to illegal modifications or unauthorized activities.

D. Applicability. In addition to the provisions of this Chapter, all development activities including new uses of land and buildings and changes of use must comply with the Table of Permitted Zoning Uses and all provisions of this Title as well as all applicable provisions of local, state, and federal law, unless specifically exempted.

- 1. Development activities proposed for jurisdictional shoreline areas must also comply with the provisions of Chapter xx.34 Shoreline Regulations.

- a. This includes the Table of Permitted Shoreline Uses which may be more restrictive than the uses permitted in the Table of Permitted Zoning Uses.
2. In particular, the following activities are subject to the provisions of this Section if they are proposed for a wetland or wetland buffer:
- a. The construction, reconstruction, demolition, or expansion of any structure;
 - b. The creation of new lots through a subdivision, short plat, Master Planned Resort, RV Park, RV Resort, or binding site plan;
 - c. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;
 - d. The dumping of, discharging of, or filling with any material;
 - e. The draining, flooding, or disturbing the water level or water table;
 - f. The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland;
 - g. Pile driving;
 - h. "Class IV - General Forest Practices" under the authority of the "1992 Washington State Forest Practices Act Rules and Regulations", WAC 222-12030, or as thereafter amended;
 - i. Proposed uses or activities determined by the County to have a potential adverse impact on wetland values and functions; and/or
 - j. Activities that may result in:
 - (1) A significant change of water temperature.
 - (2) A significant change of physical or chemical characteristics of the sources of water to the wetland.
 - (3) A significant change in the quantity, timing or duration of the water entering the wetland.

(4) The introduction of pollutants.

E. Prospective applicants are encouraged to contact the Department of Ecology Eastern Regional office and the U. S. Army Corps of Engineers to determine what state and federal permits and approvals may be required.

F. The sponsors of proposed development activities that involve or may impact designated wetlands or their buffers shall prepare and submit for County review and approval an environmentally sensitive areas report unless specifically exempted. The following activities may be determined by the County to be exempt from the buffer requirements, and/or other provisions of this Section provided that appropriate measures are proposed to avoid or mitigate potential adverse impacts:

1. All isolated Category III and IV wetlands less than 1,000 square feet that:
 - a. Are not associated with riparian areas or buffer;
 - b. Are not part of a wetland mosaic;
 - c. Do not contain habitat identified as essential for local populations of priority species identified by Washington Department of Fish and Wildlife or species of local importance;
 - d. Are not a vernal pool;
 - e. Are not an alkali wetland; and
 - f. Do not contain aspen stands
2. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.
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, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.
4. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist

are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column will be disturbed.

5. Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.
 6. Educational and scientific research activities.
 7. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way or easement, provided that the maintenance or repair does not expand the footprint or use of the facility, easement, or right-of-way.
 8. Those activities and uses conducted pursuant to the Washington State Forest Practices Act and its rules and regulations, WAC 222-12-030, where state law specifically exempts local authority, except those developments requiring local approval for Class 4 – General Forest Practice Permits (conversions) as defined in RCW 76.09 and WAC 222-12.
- G. Wetland Buffers. Unless specifically exempted, all regulated wetlands shall have a wetland buffer that shall not be disturbed unless specifically authorized.
1. All wetland buffers shall be measured from the wetland edge, as established by the approved wetland boundary survey.
 2. The width of the required wetland buffer shall be based on a determination by the County of the intensity of the proposed use. For purposes of administering this Section the following shall be used to determine low, medium, and high intensity activities:
 - a. High intensity activities may include:
 - (1) Commercial uses;
 - (2) Industrial uses;

- (3) More than one dwelling unit per acre;
 - (4) Higher intensity recreational uses such as golf courses, ball fields, motorized vehicle facilities; and/or
 - (5) Other uses determined by the County to be of a higher intensity than the enumerated low or medium intensity uses.
- b. Medium intensity activities may include:
- (1) New residential development at a density not to exceed one (1) dwelling unit per acre;
 - (2) Moderate intensity open space and parks with recreation activities such as biking and jogging;
 - (3) Less intensive agricultural activities such as orchards and hay fields; and/or
 - (4) Building logging roads.
- c. Low intensity activities may include:
- (1) Forestry (cutting trees only);
 - (2) Less intensive recreation activities such as walking bird watching, etc; and/or
 - (3) Other uses determined by the County to be of lesser intensity than the enumerated high or medium intensity uses.
3. Unless otherwise authorized, the required wetland buffer widths, shall be based on the category of the wetland and the intensity of the proposed development activity as follows in Table 1, irrespective of shoreline environment designation:

Commented [BF1]: Too SMP specific – needs to be broader to cover sensitive areas in the entire county, including those outside of shoreline jurisdiction

Table 1 - Wetland Buffer Widths

Wetland Characteristics	Buffer Width by Impact of Proposed Land Use
<i>Category IV Wetlands (For wetlands scoring less than 16 points for all functions)</i>	

Wetland Characteristics	Buffer Width by Impact of Proposed Land Use
Score for all 3 basic functions is less than 16 points	Low – 25 feet Moderate – 40 feet High – 50 feet
Category III Wetlands (For wetlands scoring 16 to 18 points or more for all functions)	
Moderate level of function for habitat (score for habitat 5 to 7 points) *If wetland scores 8 to 9 habitat points, use Category II buffers	Low – 75 feet Moderate – 110 feet High – 150 feet
Score habitat for 3 to 4 points	Low – 40 feet Moderate – 60 feet High – 80 feet
Category II Wetlands (For wetlands that score 19 to 21 points or more for all functions or having the "Special Characteristics" identified in the rating system)	
High level of function for habitat (score for habitat 8 to 9 points)	Low – 100 feet Moderate – 150 feet High – 200 feet
Moderate level of function for habitat (score for habitat 5 to 7 points)	Low – 75 feet Moderate – 110 feet High – 150 feet
High level of function for water quality improvement and low for habitat (score for water quality 8 to 9 points; habitat less than 5 points)	Low – 50 feet Moderate – 75 feet High – 100 feet
Riparian forest	Buffer width to be based on score for habitat functions or water quality functions
Not meeting above characteristic	Low – 50 feet Moderate – 75 feet High – 100 feet
Vernal pool	Low – 100 feet Moderate – 150 feet High – 200 feet Or develop a regional plan to protect the most important vernal pool complexes – buffers of vernal pools outside protection zones can then be reduced to: Low – 40 feet Moderate – 60 feet High – 80 feet
Category I Wetlands (For wetlands that score 22 points or more for all functions or having the "Special Characteristics" identified in the rating system)	
Wetlands of High Conservation Value	Low – 125 feet Moderate – 190 feet High – 250 feet

Wetland Characteristics	Buffer Width by Impact of Proposed Land Use
High level of function for habitat (score for habitat 8 to 9 points)	Low – 100 feet Moderate – 150 feet High – 200 feet
Moderate level of function for habitat (score for habitat 5 to 7 points)	Low – 75 feet Moderate – 110 feet High – 150 feet
High level of function for water quality improvement (8 to 9 points) and low for habitat (less than 5 points)	Low – 50 feet Moderate – 75 feet High – 100 feet
Not meeting above characteristics	Low – 50 feet Moderate – 75 feet High – 100 feet

~~Category I Wetland: 125' for low intensity uses, 190' for medium intensity uses, and 250' high intensity uses;~~

~~Category II Wetland: 100' for low intensity uses, 150' for medium intensity uses, and 200' high intensity uses;~~

~~Category III Wetland: 75' for low intensity uses, 110' feet for medium intensity uses, and 150' high intensity uses; and~~

~~Category IV Wetland: 25' for low intensity uses, 40' for medium intensity uses, and 50' high intensity uses.~~

4. The width of a wetland buffer may be increased or decreased by the County on a case-by-case basis based on approval of a wetland report that documents that a larger buffer is needed to protect wetland functions or values or that a smaller buffer adequately protects wetlands without a net loss of functions or values.
 - a. The standard buffer widths identified above assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided. The proponent shall maintain the viability of the buffer in perpetuity as specified in the wetland report.
 - b. Wetland buffers may be reduced by no more than 25% of the standard buffer width.

5. The County may approve proposals to average required buffers based on a finding that the averaging will result in greater than or equal wetland protection or is necessary to allow the reasonable use of property, provided that:
 - a. The total area of the wetland buffer is not reduced; and
 - b. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.
 - c. The averaged buffer will not result in degradation of the wetlands functions and values as demonstrated by a critical areas report from a qualified wetland professional.
 - d. The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.
6. The following uses may be permitted in a wetland buffer provided that they are not prohibited by other applicable laws and are conducted in a manner that does not adversely affect wetland function and values:
 - a. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.
 - ~~b.~~ b. Passive recreation facilities designed and in accordance with an approved critical area report, including:
 - (1) Walkways and trails; and
 - (2) Wildlife-viewing structures.
 - ~~b.c.~~ b.c. Dispersed camping areas.
 - ~~e.d.~~ e.d. Educational and scientific research activities.
 - ~~d.e.~~ d.e. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.
 - ~~e.f.~~ e.f. 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, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

f.g. Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

g.h. Enhancement of a wetland buffer through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

h.i. Stormwater management facilities are limited to stormwater dispersion outfalls and bio-swales in the outer 25% of the buffer of Category III or IV wetlands only, provided that the location of such facilities will not degrade the functions or values of the wetland.

i.j. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

8. Signage and Fencing.

- a. All buffers shall be temporarily fenced during construction activities in a manner approved by the County that should include highly visible and durable protective barrier to prevent access and to protect the wetland and associated buffer.
- b. As a condition of approval the County may require temporary or permanent signs to clearly identify and protect wetlands and associated buffers.
- c. As a condition of approval, the County may require or authorize the construction of a temporary or permanent fence to protect wetlands and associated buffers, provided that:

- (1) Fences should be installed on the outside perimeter of required wetland buffers;
 - (2) The fence shall be designed and constructed so that it does not interfere with animal migration and does not adversely affect animal habitats.
 - (3) Permanent fencing may be required if domestic grazing animals are on site or may be introduced to the site in the future.
 - (4) Property owners are encouraged to consider the impacts of fencing on neighboring property owners.
- H. Mitigation Sequencing. All proposed development activities that may impact wetlands and their associated buffers shall be designed and constructed in accordance with the following principles, listed in order of preference:
1. Avoid the impact altogether by not taking a certain action or parts of an action.
 2. Minimize 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. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
 4. Reduce or eliminate the impact over time by preservation and maintenance operations.
 5. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.
 6. Monitor the required compensation and take remedial or corrective measures when necessary.
- I. Compensatory Mitigation. In certain circumstances where impacts to wetlands or their associated buffers cannot be avoided or minimized, the County may approve compensatory mitigation to achieve equivalent or greater biologic functions.
1. Compensatory mitigation for alterations to wetlands shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with [Washington State Department of Ecology, U.S. Army Corps of Engineers](#)

Seattle District, and U.S. Environmental Protection Agency Region 10 Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1), Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication #06-06-011a. Olympia, Washington. Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans--Version 1, (Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised), and Selecting Wetland Mitigation Sites Using a Watershed Approach (Eastern Washington) (Publication #10-06-07, November 2010).

2. At a minimum, the mitigation ratios shall be as provided in Table 2 follows:

Table 2 - Mitigation Ratios

<u>Category and Type of Wetland</u>	<u>Creation or Re-establishment</u>	<u>Rehabilitation</u>	<u>Enhancement</u>
<u>Category I: Bog, Natural Heritage site</u>	<u>Not considered possible</u>	<u>Case by case</u>	<u>Case by case</u>
<u>Category I: Mature Forested</u>	<u>6:1</u>	<u>12:1</u>	<u>24:1</u>
<u>Category I: Based on functions</u>	<u>4:1</u>	<u>8:1</u>	<u>16:1</u>
<u>Category II</u>	<u>3:1</u>	<u>6:1</u>	<u>12:1</u>
<u>Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>8:1</u>
<u>Category IV</u>	<u>1.5:1</u>	<u>3:1</u>	<u>6:1</u>

Note:

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

<u>Wetland Category</u>	<u>Creation/Re-Establishment</u>	<u>Rehabilitation</u>	<u>Enhancement</u>	<u>Preservation</u>
<u>Category I: Bog, Natural Heritage Site*</u>	<u>Not possible</u>	<u>6:1</u>	<u>Case-by-case</u>	<u>10:1</u>
<u>Category I: Mature Forest</u>	<u>6:1</u>	<u>12:1</u>	<u>24:1</u>	<u>24:1</u>
<u>Category I: Based on Functions</u>	<u>4:1</u>	<u>8:1</u>	<u>16:1</u>	<u>20:1</u>
<u>Category II</u>	<u>3:1</u>	<u>6:1</u>	<u>12:1</u>	<u>20:1</u>
<u>Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>8:1</u>	<u>15:1</u>

Category IV	1.5:1	3:1	6:1	10:1
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*Permanent Impacts to Category I Bogs and Natural Heritage sites cannot be mitigated for, and are prohibited.

3. Increased Replacement Ratio. The standard replacement ratio may be increased under any of the following circumstances consistent with:
 - a. High degree of uncertainty as to the success of the proposed restoration or creation;
 - b. Significant period of time between destruction and replication of wetland functions;
 - c. Projected losses in functions;
 - d. Off-site compensation.
4. Decreased Replacement Ratio. The standard replacement ratio may be decreased under the following circumstances:
 - a. Findings of special studies coordinated with agencies and/or a qualified professional, which demonstrate protection of wetland function or value is attained under the decreased ratio.
5. Advance Mitigation. The proposed actions for compensation are conducted in advance of the impact and are shown to be successful. Mitigation for projects with pre-identified impacts to wetlands may be constructed in advance of the impacts, if the mitigation is implemented according to federal rules.
6. In all cases, a minimum acreage replacement ratio of 1:1 shall be required.
7. Mitigation requirements may also be determined using the credit/debit tool described in "Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Eastern Washington: Final Report (Ecology Publication #11-06-015, August 2012).

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

- a. Restoration (re-establishment and rehabilitation) of wetlands.
- b. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.
- c. Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

d. Preservation of high-quality, at risk-wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement, provided that a minimum of 1:1 acreage replacement is provided by reestablishment or creation. Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:

- (1) Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA species.
- (2) There is no net loss of habitat functions within the watershed or basin.
- (3) The impact area is small (generally less than ½ acre) and/or impacts are occurring to a low functioning system (Category III or IV wetland).
- (4) All preservation sites shall include buffer areas adequate to protect the habitat and its function from encroachment and degradation.

3-9. Compensatory mitigation actions shall be conducted on the site of the alteration except when all of the following apply (refer to the guidance document "Selecting Wetland Mitigation Sites Using a Watershed Approach (Eastern Washington) (Publication #10-06-07, November 2010):

- a. There are no reasonable opportunities on-site (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydro-geomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);
- b. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and
- c. Off-site locations shall be in the same sub-drainage basin unless:
 - (1) Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the County and strongly justify location of mitigation at another site; or

- (2) Credits from a state-certified wetland mitigation bank are used as compensation, and the use of credits is consistent with the terms of the bank's certification.
- d. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

4.10. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora. Whenever practical, it is preferred that compensatory mitigation projects be completed prior to activities that will disturb wetlands, but at a minimum compensatory mitigation shall be completed prior to the completion of the approved development activity and the issuance of a certificate of occupancy.

J. Wetland Mitigation Banks.

- 1. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:
 - a. The wetland bank is certified under state rules;
 - b. The County determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and
 - c. The proposed use of credits is consistent with the terms and conditions of the bank's certification.
- 2. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.
- 3. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification.

In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

- J. In-Lieu Fee. To aid in the implementation of off-site mitigation, the County may develop a program which prioritizes wetland areas for use as mitigation and/or allows payment in lieu of providing mitigation on a development site. This program shall be developed and approved through a public process and be consistent with state and federal rules.
- K. Wetlands Report. Unless specifically exempted by the County, all applications for proposed development activities in or near a wetland or wetland buffer shall include a wetlands report prepared by a qualified professional, as determined by the County. The County may provide more detailed guidelines for the preparation of a wetlands report. At a minimum a wetlands report and the accompanying plan sheets should contain the following information:
1. The name and contact information of the Applicant; authorization of the property owner if the owner is not the Applicant; the name, qualifications, and contact information for the primary author(s) of the wetland critical area report; a description of the proposal; identification of all the local, state, and/or federal wetland-related permit(s) required for the project; and a vicinity map for the project.
 2. A statement specifying the accuracy of the report and all assumptions made and relied upon.
 3. Documentation of any fieldwork performed on the site, including field data sheets for delineations, function assessments, baseline hydrologic data, etc.
 4. A description of the methodologies used to conduct the wetland delineations, function assessments, or impact analyses including references.
 5. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information.
 6. For each wetland identified on-site and within 300 feet of the project site provide the following based on an assessment of the entire wetland complex, not just the portion present on the proposed project site:
 - a. The wetland rating;

- b. Required buffers;
 - c. Hydrogeomorphic classification;
 - d. Wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions);
 - e. Cowardin classification of vegetation communities; and
 - f. Habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.).
7. A description of the proposed actions including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives including a no-development alternative.
 8. An assessment of the probable cumulative benefits and impacts to the wetlands and buffers resulting from the proposed development.
 9. A description of reasonable efforts made to apply the required mitigation sequencing, xx.36.040, to avoid, minimize, and mitigate impacts to critical areas.
 10. A discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity.
 11. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions.
 12. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.
 13. A description of proposed compensatory mitigation measures, if any, to address adverse impacts to wetlands and their buffers that cannot be avoided through mitigation sequencing.

~~a. Mitigation shall be described in accordance with Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication #06-06-011b, Olympia WA, March 2006 or as revised).~~

Commented [BF2]: Referenced above

14. A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:

- a. Maps (to scale) depicting delineated and surveyed wetland and required buffers on-site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; grading and clearing limits; areas of proposed impacts to wetlands and/or buffers (include square footage estimates; and the location of proposed mitigation sequencing activities including proposed compensatory mitigation if applicable.
- b. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project.

L. Unauthorized Alterations and Enforcement. Unless otherwise provided for in this Title, the following shall apply:

1. When a wetland or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored.
 - a. The County shall have the authority to issue a "stop-work" order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Chapter.
2. All development work shall remain stopped until a restoration plan is prepared and approved by County. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described below. The County may, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

3. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can demonstrate that greater functions and habitat values can be obtained, these standards may be modified:
 - a. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.
 - b. The historic soil types and configuration shall be restored to the extent practicable.
 - c. The wetland and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.
 - d. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the County.
4. The County is authorized to make site inspections and take such actions as are necessary to enforce this Chapter. Representatives of the County shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.
5. Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor.
 - a. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the state of Washington. The County may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Chapter.
 - b. If the wetland affected cannot be restored, monies collected as penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The County may coordinate its preservation or restoration activities with other communities in the watershed to optimize the effectiveness of the restoration action.

xx.36.050 Geologically Hazardous Areas.

- A. The purposes of this Section are to:

1. Identify and protect areas susceptible to erosion, sliding, earthquake or other geological events.
 2. Provide guidance to enable property owners to avoid activities that may cause or be susceptible to damage from significant hazards.
- B. Geologically hazardous areas are those areas susceptible to one or more of the following types of hazards:
1. Erosion Hazard;
 2. Landslide Hazard;
 3. Seismic Hazard;
 4. Mine Hazard;
 5. Volcanic Hazard; or
 6. Other geological events such as mass wasting, debris flows, rock falls, and differential settlement.
- C. Designation of Geological Hazard Areas. The following criteria shall be used to identify specific geological hazard areas, provided that the County may utilize updated or new information to identify these areas consistent with the principals of Best Available Science:
1. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard. Erosion hazard areas are also those areas impacted by shore land and/or stream bank erosion and those areas within a river's channel migration zone.
 2. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to the following:
 - a. Areas of historic failures, such as:

- (1) Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development;
 - (2) Those areas mapped by the Washington State Department of Ecology (Coastal Zone Atlas) or the Washington State Department of Natural Resources (slope stability mapping) as unstable (U or class 3), unstable old slides (UOS or class 4), or unstable recent slides (URS or class 5); or
 - (3) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Washington State Department of Natural Resources;
- b. Areas with all three of the following characteristics:
- (1) Slopes steeper than fifteen percent (15%);
 - (2) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - (3) Springs or ground water seepage.
- c. Areas that have shown movement during the Holocene Epoch (from ten thousand years ago to the present) or that are underlain or covered by mass wastage debris of that epoch.
- (1) Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
 - (2) Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;
 - (3) Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;
 - (4) Areas that show evidence of, or are at risk from snow avalanches;
 - (5) Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and

- (6) Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief.
 3. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. Settlement and soil liquefaction conditions occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with a shallow ground water table. 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. The strength of ground shaking is primarily affected by:
 - a. The magnitude of an earthquake;
 - b. The distance from the source of an earthquake;
 - c. The type of thickness of geologic materials at the surface; and
 - d. The type of subsurface geologic structure.
 4. Mine hazard areas are those areas underlain by or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of probable sink holes, gas releases, or subsidence due to mine workings. Factors that should be considered include: proximity to development, depth from ground surface to the mine working, and geologic material.
 5. Volcanic hazard areas are areas subject to pyroclastic flows, lava flows, debris avalanche, and inundation by debris flows, lahars, mudflows, or related flooding resulting from volcanic activity.
 6. Geologically hazardous areas shall also include areas determined by the County to be susceptible to other geological events including mass wasting, debris flows, rock falls, and differential settlement.
- D. The sponsors of proposed development activities that involve or may impact geologically hazardous areas or their buffers shall prepare and submit for County review and approval an environmentally sensitive areas report unless specifically exempted. The following activities may be determined by the County to be exempt from the requirements to prepare an environmentally sensitive areas report, the

buffer requirements, and/or other provisions of this Section provided that appropriate measures are proposed to avoid or mitigate potential adverse impacts:

1. The following activities may be exempt in Seismic Hazard Areas, Mine Hazard Areas, Volcanic Hazard Areas, and Other Hazard Areas based on a determination by the County that the proposed activity will not increase the risk of hazard.
 - a. Additions to existing residences that are two hundred fifty (250) square feet or less; and
 - b. Installation of fences.

E. Performance Standards.

1. General Requirements. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:
 - a. Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;
 - b. Will not adversely impact other critical areas;
 - c. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and
 - d. Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the State of Washington.
2. In addition to the general requirements above, proposed development activities on sites which contain erosion or landslide hazard areas shall meet the following standards:
 - a. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the County to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.
 - (1) The minimum buffer shall be equal to the height of the slope or fifty (50) feet, whichever is greater.

- (2) The buffer may be reduced to a minimum of ten (10) feet when a qualified professional demonstrates to the County's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area.
 - (3) The buffer may be increased based on a finding by the County that a larger buffer is necessary to prevent risk of damage to proposed and existing development.
- b. Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:
 - (1) The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
 - (2) The development will not decrease slope stability on adjacent properties; and
 - (3) Such alterations will not adversely impact other critical areas.
- c. Development within an erosion or landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design that deviates from one or more of these standards provides greater long-term slope stability while meeting all other provisions of this Title. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. The basic development design standards are:
 - (1) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the Uniform Building Code;
 - (2) Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;
 - (3) Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

- (4) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
 - (5) The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
 - (6) The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and
 - (7) Development shall be designed to minimize impervious lot coverage.
- d. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited;
 - e. Approved clearing activities should be allowed only from May 1 to October 1 of each year provided that the County may extend or shorten the season on a case-by-case basis depending on actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practice permit issued by the Washington State Department of Natural Resources;
 - f. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the Applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior;
 - g. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:
 - (1) Conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge;
 - (2) Discharged at flow durations matching pre-developed conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the pre-developed state; or
 - (3) Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface

and stormwater runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope;

- h. The division of land in landslide hazard areas and associated buffers is subject to the following:
 - (1) Land that is located wholly within a landslide hazard area or its buffer may not be subdivided. Land that is located partially within a landslide hazard area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of, and will not affect, the landslide hazard or its buffer.
 - (2) Access roads and utilities may be permitted within the landslide hazard area and associated buffers if the County determines that no other feasible alternative exists; and
 - i. On-site sewage disposal systems, including drain fields, shall be prohibited within erosion and landslide hazard areas and related buffers.
3. In addition to the general requirements above, proposed development activities on sites which contain mine hazard areas shall meet the following standards:
- a. Alterations. Alterations of a mine hazard area and/or buffer are allowed, as follows:
 - (1) All alterations are permitted within a mine hazard area with a low potential for subsidence;
 - (2) Within a mine hazard area with a moderate potential for subsidence, all alterations are permitted subject to a mitigation plan to minimize risk of structural damage, as recommended in the hazard analysis.
 - (3) Within a mine hazard area with a severe potential for subsidence only fences and non-residential structures less than 200 square feet may be permitted.
 - b. The division of land in mine hazard areas and associated buffers is subject to the following:
 - (1) Land that is located within two hundred (200) feet of a mine hazard area with a severe potential for subsidence may not be subdivided. Land that is located partially within a mine hazard area may be divided provided that each resulting lot has sufficient buildable area that is two hundred

(200) feet away from the mine hazard area with a severe potential for subsidence. Land that is located within a mine hazard area with a low or moderate potential for subsidence may be subdivided.

- (2) Access roads and utilities may be permitted within two hundred (200) feet of a mine hazard area with a moderate or severe potential for subsidence if the County determines that no other feasible alternative exists.

- c. Reclamation Activities. For all reclamation activities, including grading, filling, and stockpile removal, as-built drawings shall be submitted in a format specified by the County.

F. Geologically Hazardous Area Report. Unless specifically exempted by the County, all applications for proposed development activities in or near a geologically hazardous area or buffer shall include a report prepared by an engineer or geologist, licensed in the State of Washington with experience analyzing geologic, hydrologic, and ground water flow systems, and who has experience preparing reports for the relevant type of hazard. The County may provide more detailed guidelines for the preparation of a geologically hazardous area report. At a minimum the report and the accompanying plan sheets should contain the following information:

1. The name and contact information of the Applicant; authorization of the property owner if the owner is not the Applicant; the name, qualifications, and contact information for the primary author(s) of the geologically hazardous area report; a description of the proposal; identification of all the local, state, and/or federal geologically-related permit(s) required for the project; and a vicinity map for the project.
2. A statement specifying the accuracy of the report and all assumptions made and relied upon.
3. The report shall include a copy of the site plans for the proposal showing:
 - a. The type and extent of geologic hazard areas, any other critical areas, and buffers on, adjacent to, within three hundred (300) feet of, or that are likely to impact the proposal;
 - b. Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain, if available;

- c. The topography, in two-foot contours, of the project area and all hazard areas addressed in the report; and
 - d. Clearing limits.
- 4. The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region. The assessment shall include, but not be limited to:
 - a. A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;
 - b. A detailed overview of the field investigations, published data, and references; data and conclusions from past assessments of the site; and site specific measurements, test, investigations, or studies that support the identification of geologically hazardous areas; and
 - c. A description of the vulnerability of the site to seismic and other geologic events;
- 5. The report shall contain a hazards analysis including a detailed description of the proposed project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties.
 - a. The report shall make a recommendation for the minimum no-disturbance buffer and minimum building setback from any geologic hazard based upon the geotechnical analysis.
- 6. When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity.

7. In addition to the requirements listed above, critical area reports for erosion and landslide hazard areas should also include:
- a. A site plan depicting:
 - (1) The height of slope, slope gradient, the top and toe of the slope, and cross-section of the project area;
 - (2) The location of springs, seeps, or other surface expressions of ground water on or within three hundred (300) feet of the project area or that have potential to be affected by the proposal; and
 - (3) The location and description of surface water runoff features.
 - b. An analysis of the site including:
 - (1) A description of the extent and type of vegetative cover;
 - (2) A description of subsurface conditions based on data from site-specific explorations;
 - (3) Descriptions of surface and ground water conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements;
 - (4) An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;
 - (5) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one hundred-year storm event;
 - (6) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties.
 - (7) A study of slope stability including an analysis of proposed cuts, fills, and other site grading;
 - (8) Recommendations for building siting limitations; and
 - (9) An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion.

- c. A geotechnical engineering report prepared by a licensed engineer that presents engineering recommendations for the following:
 - (1) Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations, and estimates of settlement performance;
 - (2) Recommendations for drainage and sub-drainage improvements;
 - (3) Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary;
 - (4) A description of reasonable efforts made to apply the required mitigation sequencing to avoid, minimize, and mitigate impacts to critical areas; and
 - (5) A description of proposed compensatory mitigation measures, if any, to mitigate adverse site impacts that cannot be avoided through mitigation sequencing.
- d. For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall conform to the requirements of the Washington State Department of Ecology Stormwater Management Manual for Eastern Washington as adopted by Pend Oreille County-, or alternative measures that meet or exceed these standards as determined by the County;
- e. The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with the Washington State Department of Ecology Stormwater Management Manual for Eastern Washington as adopted by Pend Oreille County, or alternative measures that meet or exceed these standards as determined by the County. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;
- f. Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation

management and/or replanting plan, and/or other means for maintaining long-term soil stability; and

- g. If the County determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the County.
8. In addition to the requirements listed above, critical area reports for seismic hazard areas shall also include:
- a. On the site map all known and mapped faults within two hundred (200) feet of the project area or that have potential to be affected by the proposal;
 - b. In the analysis a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement); and
 - c. A geotechnical engineering report shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented.
9. In addition to the requirements listed above, critical area reports for mine hazard areas shall also include:
- a. On the site plan site plan the delineation of any of the following features found within three hundred (300) feet of or directly underlying the project area, or that have potential to be affected by the proposal:
 - (1) The existence of mines, including all significant mine features, such as mine entries, portals, adits, mine shafts, air shafts, and timber shafts;
 - (2) The location of any nearby mines that may impact or be affected by the proposed activities;
 - (3) The location of any known sinkholes, significant surface depressions, trough subsidence features, coal mine spoil piles, and other mine-related surface features; and

- (4) The location of any prior site improvements that have been carried out to mitigate abandoned coal mine features; and
- b. A discussion of the potential for subsidence on the site and classify all mine hazards areas within three hundred (300) feet of the project area, or that have potential to be affected by the proposal, as either low, moderate, or severe. The hazards analysis shall include a mitigation plan containing recommendations for mitigation of the potential for future trough subsidence, as appropriate, for the specific proposed alteration and recommendations for additional study, reports, and development standards if warranted.

xx.36.060 Fish and Wildlife Habitat Conservation Areas.

A. Areas within the County meeting one or more of the following criteria, may be designated as Fish and Wildlife Habitat Conservation Areas, subject to the provisions of this Chapter, and shall be managed consistent with the principles of best available science, such as the *Washington State Department of Fish and Wildlife's Management Recommendations for Priority Habitat and Species*.

- 1. Areas with which State and Federally Designated Endangered, Threatened, and Sensitive Species have a primary association.
 - a. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered.
 - b. State designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington identified by the Washington Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats.
 - c. Habitats of Primary Association: "Habitats of primary association" means a critical component(s) of the habitats of federally or state-listed endangered, threatened, candidate, sensitive, and priority wildlife or plant species, which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. Habitats of primary association include, but are not limited to: winter ranges, migration ranges, corridors, breeding sites, nesting sites, regular large concentrations, communal

roosts, roosting sites, staging area, and “priority habitats” listed by the Washington State Department of Fish and Wildlife.

2. Priority habitats and species as identified by the Washington State Department of Fish and Wildlife, and as subsequently amended.
 3. Habitats and species designated by the County as being of local importance and warranting protection, based on the provisions of Best Available Science.
 4. Natural area preserves and natural resource conservation areas as defined, established, and managed by the Washington State Department of Natural Resources.
 5. Areas of rare plant species and high quality ecosystems as identified by the Washington State Department of Natural Resources through the Natural Heritage Program.
 6. Naturally occurring ponds under twenty (20) acres and their submerged aquatic beds that provide fish and wildlife habitat;
 7. Land identified by the County as being essential for the preservation of connections between habitat areas and open spaces.
- B. The following fish and wildlife habitat areas shall be considered priority habitat areas in Pend Oreille County and shall be afforded the highest level of protection:
1. Areas with which State and Federally Designated Endangered, Threatened, and Sensitive Species have a primary association.
 2. Natural area preserves and natural resource conservation areas as defined, established, and managed by the Washington State Department of Natural Resources.
 3. Areas of rare plant species and high quality ecosystems as identified by the Washington State Department of Natural Resources through the Natural Heritage Program.
- C. While the County may maintain maps that highlight the potential location of fish and wildlife habitat conservation areas it shall be the responsibility of the property owner and project sponsor to identify all fish and wildlife habitat conservation areas on their property and to comply with the provisions of this Chapter at all times.

1. Note: Information regarding Priority Habitat and Species in Pend Oreille County may be found on the Washington State Department of Fish and Wildlife website.

D. General Performance Standards.

1. It should be noted that properties that contain fish and wildlife habitat conservation areas may contain other environmentally sensitive areas and as a result, more than one critical areas report may need to be prepared.
2. Development activities proposed for properties that contain fish and wildlife habitat conservation areas may also be under the jurisdiction of state and federal agencies and as a result, numerous permits and approvals may be required. As a result, Project Sponsors are strongly encouraged to schedule a pre-application conference with County Staff to discuss potential permitting requirements and opportunities for integrating and streamlining the development review process.
3. Proposed development activities in or near fish and wildlife habitat conservation areas should follow the required mitigation sequencing outlined in XX.36.030 General Provisions, Mitigation Sequencing to avoid or minimize potential adverse impacts before considering any action that may require mitigation.
4. A fish and wildlife habitat conservation area may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat. All new structures and land alterations shall be prohibited from fish and wildlife habitat conservation areas, unless specifically authorized by the County.
 - a. Any proposed alterations or impacts to a fish and wildlife habitat conservation area should be supported by the principles of best available science.
5. No plant, wildlife, or fish species not indigenous to the region shall be introduced into a fish and wildlife habitat conservation area unless authorized by a state and/or federal permit or approval.
6. The County may deny, restrict, or condition approvals of a proposed use or development activity within or adjacent to a fish and wildlife habitat conservation area or its buffers, as necessary to minimize or mitigate any potential adverse impacts. Conditions shall be based on the principles of best available science and may include, but are not limited to, the following:

- a. Establishment of buffer zones;
 - b. Preservation of critically important vegetation and/or priority habitat features such as snags and downed wood;
 - c. Limitation of access to the habitat area, including fencing to deter unauthorized access;
 - d. Seasonal restriction of construction activities to protect priority fish and wildlife species;
 - e. Establishment of a duration and timetable for periodic review of mitigation activities; and
 - f. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.
7. Mitigation of alterations to fish and wildlife habitat conservation areas shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse off-site impacts. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.
8. The County may require the establishment of buffer areas for activities adjacent to fish and wildlife habitat conservation areas when needed to protect habitat conservation areas. Buffers shall consist of an undisturbed area of native vegetation or areas identified for restoration established to protect the integrity, functions, and values of the affected habitat.
- a. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby and shall be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife.
 - b. Fish and wildlife habitat conservation areas and their buffers should be preserved in perpetuity through the use of native growth protection areas, critical area tracts, or comparable methods as approved by the County.
9. When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers may be required and activities may be further restricted during the specified season.

10. The County may reduce fish and wildlife habitat area buffers in accordance with the provisions of the critical area report, the principles of best available science, and applicable management recommendations issued by the Washington Department of Fish and Wildlife, if:
- a. It will not reduce stream or habitat functions;
 - b. It will not adversely affect fish habitat;
 - c. It will provide additional natural resource protection, such as buffer enhancement;
 - d. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer.
11. The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:
- a. Land that is located wholly within a habitat conservation area or its buffer should not be subdivided;
 - b. Land that is located partially within a habitat conservation area or its buffer may be divided provided that the developable portion of each new lot and its access is located outside of the habitat conservation area or its buffer and meets the minimum lot size requirements and all applicable provisions of the applicable development regulations.
 - c. Access roads and utilities serving the proposed subdivision may be permitted within the habitat conservation area and associated buffers only if the County determines that no other feasible alternative exists and when consistent with this Title
12. The outer perimeter of the fish and wildlife habitat conservation area or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in such a way as to ensure that no unauthorized intrusion will occur and verified by the County prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.
13. As a condition of any permit or authorization issued pursuant to this Chapter, the County may require the Applicant to install permanent signs along the boundary of a fish and wildlife habitat conservation area or buffer.

- a. Signs should be designed, and installed in a manner to assure protection of sensitive features or wildlife and shall be subject to County approval.
 - b. Signs shall be maintained by the property owner unless otherwise approved by the County.
- 14. The County may require as a condition of approval of any permit or authorization issued pursuant to this Chapter to require the Applicant to install a permanent fence at the edge of the fish and wildlife habitat conservation area or buffer, when fencing will prevent future impacts to the habitat conservation area.
 - a. The Applicant should be required to install a permanent fence around the habitat conservation area or buffer when domestic grazing animals are present or may be introduced on site.
 - b. Fencing installed as part of a proposed activity or as required in this Subsection shall be design so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes habitat impacts and shall be subject to County approval.
- E. Habitat Specific Performance Standards. In addition to the general performance standards listed above, the following habitat specific performance standards may also apply, as determined by the County.
 - 1. No development shall be allowed within a fish and wildlife habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.
 - a. Whenever activities are proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the County. Approval for alteration of land adjacent to the fish and wildlife habitat conservation area or its buffer shall not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.
 - b. Project Sponsors are encouraged to contact the U. S. Fish and Wildlife Service and/or the Washington State Department of Fish and Wildlife to

determine what, if any, state or local laws protecting Bald or Golden Eagles may be applicable to their proposed development.

2. All activities, uses, and alterations proposed to be located in water bodies used by fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of fish habitat, including, but not limited to, adhering to the following standards:
 - a. Activities shall be timed to occur only during the allowable work window as designated by the Washington Department of Fish and Wildlife for the applicable species;
 - b. An alternative alignment or location for the activity is not feasible;
 - c. The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;
 - d. Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques, according to an approved critical area report, and
 - e. Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved critical area report.
3. Fills, if otherwise permitted by the County Development Regulations [including](#) XX.34 Shoreline Regulations, shall not adversely impact fish or their habitat or shall mitigate any unavoidable impacts and shall only be allowed for a water-dependent use.
4. Unless specifically authorized by the County, all structures and activities shall be located outside of designated riparian habitat areas and required riparian buffers.
 - a. Riparian habitat areas shall be established for habitats that include aquatic and terrestrial ecosystems that mutually benefit each other and that are located adjacent to rivers, perennial or intermittent streams, seeps, and springs
 - b. Riparian Habitat Area widths shall be measured outward in each direction, on the horizontal plane, from the ordinary high water mark, or from the top of bank, if the ordinary high water mark cannot be identified. Riparian habitat areas should be sufficiently wide to achieve the full range of riparian and aquatic ecosystem functions, which include but are not limited to protection of in-stream fish habitat through control of temperature and

sedimentation in streams; preservation of fish and wildlife habitat; and connection of riparian wildlife habitat to other habitats.

- c. Riparian habitat areas should retain their natural vegetative condition unless specifically authorized by the County.
5. Unless otherwise approved by the County, the recommended widths of Riparian Habitat Areas shall be as follows:
- a. Type S (Shorelines of the State): (See xx.34 Shoreline Regulations, Required Buffers);
 - b. Type F (Fish Bearing): ~~200~~150 feet;
 - c. Type NP (Non-fish bearing-perennial): ~~100~~50 feet;
 - d. Type NS (Non-fish bearing-seasonal): ~~150~~65 feet; and
 - e. Type U (Unknown, not typed): Must be evaluated with proposed type and Riparian Habitat Area width included in any development application.
6. The recommended riparian habitat area widths may be increased by the County, as follows:
- a. Based on a finding that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;
 - b. When the frequently flooded area exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the frequently flooded area;
 - c. When a channel migration zone is present and mapped, the riparian habitat area width shall be measured from the outer edge of the channel migration zone;
 - d. When the habitat area is in an area of high blow down potential, the riparian habitat area width shall be expanded an additional fifty (50) feet on the windward side; and/or
 - e. When the habitat area is within an erosion or landslide hazard area, or buffer, the riparian habitat area width shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

Commented [BF3]: 150 feet adequate to protect wood recruitment, water quality protection and other habitat functions

Commented [BF4]: 100 feet adequate to protect wood recruitment, water quality protection and other habitat functions for non-fish bearing streams

Commented [BF5]: 65 feet provides adequate water quality protection and other habitat functions

7. The recommended riparian habitat area width may be reduced by the County in accordance with the recommendations of a critical area report only if:
 - a. The width reduction will not reduce stream or habitat functions, including those of non-fish habitat;
 - b. The width reduction will not degrade the habitat, including habitat for anadromous fish;
 - c. The proposal will provide additional habitat protection;
 - d. The total area contained in the riparian habitat area of each stream on the development proposal site is not decreased;
 - e. The width reduction will not be located within another critical area or associated buffer; and
 - f. The reduced riparian habitat area width is supported by the best available science.
8. Mitigation of adverse impacts to riparian habitat areas shall result in equivalent functions and values on a per function basis, be located as near the alteration as feasible, and be located in the same sub-drainage basin as the habitat impacted.
9. The performance standards set forth in this Subsection may be modified at the County's discretion if the applicant demonstrates that greater habitat functions, on a per function basis, can be obtained in the affected sub-drainage basin as a result of alternative mitigation measures.
10. The following specific activities may be permitted within a riparian habitat area, when the activity complies with the applicable provisions set forth in XX.34 Shoreline Regulations and the standards of this Subsection. The standards that provide the most protection to protected habitat and species shall apply.
 - a. When clearing and grading is permitted as part of an authorized activity or as otherwise allowed in these standards, the following should apply:
 - (1) Grading is allowed only during the dry season, which is typically regarded as beginning on May 1 and ending on October 1 of each year,

provided that the County may extend or shorten the dry season on a case -by-case basis, determined on actual weather conditions.

- (2) Filling or modification of a wetland or wetland buffer is permitted only if it is conducted as part of an approved wetland alteration.
 - (3) The soil duff layer shall remain undisturbed to the maximum extent possible. Where feasible, any soil disturbed shall be redistributed to other areas of the project area.
 - (4) The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or reestablishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces.
 - (5) Erosion and sediment control that meets or exceeds the County standards shall be provided.
- b. New, replacement, or substantially improved shoreline erosion control measures may be permitted in accordance with an approved critical area report that demonstrates the following:
- (1) Natural shoreline processes will be maintained.
 - (2) The shoreline erosion control measures will not degrade fish or wildlife habitat conservation areas or associated wetlands.
 - (3) Adequate mitigation measures ensure that there is no net loss of the functions or values of in-stream habitat or riparian habitat as a result of the proposed shoreline erosion control measures.
- c. Streambank stabilization to protect new structures from future channel migration is not permitted except when such stabilization is achieved through bioengineering or soft armoring techniques in accordance with an approved critical area report.
- d. New public boat launches that meet the applicable provisions of XX.34 Shoreline Regulations may be permitted in accordance with an approved critical area report that has demonstrated the following:
- (1) The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate;

- (2) The ramp will not adversely impact critical fish or wildlife habitat areas or associated wetlands;
 - (3) Adequate mitigation measures ensure that there is no net loss of the functions or values of in-stream habitat or riparian habitat as a result of the ramp; and
- e. Repair and maintenance of an existing dock or pier that otherwise meet all of the applicable provisions of XX.34 Shoreline Regulations may be permitted in accordance with an approved critical area report subject to the following:
 - (1) There is no increase in the use of materials creating shade for predator species;
 - (2) There is no expansion in overwater coverage;
 - (3) There is no new spanning of waters between three (3) and thirteen (13) feet deep;
 - (4) There is no increase in the size and number of pilings; and
 - (5) There is no use of toxic materials (such as creosote) that come in contact with the water.
- f. Construction of trails may be permitted in accordance with an approved critical area report subject to the following standards:
 - (1) There is no other feasible alternative route with less impact on the environment;
 - (2) Trails shall be located on the outer edge of the riparian area or buffer, except for limited viewing platforms and crossings;
 - (3) Trails and associated viewing platforms shall not be made of continuous impervious materials; and
 - (4) Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area report;

- g. Construction of roadways and minor road bridging, may be permitted in accordance with an approved critical area report subject to the following standards:
 - (1) There is no other feasible alternative route with less impact on the environment;
 - (2) The crossing minimizes interruption of downstream movement of wood and gravel;
 - (3) Roads in riparian habitat areas or their buffers shall not run parallel to the water body;
 - (4) Crossings, where necessary, shall only occur as near to perpendicular with the water body as possible;
 - (5) Road bridges and culverts are designed and installed according to the Washington Department of Fish and Wildlife Fish Passage Design at Road Culverts, 1999, or as subsequently amended.
 - (6) Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area report; and
- h. New utility lines and facilities may be permitted to cross watercourses in accordance with an approved critical area report, if they comply with the following standards:
 - (1) Fish and wildlife habitat areas shall be avoided to the maximum extent possible;
 - (2) Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone, where feasible;
 - (3) The utilities shall cross at an angle greater than sixty (60) degrees to the centerline of the channel in streams or perpendicular to the channel centerline whenever boring under the channel is not feasible;
 - (4) Crossings shall be contained within the footprint of an existing road or utility crossing where possible;
 - (5) The utility route shall avoid paralleling the stream or following a down-valley course near the channel; and

- (6) The utility installation shall not increase or decrease the natural rate of shore migration or channel migration.
- i. New public flood protection measures and expansion of existing ones may be permitted, subject to the County's review and approval of a critical area report and the approval of a Federal Biological Assessment by the federal agency responsible for reviewing actions related to a federally listed species.
- j. In-stream structures, such as, but not limited to, high flow bypasses, sediment ponds, in-stream ponds, retention and detention facilities, ~~the gates,~~ dams, and weirs, shall only be allowed in conformance with applicable the provisions of Chapter 90.58 and XX.34 Shoreline Regulations~~this Master Program~~, and upon acquisition of any required local, state, and federal permits.
- k. Conveyance structures may be permitted in accordance with an approved critical area report subject to the following standards:
 - (1) No other feasible alternatives with less impact exist;
 - (2) Mitigation for impacts is provided;
 - (3) Stormwater conveyance facilities shall incorporate fish habitat features; and
 - (4) Vegetation shall be maintained and, if necessary, added adjacent to all open channels and ponds in order to retard erosion, filter out sediments, and shade the water.
- l. New on-site sewage systems and individual wells may be permitted in accordance with an approved critical area report only if accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system.
- m. Repairs to failing on-site sewage systems associated with an existing structure shall be accomplished by utilizing one of the following methods that result in the least impact:
 - (1) Connection to an available public sanitary sewer system;

- (2) Replacement with a new on-site sewage system located in a portion of the site that has already been disturbed by development and is located landward as far as possible, provided the proposed sewage system is in compliance with the [local health district]; or
- (3) Repair to the existing on-site septic system.

E. Fish and Wildlife Habitat Conservation Areas Report. Unless specifically exempted by the County, all applications for proposed development activities in or near a priority fish and wildlife habitat conservation area shall include a critical areas report prepared by a qualified professional, as determined by the County. The County may provide more detailed guidelines for the preparation of a wetlands report. At a minimum a critical areas report for a fish and wildlife habitat conservation area and accompanying plan sheets should contain the following information:

1. A description of the proposed development activity and a map(s) highlighting:
 - a. The project area of the proposed activity;
 - b. All habitat conservation areas and recommended buffers within three hundred (300) feet of the project area; and
 - c. All shoreline areas, floodplains, other critical areas, and related buffers within three hundred (300) feet of the project area.
2. An assessment of the habitat area(s) evaluating the presence or absence of designated critical fish or wildlife species or habitat. This assessment shall also include:
 - a. A detailed description of vegetation on and adjacent to the project area;
 - b. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
 - c. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife management recommendations, as amended, that have been developed for species or habitats located on or adjacent to the project area;

- d. A detailed discussion of the direct and indirect potential benefits and impacts on habitat by the project, including potential impacts to water quality;
- e. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with the Mitigation Sequencing requirements of this Chapter, XX.36.030 A; and
- f. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.

3. In addition, the County may also require:

- a. Detailed surface and subsurface hydrologic features both on and adjacent to the site.
- b. An evaluation by an independent qualified professional regarding the Applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate; and/or
- c. That the Applicant consults with the Washington Department of Fish and Wildlife, the Kalispel Tribe, and/or other appropriate agencies prior to preparing and submitting the report.

xx.36.070 Frequently Flooded Areas.

A. Applicability. This Section shall apply to all areas of Special Flood Hazard within the jurisdiction of Pend Oreille County.

B. Purpose.

1. The purpose of this Section is to:

- a. Protect human life and health;
- b. Minimize expenditure of public money and costly flood control and flood relief projects;
- c. Minimize prolonged business interruptions;

- d. Minimize damage to public facilities and utilities such as water mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
 - e. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood damages;
 - f. Ensure that potential buyers are notified that property is in an area of special flood hazard; and,
 - g. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
 - h. Administer the Washington State Floodplain Management Act (Chapter 86.16 RCW) and maintain Pend Oreille County's eligibility to participate in the National Flood Insurance Program.
2. This section includes methods and provisions for:
- a. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
 - b. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Sewer and Water Services. The Project Sponsor shall provide sufficient documentation to verify, subject to County review and approval, that adequate provisions can be made to provide water and sewer service to the site, including but not limited to sufficient water rights, without adversely affecting existing levels of service.
- a. Controlling filling, grading, dredging, and other development which may increase flood damage; and
 - b. Preventing or regulating the construction of flood barriers that will unnaturally divert floodwaters or may increase flood hazards in other areas.
4. The degree of flood protection required by this Section is considered reasonable for regulatory purposes and is based on scientific and engineering

considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

B. Classification. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled “The Flood Insurance

Study - Pend Oreille County, Washington and Incorporated Areas”, dated March 4, 2002, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM), and any revisions thereto, are hereby adopted by reference. The Flood Insurance Study and the FIRM are on file at the County Courthouse.

1. Area of “special flood hazard” means the land in the flood plain within a community subject to a one- percent or greater chance of flooding in any given year. Designation on maps always includes the letter A. Also referred to as “100-year floodplain” and “Special Flood Hazard Area”.
2. “Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.”

C. Review Process.

1. A floodplain development permit shall be obtained before any construction or development activity is initiated within any special flood hazard area.
2. When base flood elevation data has not been established for areas of special flood hazard, the Community Development Director shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source in accordance with accepted engineering practices.
3. The Community Development Director shall:
 - a. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
 - b. Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

c. Administer and implement these regulations by granting or denying development applications in accordance with the provisions of this Chapter. This shall include but is not limited to the:

- (1) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
- (2) Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.
- (3) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of ~~FEMA Model Ordinance Section 5.4(1)~~ this chapter are met.

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4. Information to be obtained and maintained.

- a. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in section xx36.030(c)(2), obtain and record the actual (asbuilt) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. (CFR 60.3(b)(5)(i)) Recorded on a current elevation certificate (FF 81-31) with Section B completed by the local official.
- b. For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM:
 - (1) Obtain and record the elevation (in relation to mean sea level to which the structure was floodproofed).
 - (2) Maintain the floodproofing certifications required in Section 4.1-2(3) (44 CFR 60.3 (b) (5) (iii)).
- c. Maintain for public inspection all records pertaining to the provisions of this Chapter.

5. Subdivision proposals.

- a. All subdivision proposals shall be consistent with the need to minimize flood damage.
 - b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
 - c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
 - d. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least fifty lots or five acres (whichever is less).
 - e. All subdivisions and short subdivisions shall establish an elevation monument on or adjacent to the subject property for future elevation certification purposes.
 - f. All subdivisions and short subdivisions shall show on the face of the final plat or short plat, the boundary of the 100-year floodplain and floodway.
 - g. All subdivision proposals involving lands within the 100- year flood plain shall provide elevations at each lot corner.
6. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.
7. Variances.
- a. Variances may be granted when the following conditions exist:
 - (1) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result. Variance requests in the designated floodway shall be accompanied by a professional engineering analysis of the resultant base flood discharge. Variances shall not be granted from the provisions of Section XX.36.030.F.2.

- (2) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, and comply with all other variance criteria.
- (3) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (4) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.
- (5) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation. As the lot size increases, the technical justification required for issuing the variance increases.

b. Variances to the provisions of this Section may be granted upon consideration of:

- (1) The danger that materials may be swept onto other lands to the injury of others;
- (2) The danger to life and property due to flooding or erosion damage;
- (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (4) The importance of the services provided by the proposed facility to the community;
- (5) The necessity to the facility of a waterfront location, where applicable;
- (6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

- (7) The compatibility of the proposed use with existing and anticipated development;
- (8) The relationship of the proposed use to the comprehensive plan and flood plain management program for the area;
- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
- (11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

D. General Regulations.

1. Requirements for below-grade crawlspaces.

- a. The interior grade of a crawlspace below BFE must not be more than 2 feet below the lowest adjacent exterior grade (LAG).
- b. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet at any point unless the structure is designed by a licensed professional engineer. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.
- c. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed areas should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means.

- d. The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used.
- e. Below-grade crawlspace construction in accordance with the requirements listed above will not be considered basements.

2. Anchoring.

- a. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- b. All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

3. AH Zone Drainage. Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

4. Construction Materials and methods.

- a. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- c. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

4. Utilities.

- a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- b. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters;

- c. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding;
- d. New water wells shall be constructed in compliance with WAC 173-160-171;
- e. Elevate or adequately anchor propane tanks if located below the regulatory flood elevation; and
- f. Elevate or floodproof utilities below the regulatory flood elevation.

E. Specific Standards. In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) the following provisions are required:

1. Residential Construction.

- i. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.
- a. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (2) The bottom of all openings shall be no higher than one foot above grade.
 - (3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

- 2. Detached accessory buildings (garages). The following special provisions apply to detached accessory structures used as garages to single-family residences. When an accessory structure represents a minimal investment, the elevation or

dry floodproofing standards need not be met. However all other requirements applicable to structures will be applicable. A minimum investment shall be determined by the applicable guiding authority or by appeal under the variance procedure and shall be determined, if necessary, on a case by case basis. However, as a general application, expenditure for the accessory structure of not more than ten percent of the value of the main structure shall be considered a minimal investment.

- a. Accessory structures shall not be used for human habitation and must be limited to parking and storage.
 - b. Accessory structures shall comply with the foundation opening requirements in Section XX.36.030.E.1.b.
 - c. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
 - d. Accessory structures must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure that may result in damage to other structures.
 - e. Accessory structures must comply with floodplain encroachment provisions of this chapter and the National Flood Insurance Program.
 - f. Service facilities such as electrical and heating equipment shall be elevated one foot or more above the base flood elevation.
 - g. Applicants that elect not to elevate the lowest floor of accessory structures under the provisions of this section shall be notified that flood insurance premiums will be based on rates that are one foot below the base flood elevation.
3. Nonresidential construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structures, except detached accessory structures, shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:
- a. Be floodproofed so that below one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

- c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans.
 - d. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in this Section.
 - e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level.
4. Critical facility. Construction of new, critical facilities shall be located outside the limits of the special flood hazard area. However, new construction and substantial improvement of both new and existing critical facilities shall be permissible within the 100-year floodplain, provided no feasible alternative site is available, and provided the facility's nature is related to or necessitates a riverine location (such as municipal water and sewer pump stations and related treatment facilities).
- a. Critical facilities shall have the lowest floor elevated three feet or more above the base flood elevation;
 - b. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters; and,
 - c. Access routes to critical facilities shall be elevated to or above the base flood elevation to the extent possible.
5. Manufactured homes. All manufactured homes shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately designed and anchored foundation system to resist flotation, collapse and lateral movement.
6. Recreational Vehicles. Recreational vehicles placed on sites are required to either be on a site for fewer than 180 days or be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or meet the requirements of this Section and the elevation and anchoring requirements for manufactured homes.

F. Floodways. Areas designated as floodways are located within areas of special flood hazard established in Section XX.36.030.B. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

1. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.
2. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:
 - a. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and
 - b. Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either, (i) before the repair, or reconstruction is started, or (ii) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety codes which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or to structures identified as historic places shall not be included in the 50 percent.
 - c. Any development that results in additional walled and roofed space at a floor elevation at or below the ground floor shall constitute an increase in the ground floor area.
3. If subsection 1 is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Sections XX.36.030.D. and E.
4. Filling in the floodway is prohibited except for residential maintenance. Residential maintenance is considered the importing of bark or topsoil for flowerbeds and gardens. The total amount of material shall not exceed 10 cubic yards per calendar year.
5. Traditional agricultural practices are exempt.

G. Standards for shallow flooding areas (AO zones). Shallow flooding areas appear on FIRM maps as AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basements) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified in feet on the FIRM (at least two feet above the highest adjacent grade to the structure if no depth number is specified).
2. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - a. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - b. Together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in Section XX.36.030.E.3.c.
3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
4. Recreational vehicles placed on sites within AO Zones on the community's FIRM are required to:
 - a. Be on the site for fewer than 180 consecutive days; and
 - b. Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions.

xx.36.080 Critical Aquifer Recharge Areas

A. Classification

Aquifer recharge areas shall be rated and determined by the criteria established by Ecology (Publication #05-10-028, March 2005). The County hereby incorporates the ratings system as the first step in ranking the susceptibility of an aquifer to surface contamination. When applicable, the County will use wellhead protection areas developed for Class A water systems to further refine the degree of susceptibility. Aquifer recharge areas shall be classified as following:

1. Wellhead protection areas. Wellhead protection areas may be defined by the boundaries of the 10-year time of groundwater travel or boundaries established using alternate criteria approved by the Washington State Department of Health in those settings where groundwater time of travel is not a reasonable delineation criterion, in accordance with WAC 246-290-135.
2. Sole-source aquifers. Sole-source aquifers are areas designated by the U.S. Environmental Protection Agency pursuant to the Federal Safe Water Drinking Act.
3. Susceptible groundwater management areas. Susceptible groundwater management areas are areas that have been designated as moderately or highly vulnerable or susceptible in an adopted groundwater management program developed pursuant to WAC 173-100.
4. Special protection areas. Defined pursuant to WAC 173-200-090.
5. Moderately, highly vulnerable, or highly susceptible aquifer recharge areas. Aquifer recharge areas that are moderately, highly vulnerable, or highly susceptible to degradation or depletion due to hydrogeologic characteristics are those areas delineated by a hydrogeologic study prepared in accordance with the Ecology guidelines or meeting the criteria established by Ecology.

B. Susceptibility Factors, Rating Systems, and Designations

Aquifer recharge areas designations include the wellhead protection areas for other Group A water systems within the County.

C. Protection Requirements

Regulations adopted under this section shall not affect any right to use or appropriate water as allowed under state or federal law.

1. The following uses require aquifer recharge areas review and a hydrogeologic site evaluation pursuant to Section 13.50.040:

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- a. Chemical manufacturing or reprocessing;
- b. Commercial, industrial, institutional, or other facilities or activities that include storage, use, handling, or production of hazardous substances or waste products as defined by WAC 173-303;
- c. Creosote and asphalt manufacture and treatment;
- d. Electroplating;
- e. Petroleum transmission facilities;
- f. Sawmills producing more than 10,000 board feet per day;
- g. Solid waste landfills;
- h. Any septic or sewage disposal system with design flows of more than 3,500 gallons per day;
- i. Surface mining operations requiring a permit from the State DNR; and
- j. Type II and Type V Injection Wells.

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2. The following uses may require aquifer recharge areas review and a hydrogeologic site evaluation pursuant to Section 13.50.040. The Administrator shall waive this requirement if an applicant provides documentation showing compliance with federal, state, and local laws, along with BMPs designed for the specific project, are sufficient to protect potentially affected aquifers.

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- a. Aircraft, automobile, and boat repair and servicing;
- b. Dry cleaners;
- c. Funeral services;
- d. Furniture stripping;
- e. Gas stations and petroleum storage tanks (underground or aboveground) regulated and inspected by the Ecology;
- f. Golf courses;
- g. Junkyards and auto wrecking;
- h. Other projects or activities, including septic or sewage disposal systems serving commercial and industrial projects as determined by the Administrator on recommendation from the Stevens County PUD, the Tri-County Health District, or an affected water purveyor.

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3. The Administrator shall impose conditions to avoid, reduce, mitigate, or remediate impacts to an aquifer, as appropriate for the project and may require monitoring and bonding or other security to ensure conditions of approval are met. An approval based on compliance with federal, state, or local, but non-County, regulations shall not shift the burden of enforcement from the federal, state, or other local agency to the County.

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D. Hydrogeologic Site Evaluation

1. A hydrogeologic site evaluation is a report prepared by a qualified professional (hydrogeologist) with demonstrated experience in surface water and groundwater analysis.

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2. The report shall address the impact the proposed land use will have on the quality and quantity of water transmitted to an aquifer and shall include the following:

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- a. A description of surficial soil types and the geologic and hydrogeologic setting including: soil texture, permeability, and contaminant attenuation properties; characteristics of the vadose zone and geologic material including permeability and attenuation properties; and depth to groundwater and/or an impermeable soil layer;
- b. The location and identification of wells within 1,300 feet of the site;
- c. The location and identification of surface waterbodies and springs with recharge potential within 1,300 feet of the site;
- d. A description of underlying aquifers, including water level, gradients, and flow direction;
- e. Any available data on surface water and groundwater quality;
- f. An assessment of the effects of the proposed development on water quality, quantity, and on the long-term viability of the groundwater resource;
- g. Alternatives to avoid, reduce, mitigate, or remediate any substantial impact to the groundwater resource;
- h. Recommendations for appropriate BMPs, monitoring, or other mitigation;
- i. Other information as required by the Administrator in consultation with the Northeast Tri-County Health District, or an affected water purveyor.

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A. Classification

- 1. ~~Pend Oreille County has been mapped to show where the water is more or less vulnerable to contamination. The Aquifer Recharge maps along with the associated report, ("Evaluation of Groundwater Pollution Susceptibility in Pend Oreille County Using the DRASTIC Method") were completed by Eastern Washington University's Department of Geology and can be found at the Planning Department~~
- 2. ~~The **DRASTIC** method stands for the following: (D) depth to water, (R) net recharge, (A) aquifer media, (S) soil media, (T) topography, (I) impact to the vadose zone, (C) hydraulic conductivity. These factors are given points reflecting the vulnerability of ground water to contamination.~~

~~The following table outlines the groundwater protection scheme for Pend Oreille County:~~

<u>Drastic Index</u>	<u>Suseptibility</u>	<u>Suseptibility Index</u>
>200	>86%	Very High (least-desirable)
161-200	61%-85%	High
113-160	31%-60%	Moderate

81-112	10%-30%	Low
<80	<10%	Very low (most desirable)

3. ~~AQ1~~ will refer to those areas ranging from 161 to greater than 200 on the DRASTIC index.

~~B. Regulations~~

1. ~~The following uses within lands classified as AQ1 will require a conditional use permit:~~

- ~~a. The processing or production of toxic, hazardous and/or dangerous material as defined in WAC 173-303.~~
- ~~b. Automobile maintenance facilities and wrecking yards.~~
- ~~c. Mining of minerals and aggregate materials for commercial use.~~