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Memorandum

January 6, 2020

To: Pend Oreille County Planning Commission

From: Ben Floyd, White Bluffs Consulting

cc: Greg Snow, Pend Oreille County Planning

Re: January 14, 2020 Planning Commission Workshop

Introduction

Pend Oreille County is amending their Comprehensive Plan through a 2020 plan update. A workshop with the Planning Commission is scheduled for January 14 to cover several topics:

- Review and discuss any additional comments on Resource Lands Designation scenarios and preliminary draft Land Use Designation map (*previously provided*)
- Review and discuss any additional comments on revised draft Section 7 – Utilities (*previously provided*)
- Review and discuss any additional comments on revised draft Section 8 – Essential Public Facilities (*previously provided*)
- Review and discuss partially revised (some pending items to discuss with County Public Works) draft Section 4 – Transportation (attached)
- Review and discuss partially revised (some pending items to discuss with County) draft Section 9 – Capital Facilities (attached)
- Review and discuss revised Sensitive Areas Code (attached). Please note that the timing for formal review and adoption of revisions to this code is uncertain. Changes to the code are in effect also proposed amendments to the County's Shorelines Master Program. Options for timing are being discussed with the County and could include preparing a separate Sensitive Areas code for areas outside of shoreline jurisdiction in the County, or as part of future SMP amendment due by June 2022.
- Overview of draft map folio (attached)

Next Steps

- **Planning Commission comments on draft documents addressed in this memo due by January 25**

- **February 11 PC workshop (CONFIRM START TIME _____)**
    - Continue discussing January items
    - Discuss next steps, SEPA review, public and state/local agencies review and adoption process

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Attachments

4.0 Transportation Element

4.1 Overview

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Pend Oreille County has experienced modest growth in the past, which is expected to continue in coming years. To effectively and efficiently accommodate this growth in an orderly fashion, Pend Oreille County and local governments have ~~recognized the need for a transportation plan~~prepared this Transportation Element. Thi~~s~~ is element~~e Transportation Element contains a plan that~~ describes the existing~~-~~ transportation system ~~as it exists today~~ and addresses the transportation needs for the future~~next 6 and 20 years~~.

~~A transportation system includes a variety of facilities and services that can all be considered part of an area's transportation system: roads and highways, sidewalks, rail facilities, bicycle and pedestrian paths, public transit, equestrian trails, airports, waterways, and utility transmission corridors. In order to realize the most benefit and limit adverse impacts, transportation systems must be thoughtfully planned and coordinated with planned land use patterns and intensities, taking into account regional and local needs in the process.~~

The Transportation Element describes how the transportation system in Pend Oreille County is designed to facilitate the movement of people, goods, and services now and in the future. In doing so, the Transportation Element balances the needs of the variety of users of the transportation system, such as commuters, retailers, travelers, property owners, schools, businesses, airports, and recreational facilities. In order to realize the most benefit and limit adverse impacts, transportation systems must be thoughtfully planned and coordinated with planned land use patterns and intensities, taking into account regional and local needs in the process.

The Transportation Element reflects the goal of the Pend Oreille Countywide Planning Policy on transportation:

> The existing and future land use pattern shall be supported by a balanced transportation system that promotes the mobility of people and goods with a variety of options. This system shall be cooperatively planned and constructed between the County, the State, the Kalispel Tribe, and the Municipalities.

~~The Transportation Policies then address the following:~~

Commented [BF1]: Duplicate with policies that shortly follow.

~~a. Balancing transportation and land use;~~

~~b. Developing alternative transportation modes, such as bus, rail, car-pooling, and bicycles;~~

~~c. Meeting planned land use densities and economic activities in the planning, building, managing of the roadway system.~~

~~d. Assessing the impacts of new development on existing roads;~~

~~e. All jurisdictions in the County will agree upon and maintain Level of Service Standards (LOS) standards for all public roads;~~

~~f. The Regional Transportation Planning Organization (RTPO) will determine LOS standards for major connecting roads between the County and its neighboring jurisdictions;~~

~~g. Pursuing funding sources to provide trail corridors, and pedestrian and bicycle paths. The non-motorized section of the transportation system shall be a part of the funding component of the Capital Improvement Program;~~

~~h. Taking into account the safety of non-motorized travelers when considering a new development; and~~

~~i. The local government will disapprove a proposed development that will result in lowering LOS standards to an unacceptable level until such standards can be met.~~

Growth Management Act Requirements

Commented [BF2]: This information is available online and so suggest deleting it here.

~~The Growth Management Act (GMA), at RCW 36.70A.020, includes the following transportation-related goals to guide the development and adoption of comprehensive plans and development regulations for those jurisdictions planning under the GMA:~~

> ~~*(1) Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner;*~~
>
> ~~*(2) Reduce sprawl. Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development;*~~
>
> ~~*(3) Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans; and*~~
>
> ~~*(4) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.*~~

The Growth Management Act (GMA) requires that comprehensive plans include a transportation element that implements, and is consistent with~~,~~ the land use element. The Transportation Element shall include the following sub-elements:

a. Land use assumptions used in estimating travel;

b. Facilities and services needs, including;

(i) An inventory of air, water, and ground transportation facilities and services, including transit alignments and general aviation airport facilities, to define existing capital facilities and travel levels as a basis for future planning;

(ii) Level of Service standards for all arterials and transit routes to serve as a gauge to judge performance of the system;

(iii) Specific actions and requirements for bringing into compliance any facilities or services that are below an established Level of Service standard;

(iv) *Forecasts of traffic for at least 10 years based on the adopted land use plan to provide information on the location, timing, and capacity needs of future growth; and*

(v) Identification of system expansion needs and transportation system management needs to meet current and future demands.

c. Finance, including:

(i) An analysis of funding capability to judge needs against probable funding resources;

(ii) A multi-year financing plan based on the needs identified in the comprehensive plan, the appropriate parts of which shall serve as the basis for the 6-year street, road, or transit program required by RCW 35.77.010 for cities, RCW 36.81.121 for counties, and RCW 35.58.2795 for public transportation systems;

(iii) If probable funding falls short of meeting identified needs, a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that Level of Service standards will be met;

d. Intergovernmental coordination efforts, including an assessment of the impacts of the transportation plan and land use assumptions on the transportation systems of adjacent jurisdictions; and

~~*e. Demand-management strategies.*~~

~~The Growth Management Act also requires that Counties establish Level of Service standards and concurrency requirements, including the following:~~

~~*After adoption of the comprehensive plan by jurisdictions required to plan or who choose to plan under RCW 36.70A.040, local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development causes the Level of Service on a transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development*~~

~~*are made concurrent with the development. These strategies may include increased public transportation service, ride sharing programs, demand management, and other transportation systems management strategies. For the purposes of this subsection "concurrent with the development" shall mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within 6 years.*~~

~~4.1~~4.2 Transportation Goals

Transportation Goal #1: Maintain an efficient, safe, and environmentally responsible road system that supports the *Statement of Values* and the Goals of this Comprehensive Plan.

Transportation Goal #2: Preserve and improve existing facilities.

Transportation Goal #3: Consider safety, cost effectiveness, and environmental impacts when planning to build new roads.

Transportation Goal #4: Construct required transportation improvements concurrent with new land development.

Transportation Goal #5: Keep citizens informed and involved in the planning of facility improvements and new facility construction.

Transportation Goal #6: Participate in regional transportation planning efforts.

~~4.2~~4.3 Transportation Policies

In support of the Transportation Goals, the County shall implement the following Transportation Policies:

Transportation Policy #1~~: Pend Oreille County shall p~~Periodically review and update its standards for the design and construction of County roads, including but not limited to consideration of:

a. Features to reduce wildlife hazards;

b. Environmentally responsible design features;

c. Features to minimize impacts on surface and ground water; and

d. Standards for widened shoulders to accommodate pedestrians and bicycles on existing roadways as appropriate.

Transportation Policy #2: When designing and constructing new roads the State, ~~Pend Oreille~~ County, and private parties shall:

a. Give priority consideration to public safety;

b. Limit the risk of wild-fires;

c. Avoid locating roads in sensitive areas to minimize environmental disruption and construction costs;

d. Attempt to maximize view potentials; and

e. Consider provisions for non-motorized and pedestrian features, including separated pedestrian and bicycle paths.

Transportation Policy #3: ~~Pend Oreille County should s~~Support the construction of passing lanes and turn lanes on State and County roads to address safety concerns and excessive delays.

Transportation Policy #4: ~~Pend Oreille~~The County and the State should provide safe turnouts for disabled vehicles, slow vehicles, and/or scenic viewpoints.

Transportation Policy #5: ~~Pend Oreille County shall c~~Consider the restriction/elimination of access points as opportunities arise to improve safety and maintain the capacity of existing arterials.

Transportation Policy #6: P~~end~~ romote ~~Oreille County shall~~ in cooperation with the Port of Pend Oreille, ~~promote~~ the shared use of railroad crossings in an effort to minimize the need for new crossings.

Transportation Policy #7: ~~Pend Oreille County should~~ R~~r~~etain public road right-of-way to provide an adequate road system, access to private property, accommodate utilities, and access to and view of water bodies.

Transportation Policy #8: ~~Pend Oreille County should s~~Support state and local efforts to provide trail corridors and pedestrian and bicycle paths.

Transportation Policy #9: P~~end Oreille County should p~~romote alternative transportation modes, such as bus, rail, car-pooling, and bicycles.

Transportation Policy #10: ~~Pend Oreille County shall~~ E~~e~~valuate proposed developments for:

a. Compliance with established Level of Service Standards;

b. Compliance with County Road Design Standards;

c. The safety of motorized and non-motorized travelers; and

d. Acceptable accommodation of emergency vehicles.

Transportation Policy #11: The ~~Pend Oreille~~ County Development Code shall include provisions to discourage the siting of incompatible uses adjacent to general aviation airports operated for the benefit of the general public, whether that airport be publicly owned or privately owned for public use. Such regulations shall be adopted only after formal consultation with airport owners and managers, private airport operators, general aviation pilots, ports, and the aviation division of the Washington State Department of Transportation (WSDOT).

Transportation Policy #12: In order to protect the public safety ~~Pend Oreille County shall~~ consider establishing a permit system for special events and activities that use or impact public rights-of-way.

Transportation Policy # 13: ~~Pend Oreille County shall e~~Establish regulations to require new development to mitigate their impacts on County roads.

Transportation Policy #14: ~~Pend Oreille County shall~~ E~~e~~stablish a Concurrency Management System to help ensure that transportation improvements, strategies, and actions needed to support new development and to achieve transportation Level of Service standards that will be in place in time to support the developments causing such needs.

Transportation Policy #15: ~~Pend Oreille County shall~~ E~~e~~stablish a Composite LOS system with C as the Level of Service standard for County collector arterial roads in accordance with the methodology described ~~in the Transportation Plan~~in this element.

Transportation Policy #16: ~~Pend Oreille County shall e~~Establish and maintain a multi-year financing plan based on the transportation needs and priorities identified in the comprehensive plan. Transportation funds shall be allocated in the following order of priority:

a. Debt service;

b. Maintenance of existing County transportation facilities; and

c. Engineering and construction of improvements to the County transportation system.

Transportation Policy #17: Priority consideration should be given to the construction of all-weather road surfaces and improvements that will minimize seasonal road restrictions.

~~4.3~~4.4 Existing Conditions

The primary objective of this section of the report is to assess existing transportation conditions within Pend Oreille County. The following categories of information are included:

Streets and Roadways

State Highways;

Street and Road Conditions;

Bridge Condition;

Lane Configuration;

Average Daily Traffic (ADT) Volumes;

Traffic Volumes;

Heavy Vehicles;

Traffic Control Devices;

Speed Limit Designation;

Roadway Operation; and

Traffic Safety.

Non-motorized Transportation

Bicycle Paths;

Pedestrian Paths;

Equestrian Paths; and

Trail system.

Rail

~~4.3.1~~4.4.1 Streets and Roadways

The streets and roadways within the County are primarily divided between State, County, and Cities. This Section will discuss State and County facilities. Figure 4-1 depicts the State Highways and major County roads.

State Highways

The Pend Oreille County transportation system relies heavily on US Route 2 and State Routes (SR) 20, 31, and 211, which link the communities and towns together and to outside areas.

US 2, a roadway on the National Highway System, traverses from northern Spokane County to the City of Newport, then it turns east into the State of Idaho. Within the County, US 2 is a rural four-lane roadway from the southern County line to SR 211 and then a two-lane highway to the City of Newport. The AADT ranges from 5,000 to 10,000 vehicles per day within this 18-mile segment. Within the City of Newport, US 2 is a two-lane couplet with AADT ranging from 10,000 to 11,500 vehicles per day.

SR 20 traverses from west to east, beginning at the border with Stevens County and turns south at Tiger Junction, and then follows the Pend Oreille River to the City of Newport, where it joins US 2. SR 20 is mostly a rural two-lane highway. The AADT for the 46-mile segment between Tiger Junction and the City of Newport ranges from 1,200 to 3,200 vehicles per day.

SR 31 begins at the Canadian border and runs south for 27 miles where it terminates at Tiger Junction and joins SR 20. SR 31 is a rural two-lane highway with an AADT ranging from 190 to 2,000 vehicles per day.

SR 211 is a 14-mile roadway connecting US 2 on the south and SR 20 on the north near the community of Usk. The route bypasses the City of Newport and provides a more direct route to the northern portion of the County for those entering or leaving Spokane County. SR 211 is a rural two-lane highway with the AADT ranging from 1,400 to 2,000 vehicles per day.

In 1998, Highways of Statewide Significance (HSS) legislation was passed by the Washington State Legislature and codified as RCW 47.06.140. Highways of Statewide Significance are those facilities deemed to provide and support transportation functions that promote and maintain significant statewide travel and economic linkages. (Washington State Transportation Commission; WSTC 2004) The legislation emphasizes that these significant facilities should be planned from a statewide perspective. Local jurisdictions are to assess the effects of local land use plans upon state facilities, based on LOS standards adopted for State highways. Within the County, US 2 and SR 20 are designated as HSS.

Street and Road Condition

Local roads generally serve as access from land uses to the collector and arterial street system. A common attribute of local roads in both urban and rural areas is their low traffic volume and low speeds. Lane widths can be 9 to 11 feet for low speeds and volumes. The basic components of the county's transportation system are sound and in reasonably good condition. This assessment

is based on Washington State Department of Transportation (WSDOT) survey data, County survey data, and windshield observation by Jones and Stokes staff. There is adequate, and in most cases, ample capacity available, and the transportation system connects most origins and destinations well. An inventory of major County roadways and their conditions, such as functional classification, pavement type, pavement width, number of lanes, and shoulder type and width, are presented in Table A-1 included in the Appendix.

Bridge Condition

Table 4-1 lists the State owned bridges in Pend Oreille County. This list was obtained from the WSDOT Bridge and Structure Office (WSDOT 2002a). County-owned bridges are shown in Table 4-2.

Table 4-1 Pend Oreille County Bridge Inventory (State-Owned Bridges)

SR #	Bridge #	Bridge Crossing Name	MP	Width (ft)	Length (ft)	Span Type
20	20/905	Lost Creek	395.80	> 20	64	TTT
20	20/908	South Fork Lost Creek	395.90	> 20	68	PCTB
20	20/911	Ruby Creek	400.19	> 20	135	PCTB
20	20/914	Pend Oreille Valley Railroad Undercrossing (CMSTPP)	405.96	> 20	120	SB TTT
20	20/917	Tacoma Creek	515.37	> 20	104	CS
20	20/918	Calispell Creek Bridge	418.93	> 20	281	PCTB
20	20/919.25	Cattle Pass	419.62	> 20	9	TCULV
20	20/924	Davis Creek	423.75	> 20	77	TTT
31	31/33	Cedar Creek	4.15	> 20	147	CTB
31	31/36	Pend Oreille River Metaline Falls	14.07	> 20	696	ST CTB
31	31/38	Sullivan Creek	14.79	> 20	182	CTB
31	31/42	Slate Creek	21.04	> 20	216	SG SB

Source: Bridge List (WSDOT 2002)

Span Type: CS = Concrete Slab; CTB = Concrete T-Beam; PCTB = Pre-Tensioned Concrete T-Beam; SB = Steel Beam; SG = Steel Girder; ST = Steel Truss; TCULV = Timber Culvert; TTT = Creosote Treated Timber Tres

Table 4-2 Pend Oreille County Bridge Inventory (County-Owned Bridges)

Road Name	Bridge #	Bridge Crossing Name	MP	Width (ft)	# of Lanes	Length (ft)
Middle Fork Rd	2022	North Fork Calispell Creek	3.15	14	1	27
Calicoma Rd	2373	Calicoma	0.08	26	2	26
Tacoma Creek Rd	2389	Tacoma Creek Bridge	4.32	14	1	23
Rocky Cr Rd	2630	Moose Drool	1.5	14	1	25
Rocky Cr Rd	2630	Scape-Goat	2.1	14	1	21
Rocky Cr Rd	2630	Mountain Mauler	2.5	14	1	15
Greenhouse Rd	2702	Big Muddy Creek Bridge	1.03	26	2	20
Cedar Creek Rd	2705	Cedar Creek Bridge	0.00	26	2	28
Smackout Pass Rd	2714	Little Muddy Creek Bridge	2.27	14	1	23
Kings Lake Rd	3389	Usk Bridge	0.70	26	2	2,281
LeClerc Creek Rd	3500	East Branch LeClerc Creek #1	0.88	28	2	38
W Branch LeClerc Creek Rd	3503	West Branch LeClerc Creek #1	1.01	28	2	79
W Branch LeClerc Creek Rd	3503	West Branch LeClerc Creek #2	3.60	14	1	31
W Branch LeClerc Creek Rd	3503	West Branch LeClerc Creek #3	5.04	14	1	31
E Branch LeClerc Creek Rd	3521	East Branch LeClerc Creek	3.37	14	1	18
Fertile Valley Rd	9111	Sacheen Lake	2.50	26	2	104
McKenzie Rd	9216	McKenzie	2.00	26	2	96
LeClerc Rd N	9325	LeClerc Creek	16.30	26	2	63
LeClerc Rd N	9325	Mill Creek	13.30	32	2	34
LeClerc Rd N	9325	CCA Creek	4.93	32	2	24
Sullivan Lake Rd	9345	Ione Bridge	0.30	26	2	830
Sullivan Lake Rd	9345	Harvey Creek Bridge	6.70	26	2	34
Sullivan Lake Rd	9345	Sullivan Lake Inlet	9.18	19	1	78
Sullivan Lake Rd	9345	Sullivan Lake Outlet	12.35	32	2	192
Sullivan Lake Rd	9345	Mill Meadow	13.00	32	2	164

Source: Pend Oreille County 2004

Lane Configuration

The traveled way is that portion of the roadway reserved for traffic and is generally composed of two or more designated lanes. Widths of lanes and resulting traveled way are a function of design speed, vehicle classification, and safety and operational considerations. Lane widths can range from 9 to 13 feet, but are usually 11 or 12 feet in width. Roads within Pend Oreille County in most places contain two lanes.

Commented [BF3]: All this information is optional, with some of it dated. County input needed on whether to keep or delete. Most counties use GIS system for their inventory and do not include all this extra detail.

~~Average Daily Traffic (ADT) Volumes~~

~~Existing Average Daily Traffic (ADT) volumes of major and minor County Collectors by roadways are summarized in Table 4-3. Most of the count data was collected during the years 1991 through 2003. The table shows the highest ADT volumes of each County Collector. The highest County Road ADT volume is on King Lake Road. The ADT volumes by roadway segments are presented in Table A-1 included in the Appendix.~~

~~Table 4-3 Existing Average Daily Traffic on County Roads~~

Commented [BF4]: Duplicate with table provided below, which also includes ADT

~~Road#~~	~~Road Name~~	~~Existing ADT~~	~~Year~~
~~30290~~	~~Bead Lake Rd~~	~~360~~	~~2000~~
~~29750~~	~~Boundary Rd~~	~~357~~	~~1992~~
~~91230~~	~~Camden Rd~~	~~456~~	~~2001~~
~~18890~~	~~Coyote Trail~~	~~408~~	~~2000~~
~~92360~~	~~Cusick Meadow Rd~~	~~259~~	~~2000~~
~~91600~~	~~Deer Valley Rd~~	~~1,018~~	~~1998~~
~~16741~~	~~Farr's Lane~~	~~420~~	~~2003~~
~~91110~~	~~Fertile Valley Rd~~	~~578~~	~~1998~~
~~21100~~	~~Flowery Trail Rd~~	~~252~~	~~2000~~
~~19030~~	~~Gray Rd~~	~~267~~	~~2000~~
~~10030~~	~~Horseshoe Lake Rd~~	~~80~~	~~1992~~
~~33890~~	~~Kings Lake Rd~~	~~1,646~~	~~2000~~
~~93250~~	~~LeClerc Rd N~~	~~804~~	~~2000~~
~~93050~~	~~LeClerc Rd S~~	~~1,625~~	~~2001~~
~~18750~~	~~McCloud Creek Rd~~	~~100~~	~~1992~~
~~92160~~	~~McKenzie Rd~~	~~334~~	~~2000~~
~~26950~~	~~Meadow Rd~~	~~190~~	~~1992~~
~~91320~~	~~N Shore Diamond Lake Rd~~	~~723~~	~~2000~~
~~91440~~	~~S Shore Diamond Lake Rd~~	~~771~~	~~1999~~
~~16651~~	~~Scotia Rd E~~	~~943~~	~~1997~~
~~27140~~	~~Smackout Pass Rd~~	~~580~~	~~1992~~
~~15750~~	~~Spring Valley Rd~~	~~747~~	~~2000~~
~~93450~~	~~Sullivan Lake Rd~~	~~467~~	~~1999~~
~~92050~~	~~Westside Calispell Rd~~	~~525~~	~~1991~~

~~Source: Pend Oreille County 2004~~

Heavy Vehicles

Heavy vehicles include trucks used to transport freight and goods, and recreational vehicles. Because the study area is heavily influenced by the timber and agriculture industries, the freight and goods movements associated with those industries result in higher than normal truck percentages on some of the area's roadways. Heavy vehicles are usually slower moving and have longer and wider wheel base dimensions than the older roads were designed to accommodate. These vehicles are frequently prohibited from using the County road system during thaw conditions each spring to avoid deterioration of the roads. ~~Table A-2 of the Appendix lists the roadways typically closed to truck traffic each spring and totals over 280 miles. The longest period of closure was 69 days on Flowery Trail Road and Nicholson Road.~~ Recreational vehicle travel on the County's roads is seasonal but must be considered in long-range circulation planning. Primary routes for recreational vehicles include US 2, SR 20, SR 31, and SR 211.

Roadway Operations

Level of Service (LOS) is the primary measure used to determine the operating condition of a roadway segment. Highway Capacity Manual (Transportation Research Board 2000) procedures were used to measure transportation facility performance. Using the Highway Capacity Manual procedures, the quality of traffic operation is graded into one of six LOS designations: A, B, C, D, E, or F. LOS A and B represent the best traffic operation. LOS C and D represent intermediate operation, and LOS E and F represent high levels of traffic congestion.

~~The LOS for two-lane highway segments is calculated using average two-way volumes for the peak hour, and the LOS criteria is based on Percent Time-Spent-Following (PTSF) and the Average Travel Speed, as summarized in Table 4-4. On Class I highways, such as State Routes, efficient mobility is paramount, and LOS is defined in terms of both PTSF and average travel speed. On Class II highways, such as County roads, mobility is less critical, and LOS is defined only in terms of PTSF without consideration of average travel speed. Drivers will tolerate higher levels of PTSF on a Class II facility than on a Class I facility, because Class II facilities usually serve shorter trips and different trip purposes.~~

Table 4-4 Level of Service Criteria for Two-Lane Highways

LOS	Class I Highway		Class II Highway
	Average Time Spent Following Another Vehicle (percent)	**Average Travel Speed (miles/hour)**	**Average Time Spent Following Another Vehicle (percent)**
A	≤ 35	> 55	≤ 40
B	> 35 – 50	> 50 – 55	> 40 – 55
C	> 50 – 65	> 45 – 50	> 55 – 70
D	> 65 – 80	> 40 – 45	> 70 – 85
E	> 80	≤ 40	> 85
F	Applies whenever the flow rate exceeds the segment capacity		

Source: Highway Capacity Manual (TRB 2000)

The posted speed on state routes, outside city limits, is 60 mph on SR 2 and 55 mph on all other state routes. The speed limit on most county roads is 25 mph to 50 mph based on the above factors.

Traffic Safety

One of the goals of a transportation system is to move people and goods in a safe and efficient manner. Maximizing the safety of the roadway system is the primary objective of design in all cases; an important component of evaluating existing transportation conditions is traffic safety.

~~Within any area, certain locations have more vehicle collisions than others have due to different reasons. Traffic collision information for County roads was obtained from the Pend Oreille County Public Works Department. The collision data was collected between 1999 and 2003. The collision rates per million vehicle miles (mvm) and fatal collision rates per hundred million vehicle miles (hmvm) were calculated based on the existing AADT on these roadway segments. Table 4-5 summarizes the number of collisions on each major and minor Collector in the County. The collision rates by roadway segments are presented in Table A-3 included in the Appendix.~~

~~Table 4-5 Traffic Collisions on County Roads~~

~~Road#~~	~~Road Name~~	~~Length (mi)~~	~~Number of Collisions (1999 – 2003)~~	~~Fatality~~
~~30290~~	~~Bead Lake Rd~~	~~6.11~~	~~3~~	~~0~~
~~29750~~	~~Boundary Rd~~	~~9.95~~	~~4~~	~~0~~
~~91230~~	~~Camden Rd~~	~~5.18~~	~~2~~	~~0~~
~~18890~~	~~Coyote Trail~~	~~9.32~~	~~12~~	~~0~~
~~92360~~	~~Cusick Meadow Rd~~	~~1.73~~	~~0~~	~~0~~
~~91600~~	~~Deer Valley Rd~~	~~13.23~~	~~21~~	~~0~~
~~16741~~	~~Farr's Lane~~	~~0.04~~	~~0~~	~~0~~
~~91110~~	~~Fertile Valley Rd~~	~~9.32~~	~~11~~	~~0~~
~~21100~~	~~Flowery Trail Rd~~	~~9.12~~	~~6~~	~~1~~
~~19030~~	~~Gray Rd~~	~~0.48~~	~~2~~	~~0~~
~~10030~~	~~Horseshoe Lake Rd~~	~~1.05~~	~~0~~	~~0~~
~~33890~~	~~Kings Lake Rd~~	~~0.93~~	~~4~~	~~0~~
~~93250~~	~~LeClerc Rd N~~	~~32.21~~	~~19~~	~~1~~
~~93050~~	~~LeClerc Rd S~~	~~15.54~~	~~39~~	~~2~~
~~18750~~	~~McCloud Creek Rd~~	~~2.74~~	~~8~~	~~1~~
~~92160~~	~~McKenzie Rd~~	~~2.27~~	~~1~~	~~0~~
~~26950~~	~~Meadow Rd~~	~~7.21~~	~~1~~	~~0~~
~~91320~~	~~N Shore Diamond Lake Rd~~	~~6.03~~	~~6~~	~~0~~

~~Road#~~	~~Road Name~~	~~Length (mi)~~	~~Number of Collisions (1999 – 2003)~~	~~Fatality~~
~~91440~~	~~S Shore Diamond Lake Rd~~	~~2.47~~	~~6~~	~~0~~
~~16651~~	~~Scotia Rd E~~	~~0.64~~	~~1~~	~~0~~
~~27140~~	~~Smackout Pass Rd~~	~~2.62~~	~~0~~	~~0~~
~~15750~~	~~Spring Valley Rd~~	~~11.46~~	~~15~~	~~0~~
~~93450~~	~~Sullivan Lake Rd~~	~~17.60~~	~~9~~	~~0~~
~~92050~~	~~Westside Calispell Rd~~	~~9.39~~	~~9~~	~~0~~
~~**Total Collisions (1999 – 2003)**~~			~~**179**~~	~~**5**~~

~~Source: Pend Oreille County 2004~~

~~The County averaged 36 collisions per year over the past 5 years with one fatality per year on the major and minor Collectors between 1999 and 2003. A large number of roadway segments were without collisions during this period of time. The highest collision rate was along McCloud Road at 13.3 mvm. Seven other roadway segments (County roads) that had collision rates exceeding 2.0 are listed below:~~

~~Coyote Trail;~~

~~Deer Valley Road;~~

~~Gray Road;~~

~~Kings Lake Road;~~

~~Le Clere Road S;~~

~~S Shore Diamond Lake Road; and~~

~~Westside Calispell Lake Road.~~

~~State highway traffic collisions within the County are summarized in the 1996 Washington State Highway Accident Report (WSDOT 1996). The accident rate of US 2 is between 0.6 mvm to 1.3 mvm from the 58 accidents in 1996. The accident rate of SR 20 is between 1.3 mvm to 1.8 mvm from 43 accidents in 1996. SR 31 within the County had 6 accidents in 1996 with the accident rate ranging from 0.2 mvm to 0.8 mvm. The accident rate of SR 211 is the highest among these State Routes. The rate is between 2.5 mvm to 2.7 mvm from 22 accidents. The statewide accident rate for collector arterials in rural areas is 2.05 mvm. Roadways with accident rates higher then this value should be analyzed for traffic safety measures.~~

Commented [BF5]: County will need to provide updated information for this section or otherwise suggest deleting most of it except for statement of commitment to safety. It is important information but dated and not required to include per GMA

Scenic Byways

The State has designated SR 31 from SR 20 to the Canadian Border as a Scenic Byway~~s~~. Scenic Byway designation is based on scenic, cultural, historic, natural, recreational, and archaeological qualities. Designated roads are eligible for special grant programs to provide pullouts and other amenities. SR 31 and SR 20 are also part of a International Byway designated the Selkirk Loop.

This byway loops through Pend Oreille County, northern Idaho on US 2 and US 95 and then through southern Canada.

~~4.3.2~~4.4.2 Non-motorized Transportation

Non-motorized facilities in the County are somewhat limited. Pathways and sidewalks are provided only at limited locations within city limits and in the immediate vicinity of the larger urban areas. In recent years, the awareness of the potential for non-motorized (pedestrian, bicycle, and equestrian) transportation routes for recreational purposes and non-recreational purposes has increased throughout the nation and within the County. The County has a fund established that supports the development of paths and trails, but the fund is limited and could benefit from additional guidance on spending priorities.

Bicycle Paths

Bicycle facilities should serve to connect attractions and resources such as schools, commercial areas, employment centers, and recreational facilities. U.S. Bicycle Route 10 follows US 2 through Pend Oreille County. ~~The WSDOT bicycle map that is provided as information to the state's bicyclists indicates that bicycling is allowed on some parts of US 2 and State Routes 31, 20, and 211 within the County.~~ Recreational bicycling is ~~growing in~~ popular~~ity~~ in Pend Oreille County. Many of the popular routes have limited or no shoulders to safely accommodate bicyclists. In addition, many of the routes also have large segments with limited sight distance. There are two exceptions within the County. The first is a bicycle/pedestrian path that starts at the Cusick Boat Launch and heads south along River Road, ending just north of King's Lake Road. The second bicycle path is a striped lane on LeClerc Road North from the Usk Bridge to the Kalispel Tribe Community Center. The second bicycle path has both separated and non-separated portions to it. Lastly a National Bikeway has been identified, the Golden Tiger Trail, along Highway 20 from Stevens County to State Highway 31 and north to Ione and then south along Le Clerc Road to the Idaho border.

Pedestrian Paths

Improvements to enhance pedestrian mobility and safety are based on issues raised by the public. Improvements include constructing new crosswalks, pedestrian bridges, sidewalks, and paths, and widening existing shoulders. Pedestrian improvements are most effective where pedestrian concentrations are greatest, such as within commercial business areas, and around schools and recreational areas. Most walking takes place on County road shoulders. The Six Year Plan proposes the construction of a pedestrian path along Fertile Valley Road adjacent to Sacheen Lake.

Commented [BF6]: Update – county confirm if this was completed

Equestrian Paths

The only designated equestrian trails outside of state and/or federal parks, are in the County Park.

Trail System

A good deal of riding and hiking takes place throughout the County along road rights-of-way and in other areas where a trail is not guaranteed to the user. Designated trails outside federally owned land in Pend Oreille County are almost nonexistent, with the exception of a few private routes and routes along existing roads that have been so designated by tourist information but which have not been developed to provide for bicycles, horses, or pedestrians.

Pend Oreille River Water Trail

The Pend Oreille River Water Trail covers 70 miles of the Pend Oreille River. The Water Trail begins in Oldtown, ID, then follows the river north through Pend Oreille County, in Northeastern Washington, all the way up to Boundary Dam, just one mile shy of Southeastern British Columbia, Canada. The water trail offers small boat recreationalists and paddlers the opportunity to travel a designated route along a river by providing access areas, environmental and historical points of interests, relaxing picnic stops, and overnight campsites.

~~4.3.3~~4.4.3 Rail

The Port of Pend Oreille owns and operates the Pend Oreille Valley Railroad (POVA) and repair facilities for locomotives and rail cars. The railroad extends from Metaline Falls to Newport, approximately 61 rail miles, along which the right-of-way varies in width from 50 feet to more than 250 feet each side of the centerline. POVA operates over the Burlington Northern Santa Fe (BNSF) line between Newport, Washington and Dover, Idaho and has operating rights from Dover, Idaho to Sandpoint, Idaho in order to interchange cars with the BNSF.

Commented [BF7]: Discuss latest status and update

~~4.3.4~~4.4.4 Airport

The Ione Municipal Airport is in the National Plan of Integrated Airport Systems (NPIAS). Participation in the NPIAS is limited to public use airports that meet specific FAA activity criteria. NPIAS airports are eligible for federal funding of improvements through FAA programs such as the current Airport Improvement Program (AIP). ~~Currently, there are more than 3,300 NPIAS airports, of which more than 75 percent are general aviation airports similar to Ione Municipal.~~ Ione Municipal is the only NPIAS airport in Pend Oreille County and it is the only paved and lighted airport in the county that is open year-round.

The County and the Town of Ione have partnered in the creation of the Joint Airport Zoning Board (JAZB). The JAZB was formally created in Resolution 2013-1. The JAZB has created and adopted a zoning overlay.

~~4.4~~4.5 Traffic and Level of Service

~~4.4.1~~4.5.1 Introduction

The adequacy of the transportation system is based on the use of established level of service measures to analyze current and future anticipated growth. The following sections describe the methodology for forecasting future growth, typical measures of level of service, and propose

new measures for Pend Oreille County. The need for future roadway improvements can be quantified, in part, by examining the results of this effort.

The following categories of traffic study are discussed in this section:

Existing traffic;

Functional classification system;

Existing Level of Service;

Traffic forecasts;

Level of Service forecasts; and

County road priority.

Existing Traffic

Average Daily Traffic (ADT) was furnished by the WSDOT for state routes and by Pend Oreille County for County roads. These traffic volumes are required to form the basis for the Level of Service (LOS) analysis, and traffic forecast. Traffic demand on roads in Pend Oreille County varies from fewer than 100 vehicles on local roads to as many as ~~1~~2,080~~,700~~ vehicles per day for the year 2012~~03~~. Traffic demand on state routes in the County varies from a low of 25~~19~~0 vehicles in the northern most part of the County to as high as ~~10~~8,6~~0~~00 vehicles per day around Newport (WSDOT 2018). Traffic volume dictates the type of roadway to be provided. Typically roads are categorized into functional classes to aid the funding review process.

Commented [BF8]: https://www.wsdot.wa.gov/data/tools/geoportal/?config=traffic, accessed on December 31, 2019

An inventory of the arterial streets, county roads, and state routes in Pend Oreille County provides a basis for the description of the existing transportation system. Existing Average Daily Traffic (ADT) on the major street network were assimilated in order to calculate the LOS of traffic operations. The assessment of existing traffic conditions and identification of planned transportation improvement projects provide the quantitative and qualitative measures used in the development of recommended transportation improvements.

~~Table A-4 of the Appendix shows the existing AADT on State routes and Table A-1 shows the existing 2003 ADT on County major and minor Collectors. Where traffic counts were not available for 2003 a traffic count for a previous year was used and inflated at 2% per year to 2003.~~

~~4.4.2~~4.5.2 Functional Classification System

Classification of streets and highways in the State of Washington is based upon guidelines prepared by the Federal Highway Administration (FHWA). Streets are classified based on the degree to which they provide through movement and land access functions. Specific criteria defining streets include the following:

Character and relative length of trips;

Anticipated or projected traffic volume; and

Relationship of a street to the land use it serves.

Each local jurisdiction is responsible for defining its transportation system into specific functional classifications. Pend Oreille County has those functional classifications below:

Principal Arterial: (02 Rural Principal) – Streets and highways that contain the greatest portion of through or long distance travel. Such facilities serve the high volume travel corridors that connect the major generators of traffic. The selected routes provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering the urban area. Within Pend Oreille County, only US 2 is designated a Principal Arterial.

Minor Arterial: (06 Rural Minor) – Streets and highways that connect principal arterials with the arterial and collector roads that extend into urban and rural areas. Minor arterial streets and highways serve less concentrated traffic generating areas such as small communities, neighborhood shopping centers, and schools. Although the predominant function of minor arterial streets is the movement of through traffic, they also provide for considerable local traffic that originates or is destined to points along the corridor. Within Pend Oreille County, SR 211, SR 20, and SR 31 are the only designated Minor Arterials.

Major Collector: (07 Rural Major Collector) – These routes should provide service to the county seat if not on a state route, to larger towns not directly served by the state route systems, and to other traffic generators of equivalent inter-county importance, such as consolidated schools, shipping points, county parks, and important agricultural areas. In addition, these routes should link larger towns and/or cities with state routes, and should serve the more important inter-county travel corridors.

Minor Collector: (08 Rural Minor Collector) – These routes should be spaced at intervals consistent with population density, collect traffic from local roads, and bring all developed areas within a reasonable distance of a collector road. In addition, these routes should provide service to the remaining smaller communities and link the locally important traffic generators with their rural hinterlands.

Local Access Road: (09 Rural Unclassified) – Streets not selected for inclusion in the arterial or collector classes. They allow access to individual homes, shops, and similar traffic destinations. Direct access to abutting land is essential, because all traffic originates from or is destined to abutting land. Through traffic should be discouraged by appropriate geometric design and/or traffic control devices.

Table 4-6 summarizes the lengths of the County transportation system by functional classifications. The County roadways classified as major and minor Collectors are analyzed in this Plan.

Table 4-6 County Transportation System Summary

Functional Classification	Length (mi)
Principal Arterial	19
Minor Arterial	96
Major Collector	107

Functional Classification	Length (mi)
Minor Collector	75
Local Access Road	369
Total Length	666

Source: Pend Oreille County 2004

Commented [BF9]: Verify with County and update as appropriate

~~4.4.3~~4.5.3 Existing Level of Service

The roadway Level of Service (LOS) is the fundamental description of traffic congestion and serves as a basis for road, street, and intersection design. ~~This descriptive role has been extended in recent years to use the concept of LOS in the development review process. Developers are required to determine the traffic impacts of their developments and mitigate additional traffic that may result from their development.~~ As a result of the requirement of the Growth Management Act (GMA), LOS standards are set by regulatory agencies as a threshold measurement. If the traffic impacts of a development exceed this LOS threshold, the developer is required to mitigate those impacts by helping to provide improvements such as streets and/or other infrastructure, transportation demand management programs to reduce single occupant vehicles, and transit and non-motorized alternatives. This mitigation is the fundamental basis of the GMA concurrency requirement that links land use development and transportation facilities. ~~It should be noted that communities could adopt revised LOS standards provided that these revised standards meet the GMA requirements.~~

~~The GMA recommends that the adopted LOS standard be regionally consistent.~~ The LOS standard ~~that is~~ adopted by the County is~~, therefore, should be~~ consistent with ~~those~~ LOS standards adopted by the communities of Pend Oreille County and by the North East Washington Regional Transportation Planning Organization (NEW RTPO). ~~As stated in the Countywide Planning Policies on transportation, the County should determine LOS standards for major connecting roads between the County and its neighboring jurisdictions.~~

~~The LOS standards established for HSS are divided into two categories, rural and urban. For rural areas, LOS C is the service standard, and for urban area, LOS D is the service standard. Highways of Regional Significance (HRS), which are those that do not have Statewide Significance designation, may be held to the locally adopted LOS standards of the jurisdictions in which they are located. However, at a minimum, the RTPO must establish LOS standards. (WSDOT 2002b)~~

~~The NEW RTPO, in cooperation with WSDOT, has adopted LOS standards for HRS and County facilities. For all State Highways, LOS C is the service standard, and for all other designated regionally significant transportation systems, LOS D is the service standard. (TEDD 2001)~~

~~LOS is a qualitative measure of the efficiency of a transportation facility such as roads or transit. Basically, LOS measures the operational condition of a transportation system. Much attention has been focused on establishing new, alternative ways to measure LOS under the GMA. The requirements of the GMA recommend that cities and counties determine LOS for roadways and set an LOS Standard for roadways, but that they should also set an LOS standard for transit facilities and services. These LOS standards have a planning function and a regulatory function.~~

~~The LOS standard is used to determine the qualitative existing and future performance levels of city and county roadways part of the planning function. The LOS standard also determines whether the GMA concurrency requirement has been met. The concurrency requirement is mandated by the GMA and requires that a regional LOS standard be set for roads and transit. All local and regional plans, and their standards, should comply with the regional adopted LOS standard.~~

~~The primary function of the arterial road system is to provide an orderly movement of traffic with reasonable mobility and capacity. The arterial road system must also be compatible with other functions of the community. The primary function is most commonly measured and rated using LOS standards as a guide. Community compatibility is less definite and requires a subjective evaluation of community values and standards. Community values and standards are derived from the transportation policies identified in the comprehensive plan and from standards in subdivision and zoning ordinances. Comments received during the public meetings provide additional information on what the community expects of their transportation system.~~

~~The 2000 Highway Capacity Manual describes six levels of service for vehicular traffic, which range from the highest - LOS A - to the lowest - LOS F. For two-lane highway segments, the Level of Service is calculated using average two-way volumes for the peak hour, and the LOS criteria is based on Percent Time Spent Following (PTSF) and the Average Travel Speed, as summarized in Table 4-4. State Routes are analyzed as Class I two-lane highways and County roads are analyzed as Class II two-lane highways. The average two-way volumes for the peak hour are assumed to be 10% of ADT volumes.~~

~~Table A-5 of the Appendix summarizes the LOS for State Route segments, which operate at LOS C for US 2 and one segment of SR 31 and LOS B for all other State Routes segments. Table A-1 summarizes the LOS for County roadway segments, which all operate at LOS A under existing condition. The conventional method described in the 2000 Highway Capacity Manual suits urban areas well. However, in Pend Oreille County, where concerns for roadway conditions, geometrics, and all weather roads are more critical this LOS method may be inadequate.~~

~~4.4.4~~4.5.4 Traffic Forecasts

~~There are a number of ways of providing travel forecasts. The use of travel demand models, which are based on land use, provide the greatest degree of accuracy for predicting future travel and assigning trips to specific routes. These models typically use trip generation rates for a variety of land use categories to calculate how many trips a particular site or area will generate. The trip generation rate is based on the particular measurement, such as trips per 1,000 square feet of retail space, trips per dwelling unit, or trips per person, and is provided by local knowledge or using national survey data. The model uses a four-step process of trip generation based on land use, trip distribution based on the transportation network (primarily the road system), mode split, and then trip assignment.~~

~~When forecasting models are not available, a~~A Growth Trend Method wa~~i~~s ~~typically~~ used to forecast future traffic volumes, ~~. This method uses~~based on past growth trends and ~~modified based on~~ anticipated or planned land use changes- and forecasted Average Daily Traffic (ADT) volumes ~~to forecast future traffic volumes~~.

~~Trend Analysis Forecasting~~

~~The Growth Trend Method is used primarily in rural areas, but can also be used in urban areas with stable or steady growth patterns. WSDOT used the growth trend method for statewide traffic forecasting, but with average growth factors developed for each county and by functional class of each state route. Trend analysis looks at historical data and activity as the basis for the projecting future traffic activity. The growth rate used in trend analysis can vary, and it is possible to conduct projections under several scenarios using different growth rates. However trend analysis forecasting assumes for the most part that future traffic growth will mirror and follow historical trends.~~

~~The trend analysis method is applicable where sufficient count data is available to establish a trend line for the subject streets. Average Daily Traffic (ADT) volumes are used in this case. The simplest procedure is to plot the data for each year and establish the trend line. This procedure will not necessarily produce the most reliable projection but it will result in different individuals' obtaining the same mathematical results.~~

~~Trend analysis is most applicable where extensive count data over a long period of time is available and where the streets or roads are not already at capacity. Trend analysis is based on the assumption that recent growth or growth rates in traffic volumes will continue through the study target year and that there are no capacity restraints. Use of this method should be avoided where substantial transportation system changes will alter traffic patterns within the study area.~~

~~Forecasting Methodology~~

~~The forecasting methodology used for the Pend Oreille County Transportation Plan is Trend Analysis Forecasting. This methodology was chosen for the following reasons:~~

~~Land use information is not readily available in sufficient detail to perform conventional transportation modeling (land use information would be needed for the entire County, both existing and design year, to perform trip generation);~~

There is extensive traffic count information available on State Routes from the WSDOT;

~~The existing land use, on the macro scale, is not anticipated to change significantly in the time frame covered by this study because the land use alternatives developed would have only minor deviations from the existing trend growth;~~

Population forecasts for the same time period show a 1.4% growth per year; and

Relatively minor traffic congestion is anticipated through the design year to cause traffic to shift away from the existing trend.

Based on these considerations, it was determined that trend analysis is the appropriate forecasting methodology. Where specific developments are known, trips will be added to the network and will be analyzed on a project-specific basis.

State Route Traffic Forecasts

Traffic volumes on State routes were analyzed using WSDOT's historical count data. This data is summarized in Table A-4 of the Appendix. Generally, traffic volumes along US 2 and SR 211 have increased by approximately 2% per year over the past 10 years. State routes in the northern portion of the County have either declined slightly or remained the same over the same period of time. Because the traffic volumes are so low along these State routes a small change, less than 100 vehicles, will result in an annual rate of 1% over a several year period. Because the County may see an increase in recreational traffic over the next 20 years and population growth is projected at ~~over~~ less than 1% per year an annual growth rate of 2% per year for all State routes will be used.

Commented [BF10]: Discuss with County PW/verify and update

County Road Traffic Forecast

~~The trend analysis forecasting methodology for county roads was predicated on 2003 as the base year. The County has extensive counts from 1991 through 2003. All counts were adjusted to 2003 using the 2% growth rate, which is derived from WSDOT AADT data on State Routes, to establish a common base.~~

~~A 2% growth rate was chosen as the annual growth rate for all County roads. Several factors were considered in arriving at this growth rate. The WSDOT has used approximately 2% as the growth rate on state routes in Pend Oreille County. A review of County road count history revealed modest growth along roads in the southern portion of the County, while along northern roads they have either declined slightly or remained the same. Analysis of count history and experience elsewhere in eastern Washington revealed a modest growth rate.~~

While travel historically increases at a greater rate than population, population is still a good indicator of overall growth in rural areas. Through trips are anticipated to grow faster than local trips, but most of the long-distance through trips would be on state routes. Population forecasts project a 1.4% annual growth rate. Overall, it was decided that a 2% per year growth is appropriate for county roads.

Commented [BF11]: Lets discuss this past method with what the County provided in 2019

The calculated 2010 and 2025 average daily traffic (ADT) for County arterials is summarized in Table 4-7. The table shows the highest ADT volumes of each County Collector. The ADT volumes by roadway segments are presented in Table A-6 included in the Appendix.

The County last conducted systematic Road volume counts in 2012. No systematic county wide counts have been conducted since. Pend Oreille County population in 2000 was 11,667. The population in 2019 is 13363. This works out to a growth rate of 1696 persons over 19 years or 89.2 persons per year or 0.76% growth rate per year.

Table 4-7 2025~~10~~ and 2030~~25~~ Average Daily Traffic Projections on County Roads

Rd. Number	Road Name	FFC	Existing ADT	Year Counted	Projected * 2025	Projected * 2030
93050	Leclerc Rd S	07	2084	2012	2291	2371
33890	5th St (Usk)	07	1646	2012	1810	1873
91440	Southshore Diamond Lake Rd	07	1120	2012	1231	1274
93250	Leclerc Rd N	07	1018	2012	1119	1158
91600	Deer Valley Rd	07	1047	2012	1151	1191
16651	Scotia Rd E	07	976	2012	1073	1110
18890	Coyote Trail	07	600	2012	660	683
19030	Gray Rd	07	295	2012	324	336
91320	Northshore Diamond Lake Rd	08	1194	2012	1313	1358
15750	Spring Valley Rd	08	952	2012	1047	1083
92050	Westside Calispel Rd	07	529	2017	561	582
92160	Mckenzie Rd	07	525	2012	577	597
93450	Sullivan Lake Rd	07	467	2012	513	531
91230	Camden Rd	08	456	2012	501	519
21100	Flowery Trail	07	350	2012	385	398
30290	Bead Lake Rd	08	360	2012	396	410
91110	Fertile Valley Rd	08	300	2012	330	341
92360	Cusick Meadow Rd	08	259	2012	285	295
27140	Smackout Pass Rd	07	200	2013	218	226
29750	Boundary Rd	08	200	2012	220	228
26950	Meadow Road	07	100	2012	110	114
10030	Horseshoe Lake Rd.	08	100	2012	110	114
18750	McCloud Creek Rd	08	100	2012	110	114

Field Code Changed

~~Road#~~	~~Road Name~~	~~2010 ADT~~	~~2025 ADT~~
~~30290~~	~~Bead Lake Rd~~	~~440~~	~~590~~
~~29750~~	~~Boundary Rd~~	~~510~~	~~680~~
~~91230~~	~~Camden Rd~~	~~540~~	~~730~~
~~18890~~	~~Coyote Trail~~	~~490~~	~~660~~
~~92360~~	~~Cusick Meadow Rd~~	~~310~~	~~420~~

~~Road#~~	~~Road Name~~	~~2010 ADT~~	~~2025 ADT~~
~~91600~~	~~Deer Valley Rd~~	~~1,290~~	~~1,730~~
~~16741~~	~~Farr's Lane~~	~~480~~	~~650~~
~~91110~~	~~Fertile Valley Rd~~	~~740~~	~~990~~
~~21100~~	~~Flowery Trail Rd~~	~~310~~	~~420~~
~~19030~~	~~Gray Rd~~	~~320~~	~~430~~
~~10030~~	~~Horseshoe Lake Rd~~	~~110~~	~~150~~
~~33890~~	~~Kings Lake Rd~~	~~2,010~~	~~2,710~~
~~93250~~	~~LeClere Rd N~~	~~980~~	~~1,310~~
~~93050~~	~~LeClere Rd S~~	~~1,940~~	~~2,610~~
~~18750~~	~~McCloud Creek Rd~~	~~140~~	~~190~~
~~92160~~	~~McKenzie Rd~~	~~400~~	~~540~~
~~26950~~	~~Meadow Rd~~	~~280~~	~~370~~
~~91320~~	~~N Shore Diamond Lake Rd~~	~~880~~	~~1,190~~
~~91440~~	~~S Shore Diamond Lake Rd~~	~~950~~	~~1,280~~
~~16651~~	~~Scotia Rd E~~	~~1,220~~	~~1,640~~
~~27140~~	~~Smackout Pass Rd~~	~~830~~	~~1,110~~
~~15750~~	~~Spring Valley Rd~~	~~930~~	~~1,250~~
~~93450~~	~~Sullivan Lake Rd~~	~~590~~	~~790~~
~~92050~~	~~Westside Calispell Rd~~	~~770~~	~~1,040~~

~~Source: Pend Oreille County 2004.~~

~~4.4.5~~4.5.5 Level of Service Forecasts

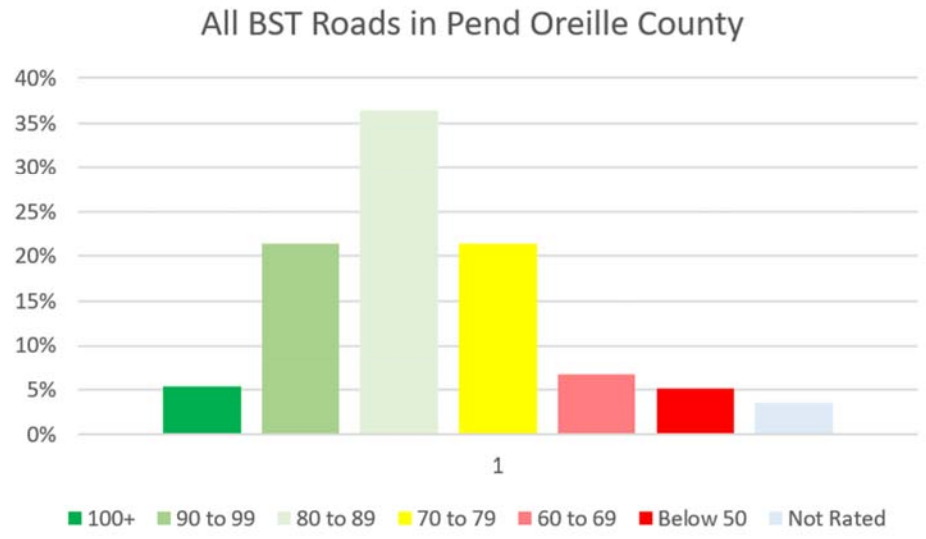
Pend Oreille County continues to have relatively low population compared to the rest of Washington State. This low population translates into high levels on service on all of our County roads. As of the fall of 2019, there are no Pend Oreille County Roads which have low level of service. County Road 93050 Leclerc Rd. S. has a projected 2030 ADT of 2371. Pend Oreille County roads enjoy LOS B using the following definition: "reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted. The lowest average vehicle spacing is about 330 ft(100 m) or 16 car lengths. Motorists still have a high level of physical and psychological comfort.".

Commented [BF12]: Should also state the LOS standard, which is C?

~~Using the conventional LOS method from the Highway Capacity Manual, the LOS for each segment of County road was calculated and listed in Table A-6 of the Appendix. This table shows that all County roads operate at LOS A for the year 2010 and LOS A with LOS B for one segment in the year 2025.~~ The projected 2030~~25~~ ADT on County roadways varies from a low of 114~~0~~ vehicles to as high as 2,371~~610~~ vehicles per day.

~~The conventional Level of Service (LOS) defined by the 2000 Highway Capacity Manual has limited value in a rural county such as Pend Oreille County. Congestion, which is an indicator that a roadway is approaching capacity, is generally not an issue in Pend Oreille County. A~~The conventional LOS analysis of the County would conclude that there are no needs for roadway improvements, while the citizens of the County and the local government recognize the need for improvements on some sections of the roadway system. These improvement needs may take the form of street or road widening to meet standards, resurfacing to improve comfort, passing lanes to address seasonal RVs and trucks, spot safety improvements, and/or adding traffic control devices, as characterized in the County's most recent 6-year Transportation Improvement Plan, along with maintenance needs further described below.

The County maintains extensive maintenance records. A recent review of these records shows the Counties FFC 07 Roads (highest classification), are in relatively good condition.



Of the roads rated 79 or below, all of the FFC 07 roads have projects with funding within the next two years. The County is lacking funding for the lower FFC 08 and 09 roads. The County currently spends 250,000 per year to maintain these lower level roads. It has been determined by the County that, while these roads will meet the LOS for the forecasted time period, an additional $250,000 per year is needed to maintain a 10-year rotation and avoid a future spike in road improvements costs. This includes costs to replace and maintain our gravel roads. The County's gravel roads have received little or no new gravel during the past 10 years. Studies have shown that gravel roads lose between 2 to 3 % of their gravel each year.

Commented [BF13]: We should further explain the FFC description so that members of the public will understand more clearly this discussion.

~~A composite LOS was developed to measure the overall roadway performance. The method is intended to identify and prioritize roadway improvement needs, not just relative capacity. The goal of using the composite LOS is to assist decision makers in programming limited transportation funding in an efficient and effective manner.~~

Commented [BF14]: A simplified analysis approach was used for the updated LOS forecast

~~The composite LOS method uses a number of criteria to evaluate and prioritize County roads. These criteria are as follows:~~

~~LOS: The conventional LOS as defined by the Highway Capacity Manual is used to allocate points. The LOS for 2025 was used to evaluate roadway segments. An LOS rating of A will receive less points then a rating of B, etc.~~

~~Pavement Condition: The pavement condition of each arterial County road segment is rated annually to determine the need for repaving and/or repair needs. This rating is based on criteria used statewide by Counties and results in an overall rating and ranking of County roads. To determine pavement conditions in the future depreciation graphs were used which evaluate traffic volumes and truck usage. Points were then assigned with the worst conditions receiving the highest number of points.~~

~~Accident Rate: The previous 5-year accident rate for each segment of roadway was calculated and the higher the rate the more points were assigned.~~

~~Fatalities: Where fatality accidents occurred during the previous 5 years, points were allocated to the particular segment of roadway.~~

~~Geometric Conditions: Each segment of roadway was rated as to its drivability and current roadway conditions as compared to adopted standards. The standards included lane width, shoulder width, geometrics, etc. Points were assigned based on the roadways rating with the roads not meeting standards or having poor derivability receiving the highest points.~~

~~Road Restrictions: The ability to move goods and provide services throughout the year is important in Pend Oreille County. Road restrictions often occur on many roads during the spring thaw because of inadequate pavement structure. To evaluate this issue, the number of restricted road days during the winter of 2003-2004 was used to assign points to roadways. The more restricted days the more points were assigned.~~

~~The final point assignment and subsequent ranking of roadway segments are shown in Table A-7 of the Appendix for the years 2010 and 2025. The table lists each roadway segment, the evaluation criteria, and the points assigned. Table A-8 of the Appendix shows the rating values used to assign points.~~

~~The resulting table may also be used to establish LOS for GMA purposes or establish a priority array for selecting capital projects. Discussions with County staff, planning commission members and citizens revealed a belief that all roadways currently are at an acceptable level of service for GMA purposes. As a result, Table 4-8 should be used to establish County road level of services with LOS C adopted as the acceptable level of service for County roads. Based on this LOS standard there are no County roads that exceed acceptable standards.~~

~~Table 4-8 Concurrency Level of Service~~

~~Level of service~~	~~Point Range~~
~~A~~	~~< 20~~
~~B~~	~~21 to 30~~
~~C~~	~~31 to 40~~
~~D~~	~~41 to 50~~
~~E~~	~~>51~~

~~4.4.6~~4.5.6 ~~4.6.7~~ Conclusion

Several findings and/or conclusions can be drawn from the analysis of the development of the traffic and LOS forecasts:

- The historical average population growth rate in Pend Oreille County has been low. Traffic generated by the residents of the County can be expected to generally follow the growth of the population. Historically, however, traffic has grown somewhat faster than population, reflecting such factors as an increase in vehicle ownership, more recreational travel to the County, and longer-distance trips.
- Congestion is generally not a problem in Pend Oreille County. Within and adjacent to towns there are isolated congestion problems that should be addressed specifically. Seasonal congestion issues on recreational and through routes should also be addressed as transportation deficiencies.
- Additional resources of approximately $250,000 per year is needed to maintain County gravel roads to avoid higher future road maintenance and reconstruction costs.

Commented [BF15]: Discuss with County if still valid

9.0 Capital Facilities Element

9.1 Overview

The Capital Facilities element provides a functional description of the County's current infrastructure needs and a projection of those needs as population grows in the County. Capital facilities include roads, bridges~~, sewers~~, parks and open spaces, facilities for drinking water, wastewater, surface water, solid waste disposal and recycling, and the government buildings that house public services. These capital facilities are needed to support the future growth expected in the County.

~~Projections of infrastructure needs are based on measurable level of service (LOS) standards and population projections.~~ Policies are adopted to guide future capital spending, and to require new infrastructure to be provided concurrently with new development. ~~Each jurisdiction planning~~The County under the Growth Management Act (GMA) ~~shall~~ makes ~~its~~ capital budget decisions in conformity with its comprehensive plan.

The Capital Facilities and the Capital Finance Plan help the ~~community and its officials~~County to make the sound financial decisions that will ensure that ~~county~~ services such as law enforcement, transportation facilities, parks, and solid waste disposal will continue to adequately support county residents today and ~~through the year 2025~~into the future. Particularly important are those facilities that the county funds or those facilities that influence the type and quality to the growth and development of the County.

9.2 Growth Management Act Requirements

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Under the Growth Management Act (RCW 36.70A), a capital facilities element is one of the six required elements of the comprehensive plan. Under the Growth Management Act (GMA), this element must:

- *Identify public facilities that will be required during the 6-years following adoption of the comprehensive plan;*
- *Include the location and cost of the facilities, and the sources of revenue that will be used to fund the facilities; and*
- *Be financially feasible, i.e. dependable revenue sources must equal or exceed anticipated costs. If the costs exceed the revenue, the local government must reduce its level of service or otherwise reduce costs, or else the land use element of the comprehensive plan must be modified to bring development into balance with available or affordable public facilities.*

~~Other requirements of the GMA include forecasts of future needs for capital facilities, and the use of objective Level of Service (LOS) standards as the basis for public facilities planning. The need for public facilities in the element must be based on quantifiable, objective measures of capacity, such as gallons of water per person, traffic volume capacity per mile of road, and acres of park per capita. These standards are used to predict the amount of service needed as population increases. Acceptable standards are expected to vary from one community to the next, depending on its size, financial resources, and the desires of its citizens. (see RCW 36.70A.020)~~

~~Responsibility for adopting specific LOS standards rests with the Board of County Commissioners.~~

~~The GMA, at RCW 36.70A.150, also requires the identification of lands useful for public purposes. These lands needed to accommodate public facilities include utility corridors, transportation corridors, landfills, sewage treatment facilities, storm water management facilities, recreation, and schools. The GMA further requires that the County work with the state and the cities in the County "….*to identify areas of shared need for public facilities."* The jurisdictions with the County are then required to "…*prepare a prioritized list of lands necessary for the identified public uses including an estimated date by which the acquisition will be needed."* This coordination among the cities, the state, and the County provides the opportunity to identify the areas of shared need and allows the possibility of shared use and other efficiencies. More information on lands useful for public purposes is provided in section 9.2 of this element.~~

~~In addition, the GMA requires that comprehensive plans must contain some process for *"identifying and siting" essential public facilities such as airports, correctional facilities, solid waste handling facilities, mental health facilities and group homes, and other hard to site facilities."* RCW 36.70A.200 (2) states: "*No local comprehensive plan or development regulation may preclude the siting of essential public facilities."* This section does not preclude reasonable review of proposals; it merely states that local jurisdictions must not arbitrarily exclude such facilities. Section 8.0 specifically deals with Essential Public Facilities within this plan.~~

The Capital Facilities Plan (CFP) ~~must be updated~~is updated each year as part of the County budgeting process. ~~The annual update must be completed before the county's budget is adopted in order to incorporate the capital improvements from the updated CFP in the county's annual budget. Counties shall perform their activities and make budget decisions in conformity with their comprehensive plan.~~

~~Several provisions of the GMA require that public facilities needed to support development shall be available at the time of such development. This "concurrency" requirement states that no development order or permit be issued if it would result in a reduction in the levels of service below the standards adopted in the comprehensive plan (see RCW 36.70A.020, 36.70A.070, 58.17.110). Policies must be developed to insure that sufficient public facility capacity is available for each proposed development, or that development applications are denied when public facilities are not sufficient. According to Growth Management procedural criteria in WAC 365-195-210, available public facilities means that facilities or services are in place or that a financial commitment is in place to provide the facilities or services within a specified time. In the case of transportation, the specified time in the GMA, at 36.70A.070 (6)(e), is 6 years from the time of development.~~

~~The CFP function in the context of GMA planning is the element that shows how the comprehensive plan guides capital facilities decisions and spending. The requirements to establish measurable level of service standards, to be financially feasible, and to provide facilities concurrent with development are intended to be a reality check for the vision of community's future as laid out in its comprehensive plan.~~

9.3 Capital Facilities Goals

Capital Facility Goal #1: Evaluate and plan to correct existing capital facilities system deficiencies, as well as plan for future capital facilities needs and requirements.

Capital Facility Goal #2: Assure that public facilities needed to accommodate growth are adequate and are provided concurrently to the need, based on the County's adopted level of service standards.

Capital Facility Goal #3: Inform citizens of the financial requirements for needed capital improvements.

Capital Facility Goal #4: Schedule capital expenditures for all infrastructure systems in a comprehensive and financially sound manner.

9.4 Capital Facilities Policies

In support of the Capital Facility Goals, Pend Oreille County will implement the following Capital Facility Policies:

Capital Facility Policy #1: The ~~Pend Oreille~~ County 6-year Capital Facilities Plan (CFP) shall be updated annually, in conjunction with the county budget process. When updating the Capital Facilities Plan, consideration shall be given not only to the cost-effective design, but also to maintenance and operation costs.

Capital Facility Policy #2: ~~Pend Oreille County shall i~~Include capital projects that are required to carry out policies of other elements of the Comprehensive Plan in the Capital Facilities Plan.

Capital Facility Policy #3: ~~Pend Oreille County shall, as~~As projects are added to the Capital Facilities Plan, review the timing of all other projects to ensure the availability of financing and other resources.

Capital Facility Policy #4: ~~Pend Oreille County shall p~~Prepare a prioritized list of lands necessary for the identified public county facilities, including an estimated date by which the land acquisition will be needed.

Capital Facility Policy #5: ~~Pend Oreille County shall a~~Adopt a concurrency management plan to evaluate specific development proposals to ensure that needed capital expenditures are made concurrent with development.

Capital Facility Policy #6: P~~end Oreille County shall p~~eriodically review forecasted ~~staffing,~~ facility~~,~~ and equipment needs and establish target dates for the repair or replacement of County facilities.

Capital Facility Policy #7: ~~Pend Oreille County should d~~Design and landscape capital facilities to blend in with the surrounding environment and to mitigate potential adverse impacts.

Capital Facility Policy #8: ~~Pend Oreille County should, t~~When ~~o the greatest extent~~ feasible, utilize dedicated capital facility funds to leverage state and federal grant funds.

Capital Facility Policy #9: ~~Pend Oreille County shall w~~Work with the State and the cities and towns within the County to identify areas of common need or the opportunities for the shared use of ~~-~~public facilities.

Capital Facility Policy #10: ~~Pend Oreille County shall c~~Consider collecting impact fees or other means of assisting fire districts in financing needed capital improvements.

~~**Capital Facility Policy #11:** Pend Oreille County may designate the establishment of a County-wide GIS system as a public project to be included in the County Capital Facilities Plan and/or as a public facility necessary to serve economic development purposes in this rural County.~~

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9.5 Existing Conditions and Level of Service

The capital facilities for which the County has direct responsibility include roads, solid waste disposal, parks and recreation, and county administrative facilities for the general government services provided by the courts, auditor, assessor, sheriff, commissioners, public works, and many other functions which take place in the Courthouse, Hall of Justice, Sheriff's Office, and other county facilities. For each area of County responsibility, the existing facilities inventory is maintained in the County GIS system and incorporated by reference into the Comprehensive Plan. ~~are described and the Level of Service Standard is discussed in the Capital Facilities Background Report in Appendix B. The existing facilities are compared to the LOS standard to determine the capital expenditures, which may be needed to correct existing deficiencies and bring the facilities up to the LOS standard. The LOS standard and population projections or workload projections are then used to determine the need for additional capital facilities to accommodate expected population growth. These additional capital facilities are included in the 6-year planning period, and in the case of county administration facilities, in the 20-year planning period as well. Finally, potential funding sources are identified.~~

9.5.1 Capital Project Selection and Level of Service Standards

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The County and public facility providers will use established LOS for identifying capital improvements. For the County, LOS standards have been established for County roads, as discussed in Section 4.5.6. These LOS standards, along with other factors considered for other County facilities are considered in identifying planned capital improvements. Other factors considered in planning these improvements include identifying projects that:

- Address existing deficiencies
- Preserve existing capacity
- Provide for new development
- Enhance quality of life
- Meet other County needs not related to growth

The County will evaluate whether the County road standards and other identified capital needs are being met when updates to the Comprehensive Plan are performed according to the deadlines in RCW 36.70A.130(1), when UGAs are reviewed according to RCW 36.70A.130(3), and when major changes are made to this element. If these standards are not being met and public facilities are inadequate, the County will consider one or more of the following strategies:

- Reduce public facility demand
- Reduce LOS standards
- Increase revenue
- Reduce the cost of the needed public facilities

- Reallocate or redirect population and employment growth to make better use of existing facilities
- Phase growth or adjust the timing of development, if the lack of public facilities is a short-term issue

The County will also evaluate if proposed development activities would reduce the LOS of public facilities below the adopted standards. If a proposal is expected to impact a transportation facility and cause it to fall below the LOS standard, then preliminary development approval would also need to include additional improvements or strategies made concurrent with the development that maintain these standards. All other types of public facilities do not have the specific concurrency requirement that transportation facilities have, but they do require the provision of adequate public facilities as a condition of project approval.

Public facility improvements for maintenance or other needs and not targeted to maintain LOS may include:

- Facility repairs
- Remodels
- Renovation
- Replacement of obsolete or worn out structures
- Improvements that do not reduce financing for other improvements needed to achieve or maintain LOS standards
- Improvements that do not contradict, limit, or substantially change the goals and policies of any element of this Comprehensive Plan

Public facility improvements may also provide capacity in excess of what would be required to achieve or maintain LOS standards (i.e., the minimum capacity of a capital project is larger than the capacity required to provide the LOS). Excess capacity is beneficial if it results in economies of scale making it less expensive than a comparable amount of capacity acquired at a later date. However, these projects may be given a lower priority than projects needed to maintain the LOS standard.

~~9.5.1~~9.5.2 ~~Future Growth and Deficiences~~ Capital Facilities and Land Use

There is a direct relationship between the Capital Facilities and Land Use elements of the Comprehensive Plan. The Land Use element determines where and at what density population and employment growth will be located. The Capital Facilities element identifies the thresholds of growth, when new and expanded public facilities will be needed, and indicates the County's priority system for constructing the identified public facilities. Although some public facilities are provided by other government agencies or private entities, the County must demonstrate these services are available. ~~The Office of Financial Management (OFM) population projections are presented here. While the Growth Management Act (GMA) requires counties to use the OFM projections under most~~

~~circumstances, it was generally recognized that the OFM projections from the early 1990s for eastern Washington counties were inaccurate. By 1995, Pend Oreille County had already exceeded the 20-year population projection of 10,600 persons, released by OFM in 1992. This discrepancy was the result of a trend towards migration to rural areas that started around 1990 following a decade of relatively flat population growth in rural eastern Washington. The OFM updated low-, medium-, and high-range population projections from 1995 are shown in Table 2.2.~~

~~It is important to stress that population projections of the type presented below are inherently speculative, and do not consider three factors which may seriously affect population in the County: 1) The construction of second homes for seasonal residents; 2) the possibility of large resort development along the Pend Oreille River; and 3) the proposed opening of the Pend Oreille Mine in the Metaline Falls area. For these reasons, population projections should be reviewed annually during each update of this plan.~~

~~Population history for the County is shown in Table 2-1. This table illustrates the general trend in rural eastern Washington towards an increasingly higher percentage of population living outside of incorporated areas, a trend beginning in the 1970s that has repercussions regarding the costs of provision of services in the rural areas of the County. In 1960, 53.3% of the county population lived outside the five incorporated areas. That figure was unchanged in 1970, increased to 65.1% in 1980 and to 68.6% in 1990. The year 2000 Census showed 74.5% of the population living in the unincorporated areas, up roughly 3% since 1993.~~

~~Projected population for the County is presented in Table 2-2. Consistent with growth assumptions in the Comprehensive Plan, the County has adopted the Office of Financial Management (OFM) intermediate population projections. County population is projected by OFM to increase at a rate of slightly more than 200 residents per year for the 20-year period 2005 to 2025 – from 12,679 to a 16,662.~~

~~Based on the experience of the mid- and late 1990s and using the OFM medium-series population projections, an estimate has been made of population growth outside of the incorporated areas in the County. Although historically the population has increasingly shifted outside of incorporated areas, this projection assumes that the proportion of population outside of incorporated areas will stabilize at about 75% of the total population. This stabilization could take place through a combination of disincentives to live outside of incorporated areas, such as county restrictions on subdivision or increased requirements for group water systems, and incentives to live inside towns, such as the availability of housing existing infrastructure. Table 4.3 presents a projection on rural population increases over the next 20 years, based on the assumption that population outside the incorporated areas will stabilize at 75% of the total county population and using OFM medium-series projections. Year 2000 total population figure is from the official U.S. Census.~~

Commented [BF3]: This outdated info has been updated in the Land Use element (Section 2)

~~9.5.2~~9.5.3 County Capital Facilities Improvement Plan

Capital facilities are planned to accommodate expected population growth and to meet other County needs. These additional capital facilities are included in the 6-year planning period and potential funding sources are identified for roads, solid waste management facilities and other capital improvements. The County has produced the following 6-year Capital Facilities Plan, which is a list of proposed improvements. The 6-year Capital Facilities Improvement Plan is updated annually as part of the Pend Oreille County budget process. Any updates to the Capital

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Facilities element of the Comprehensive Plan will be considered concurrently with other proposed amendments that are included in the annual Comprehensive Plan amendment review. The County's CIP, adopted by reference, is a dynamic document that will be updated annually to reflect new cost information, funding information, project list changes, and existing facility updates. The annual updates to the CIP will be done prior to the annual budget process so that CIP projects can be included in the annual budget.

Capital Facilities and Public Facilities Projects

The County maintains a plan for other County facilities and public facility improvements. Improvements are described along with cost, funding source, and year planned. The plan is reviewed and updated annually, as necessary. Table 9-1 identifies the latest improvements planned for certain County capital and public facility projects. In addition to these improvements, road, parks and solid waste improvements are also included in the County's Capital Facilities Improvement Plan.

Roads

~~Existing Facilities (including equipment replacement situation): The County contains 807.8 miles of roads. Of these, 549 miles are County roads and 258.7 miles of roads under other jurisdictions. These figures do not include Forest Service roads. Table 4-3 lists the total miles of county roads. (See Appendix A Transportation Table A-5)~~

Major road improvements are scheduled through Pend Oreille County's 6-year Transportation Improvement Program (TIP). Improvements are described by location, cost, funding source, and year for commencement of each phase of the improvement. No improvements are currently planned other than those listed. The full 6-year ~~Transportation Improvement Plan (~~TIP~~)~~ is described in Chapter 4 and incorporated into the County CIP by reference. ~~available at the Public Works Department office. (See the Transportation Element of the Comprehensive Plan for the detailed information, and Goals and Strategies regarding the annual 6-year Transportation Improvement Program.)~~

Parks

The Parks Plan contains a detailed inventory of parks, trail and recreational facilities in the County, along with future opportunities for improvements. This plan, including any future updates, is incorporated into this plan by reference, as described in greater detail in Chapter 6.

Solid Waste Facilities

Solid waste facility improvements are identified in the County's Solid Waste Management Plan. Improvements are described along with cost, funding source, and year planned. The SWMP is incorporated into this plan by reference.

Commented [BF4]: County to provide status on SMWP update and CIP – verify and update as appropriate

~~Table B-1 contains data on county road facilities for the service and storage of equipment. (see Capital Facilities and Utilities appendix)~~

~~Level of Service Standard(s) and Forecast of Demand~~

~~A number of alternative approaches to transportation standards exist. The traditional alternatives include the Highway Capacity Manual (HCM) Signalized Intersection Method, and the variations on it, which measure capacity at intersections. One alternative approach is to modify~~

~~capacity measures to allow for greater development in dense traffic areas. This alternative is in response to the tendency of HCM standards to promote suburban sprawl under some conditions, in contradiction to the anti-sprawl goals of the Growth Management Act (GMA). A second alternative approach is to supplement HCM-type standards with standards for pedestrian travel, bicycle lanes, and mass transit. While both of these alternatives seem promising, neither seems particularly appropriate to Pend Oreille County, where county roads tend to be rural and to serve relatively low-density development.~~

~~For the purposes of this plan, the County has adopted a rural composite Level of Service methodology described in the Transportation Element of this Plan. This method assigns points for a variety of operational and road condition factors related to rural road systems. The detailed method is available at the Public Works office. For bicycle and walking lanes, the County will continue with its current program of installing extra-wide shoulders on county arterials as the arterials are rebuilt. At this time, no formal standards are established for non-motorized transportation.~~

~~Six-Year Road Improvement Project~~

~~6-year Road Improvement Program – This program of road improvements should be adequate to correct existing roadway problems over the period of the 6-year plan. Table 9.1 lists the projects included in the 6-year plan and proposed funding sources.~~

Table 9.1: County Capital Facilities Improvements~~Six Year Road Transportation Improvement Program (Separate Document)~~

Commented [BF5]: Will there be an updated version of this table prior to June 2020?

Pend Oreille County Comprehensive Plan Table 9.7 2018 Capital Projects and Public Facilities Plan Adopted:09/20/2016

Department	Project	Cost	Funding	2018	2019	2020	2021	2022	2023	2024	2025
Buildings & Grounds	Courthouse Elevator Replacement	115,000	CP	115,000							
Buildings & Grounds	227 Garden Building HVAC Replacem	70,000	CP	70,000							
Prosecutor Office	Hall of Justice Office Configuration	25,000	CP	25,000							
Public Works	Fairgrounds Fire Flow Study	40,000	CP/GR	40,000							
County Gov.	40 x 60 Pole Building for Storage	99,000	CP/SH	99000							
ITS	Data Center (Location Study)	11,500	CP	11,500							
ITS	Physical Security Upgrade (County wi	30,000	GR/CP	20,000							
WSU Extension	4-H Building Study	40,000	CP/GR	40,000							
Bond	Martin Hall Principal & Interest	72,195	CP	36,253	15,000	15,000	15,000	15,000	15,000		
Economic Development Pre	Administrative Costs for EDC &TEDD	660,000	PF	110,000	110,000	110,000	110,000	110,000	110,000		
Totals		**1,162,695**		**566,753**	**125,000**	**125,000**	125,000	125,000	125,000	0	0
CP - Capital Project Fund	2017-2021 = 15,000 per year Maintenance of the Martin Hall Facility										
PF - Public facilites Fund											
GR - Grant funded											
B- Bond											
SH - Sheriff's Office											

~~In assessing future county growth, it is important to consider the cost of increased road maintenance. As new roads are built, developers can be required to build roads to county standards. However, ongoing maintenance will be a continuing cost. A rough calculation shows that the County spends around $3,200 per mile of county road per year. (In 2002 the County budgeted $2,381,117 in road maintenance expenses for 549 miles of county roads. This sum does not include administration and facilities costs.) State and federal funds can be used only for 07 and 08 roads, not for road maintenance.~~

~~Maintenance is funded primarily from the gasoline tax and property tax. In order to recover this annual maintenance cost from the road assessment, each mile of new county road would need to serve $1.4 million in assessed value at the current assessment of $2.25 per thousand. (Note: According to the Washington State Department of Transportation (WSDOT), "07" refers to major collector routes, such as LeClerc South and Deer Valley Roads that serve as the major feeder system to the principal and minor arterials. "08" refers to minor collector routes, such as Coyote Trail and Deer Valley Roads that provide for most of the intra-county road travel on roads with a higher use design than local access roads.)~~

~~Potential Road Funding Sources~~

~~Road improvements (as opposed to maintenance) listed in the 6-year Transportation Improvement Program will continue to be funded through a combination of state and federal revenues, federal Transportation Equity Act-21 (TEA-21) funds, state Rural Arterial Program (RAP) funds, and the road assessment on real property. These funds should be sufficient to fund needed projects.~~

~~County Equipment and Vehicles~~

~~Though they are not major county capital facilities, equipment and vehicles are discussed briefly in the following paragraphs:~~

~~Heavy Equipment and Vehicles~~

~~Heavy equipment and most vehicles are owned by the county's Equipment Rental and Revolving (ER&R) Fund, which rents the vehicles to the various county departments. Accounts are maintained for each vehicle, and rental rates are adjusted to provide for replacement at the end of projected life. A few vehicles are owned outside the ER&R fund by each department. This system appears to work very well.~~

~~Minor Equipment~~

~~Smaller equipment items are owned by individual departments, with a master inventory maintained by the county Personnel/Civil Service Department. All of these items have a projected replacement date listed in the inventory.~~

~~County Administration Existing Facilities~~

~~The inventory of county administrative buildings and specific offices, each owned by the County, is contained in Table 9.2.~~

~~Table 9.2 County Administrative Buildings~~

~~Buildings and Programs Housed~~	~~Size (sq. ft.)~~	~~Year Built~~	~~No. Full-time Employees~~
~~Courthouse: Commissioners, Auditor, Assessor, Treasurer, Personnel, Public Works (Planning & Building, Roads, Solid Waste~~	~~13,515~~	~~1915/1992~~	~~39~~
~~Courthouse Annex: County Extension, Weed Board, archives & storage~~	~~3,675~~	~~1936/1992~~	~~6~~
~~Health Center: Health District, Chief Investigator for Prosecuting Attorney's office, Director of Emergency Services~~	~~7,800~~	~~1972~~	~~8.2~~
~~Sheriff's Office: Sheriff's Office, Jail~~	~~9,240~~	~~1973~~	~~35.4~~
~~Hall of Justice: Prosecuting Attorney, County Clerk, Juvenile Office, District Court, Superior Court~~	~~12,000~~	~~1979~~	~~21.75~~
~~Counseling Services Building: Counseling Services Department~~	~~10,000~~	~~2000~~	~~20~~

~~Level of Service Standard(s) and Forecast of Demand~~

~~A review of these facilities and future demand revealed only the Law and Justice Center as inadequate. Table 9.3 summarizes the administrative office needs by showing the existing deficit, 6-year demand, and 20-year demand of the four Hall of Justice Building offices reviewed.~~

~~Table 9.3 Existing Deficit, 6-year Demand, and 20-year Demand~~

~~Office~~	~~Existing Deficit~~	~~6-year Demand~~	~~20-year Demand~~
~~Superior Court~~	~~164 sq. ft.~~	~~460 sq. ft.~~	~~Additional Courtroom, 224 sq. ft. office space~~
~~District Court~~	~~183 sq. ft.~~	~~479 sq. ft.~~	~~Additional Courtroom, 128 sq. ft. office space~~

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~~Prosecutor's Office~~	~~760 sq. ft.~~	~~1,654 sq. ft.~~	~~350-800 sq. ft., depending on staffing standard~~
~~Juvenile Office~~	~~168 sq. ft.~~	~~196 sq. ft.~~	~~128 sq. ft. office space~~

~~Note: Prosecutor's Office, 6-year Demand of 1654 square feet includes the amount of space to alleviate the Existing Deficit. The numbers above include only actual office space, and do not include reception area or storage area.~~

~~Solid Waste Handling~~

~~Existing Facilities~~

~~Pend Oreille County completed its first solid waste planning effort in 1978. Until that time, six landfills had been operating in the county, and all were reaching capacity or had recently been closed. Transfer station sites were being developed east of Ione on Sullivan Lake Road, and on Deer Valley Road. Upon completion of these sites, the remaining old landfills were closed. A transfer station/drop box facility was built next to the District 2 shop on Jared Road to replace the Usk landfill.~~

~~The County has closed its landfills. A solid waste transfer facility was constructed in 1994 in the Newport area, along with a household hazardous waste facility at the county's Deer Valley facility, and a transfer facility was built at a location near Ione on the Sullivan Lake Road. The Usk transfer station does not have a scale or scalehouse.~~

~~All solid waste is long-hauled outside of the county. The County retains ownership of the transfer station sites, which are operated by a contractor that provides all equipment except recycling bins. With the exception of the items listed below for enhanced recycling efforts, the County plans to continue this pattern of ownership.~~

~~Level of Service Standard(s) and Forecast of Demand~~

~~Since solid waste is transported outside of the County under private contract, LOS standards have been defined as "transfer stations located at Ione, Usk and Newport, adequate to handle the following total amounts of solid waste".~~

~~Table 9.4 Solid Waste Generation Rates~~

~~Federal and State Solid Waste Generation Rates~~	
~~•Overall Generation Rate~~	~~6.5 lbs/person/day~~
~~•Recycling Rate~~	~~2.3 lbs/person/day~~
~~•Waste hauled to transfer station~~	~~4.2 lbs/person/day~~
~~**Pend Oreille County Solid Waste Generation Rates**~~	

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•Overall Generation Rate[1]	3.2 lbs/person/day
•Recycling Rate2	0.3 lbs/person/day

[1] Based on the 2003 solid waste generation and population of 11,858.

[2] Based on weight from mixed tin, newspaper, cardboard, aluminum cans and tin cans.

Table 9.4 reflects state and federal estimates of per/capita waste generation, and is higher than the actual amounts of waste currently being received.

Based on these generation rates, Table 9.5 shows the future demand for solid waste handling facilities.

Table 9.5 Solid Waste Forecast Demand Estimates

Rate	Standard in pppd (pounds per person per day)	2003 Demand 11,858 population (pounds per day)	2005 Demand 12,679 population (pounds per day)	2025 Demnd 16,662 population (pounds per day)
Overall Generation Rate	6.5	77,077	82,414	108,303
Recycling Rate	2.3	27,273	29,162	38,323
Waste hauled to transfer stations	4.2	49,804	53,252	69,980

Capital Purchases Needed to Correct Existing Deficiencies

The additional solid waste generated from the growth in population will generally be accommodated through the expansion of operating hours until facility expansion is required. The Solid Waste Management Plan contains the following 6-year capital implementation schedule as shown in Table 9.7. (Table 9.6 was deleted and added to table 9.7 during the 2007 update)

9.5.4 Improvements to Public Facilities Identified in Other Plans

Facilities Not Provided by the County There are various other capital facilities throughout the County that are maintained by private and public entities, including fire districts and other emergency services, hospital districts, school districts, the Public Utility District #1 (PUD) and other public and private utility companies, water and sewer districts, and other service providers. Various plans prepared by these agencies and organizations have been reviewed by the County,

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along with phone interviews conducted, as part of this periodic Comprehensive Plan review and update. A summary of capital facilities forecasted for the next six years, along with the six-year financing plan, for these non-County operated facilities is provided in Table 9-2. This forecast and financing plan, combined with the County CIP and TIP for County-owned facilities comprise the County's forecast of future needed public facilities and financing plan for the next 6 years, to support implementation of the Comprehensive Plan. The County will review and revise this forecast and financing plan, as applicable, during plan implementation.

Table 9-2
Six-Year Capital Improvements Plan for Non-County Operated Facilities (NEW TABLE – Under Development)

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
School Districts	Selkirk School District (spoke to Nancy Lotze -superintendent on 1/6/2020)	Capacity to meet school enrollment is adequate for several years.	Consolidated campus Yearly maintenance improvements	Potential bond, planned for future possibly in 2022	• 12 – 15 million with possible completion from 2023-2025
					• Yearly budget of $50,000
	Newport School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.			•
	Cusick School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.			•
	Newport College Center	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.			•

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
Water and Sewer	Cities and Towns in Pend Oreille County	Existing system plans with facilities inventories and capacities adopted by reference	6-year water system and sewer plans	Rates and development charges, grants and loans. Existing revenues and planned rate increases will support system improvements, with growth paying for growth	See system plans, incorporated by reference, for these details
Power	Pend Oreille County PUD	Existing system plans with facility inventories adopted by reference	Transmission, power production and water system improvements	Rates and development charges. Existing financial plans support system improvements, with growth paying for growth	See system plans, incorporated by reference, for these details

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
Water and Sewer Districts	Diamond Lake Water District	Existing system plans with facility inventories adopted by reference	New well site #4 near Southshore Diamond Lake Road to increase water rights	Rates and development charges. Existing financial plans support system improvements	2020 - $100,000
	Chippewa Water & Sewer District				
	Lenora Water & Sewer District				
	Ponderay Shores Water & Sewer District				
	Sacheen Water & Sewer District	Existing sewer capacity is at 50% with room for another 300 hook ups	None		

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
Fire Districts	South Pend Oreille Fire & Rescue (spoke with -fire chief Michael Nokes on 1/6/2020)		No planned improvements		•
	District 2				
	District 4				
	District 5 (spoke with Fire chief Jay Foster on 1/6/2020	Capacity improvements needed	Would like to remodel and add onto stations Would like to add an all wheel drive pumper tanker	Starting association to raise funds and looking at a community development block grant Assistance to Firefighters grant	$50,000 by 2025 $300,000 by 2025 and need to raise $15,000 of it
	District 6	No information available	No information available	No information available	No information available
	District 8				

~~While the County is not the provider of these facilities, however, all of the facilities not provided by the County will be impacted by population growth. Early review during the county permitting process may avoid costly provision of service problems at a later date. Consequently, the County has been and will continue to communicate and coordinate with the various service providers reviewed in the Capital Facilities and Utilities element, as well as other service providers.~~

~~Pend Oreille County Library District~~

~~The Pend Oreille County Library District was formed in 1980. In 1985, the towns of Cusick, Ione, Metaline, Metaline Falls, and Newport voted to annex their facilities to the county library system each located inside an incorporated area in the County. The County library system receives its financing through a $.50 per $1,000 property tax valuation in the County. Each town owns and maintains their respective facilities. The Metaline's Community Library maintenance is financed by agreement between Metaline and Metaline Falls. The District as of January 2005 is being requested to fund a proportional share of utility expenses at a number of facilities and this could impact services.~~

~~The Library District is divided into four service areas as follows:~~

- ~~North County Service Area – includes Metaline, Metaline Falls, Ione West, Ione East, and Tiger – Dry Canyon voting precincts. It is estimated that 18.5% of the County population is in this area. There are District libraries in Ione and Metaline Falls and together they are open 46 hours/week;~~
- ~~Calispell Valley Service Area – includes Ruby, Locke, Cusick, Calispell, LeClerc, and Usk voting precincts. It is estimated that 11.9% of the County population live in this area. There is one district library in Cusick open 24 hours/week;~~
- ~~Newport Service Area – includes Dalkena, Diamond Lake East, Furport, Deer Valley, Newport NE, NW, SE, & SW, Noble, and Skookum voting precincts. It is estimated that 48.4% of the County population live in this area. There is one District library in Newport, open 43 hours/week; and~~
- ~~Far South County Service Area – includes Camden, Sacheen, Fertile Valley, and Diamond Lake West. It is estimated that 21.2% of the County population live in this area. There is one District library in Newport, open 43 hours/week; therefore; for budget purposes Newport and the far south county areas are considered as one service area using a total percentage of 69.6%.~~
- ~~**Six-Year Capital Facilties Plan**~~

~~The County has produced the following 6-year Capital Facilities Plan, which is a list of proposed improvements. The 6-year Capital Facilities Plan is updated annually as part of the Pend Oreille County budget process (see Table 9.7)~~

Commented [BF6]: Text moved above and updated

CHAPTER XX.36
ENVIRONMENTALLY SENSITIVE AREAS

xx.36.010 Purpose.
xx.36.020 Applicability.
xx.36.030 General Provisions.
xx.36.040 Wetlands.
xx.36.050 Geologically Hazardous Areas.
xx.36.060 Fish and Wildlife Habitat Conservation Areas.
xx.36.070 Frequently Flooded Areas.
xx.36.080 Critical Aquifer Recharge Areas.

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.

~~C~~D. 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 that 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 16~~30~~-18~~50~~ 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
Category IV Wetlands (For wetlands scoring less than 16 points for all functions)	

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 ¾ 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. 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. Dispersed camping areas.

   ~~c.~~d. Educational and scientific research activities.

   ~~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. 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

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

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.

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

~~Category IV~~	~~1.5:1~~	~~3:1~~	~~6:1~~	~~10:1~~

~~*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 caseby-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, ~~tide 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.

Commented [BF6]: See F.

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:

   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) **d**epth to water, (R) net **r**echarge, (A) **a**quifer media, (S) **s**oil media, (T) **t**opography, (I) **i**mpact to the vadose zone, (C) **h**ydraulic 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:~~

~~Drastic Index~~	~~Susceptibility~~	~~Susceptibility Index~~
~~>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.~~