SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to <u>all parts of your proposal</u>, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

- 1. Name of proposed project, if applicable:
 - Peshastin Mill Site Community and Environmental Enhancements
- 2. Name of applicant:
 - Bill and Jenny Goebel

Reviewed by Scott Kugel chelan country community Development Assistant Planner

- 3. Address and phone number of applicant and contact person:
 - 12486 Prowell Road, Leavenworth, WA 98806 •
 - 206-601-6010
- 4. Date checklist prepared:
 - March 29, 2019
- 5. Agency requesting checklist:
 - **Chelan County Community Development Department** •
 - Washington State Department of Fish and Wildlife
 - Washington State Department of Ecology
 - U.S. Corps of Engineers •
- Proposed timing or schedule (including phasing, if applicable):
 - Early 2019 •

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

. No. Only timing of project elements described will be phased; phases are included in the site plan.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- 2014. Phase 1 Environmental Site Assessment Report. Former Peshastin Mill Upland Area. Chelan County, Washington. RH2 Engineering, Inc. for the Port of Chelan County.
- 2014. Phase 2 Environmental Site Assessment Report. Former Peshastin Mill Upland Area. Chelan County, Washington. RH2 Engineering, Inc. for the Port of Chelan County.
- 2016. Supplemental Remedial Investigation, Former Peshastin Log Yard, Peshastin, Washington, GeoEngineers.
- . 2018. Wetland and Riparian Assessment. Peshastin, Washington. SCJ Alliance.
- 2018. Formal Wetland Delineation. Peshastin, Washington. SCJ Alliance. ۲
- 2018. Cultural Resource Investigation. Peshastin, Washington. Cultural Resource Consultants.
- 2018. WDFW PHS Database guery ٠
- 2019. Aspect Consulting, Geotechnical Surveys (Buildings, Roads, and Utilities).
- · 2019. 505 Alliance, Peshastin Business Park critical Areas Report.
- · 2019. CC NRD, Stream Typing 2019-006.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

- There are no known pending governmental approvals or other proposals directly affecting this project.
- 10. List any government approvals or permits that will be needed for your proposal, if known.
 - Local Permits, Licenses, and Approvals
 - o General Land Use Form Chelan County Community Development/Public Works
 - o Shoreline Permit (Exemption) Chelan County Community Development
 - o Building Permit/Codes Chelan County Public Works
 - o Clearing and Grading Permit Chelan County Public Works
 - Chelan County Public Works Approval for Road Activities/Improvements within Right-of-Way (if applicable)
 - o Chelan County Access permit for existing access to Peshastin Mill Road
 - o Per Campus-Industrial Zoning Code:
 - Landscaping Standards from Chapter 15.50
 - Parking Standards from Section 11.22.040(3) and Chapter 11.90
 - Signage Code from Section 11.22.040(2) and Chapter 11.92
 - Lighting Code from Section 11.22.040(6)
 - Chelan County Code 11.78 Fish and Wildlife Habitat Conservation Areas
 Overlay
 - Chelan County Code 11.80 Wetland Areas Overlay District
 - Chelan County Stormwater Standards, Chapter 13.16 of Chelan County Code

• State Permits, Licenses, and Approvals

- Construction Stormwater Permit WA State Dept. of Ecology
- o Hydraulic Project Approval WA State Dept. of Fish and Wildlife
- Applicant will upload to WDFW APPS system

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The Peshastin Mill Site proposal has been developed to ensure minimum impact to the natural environment such that it is in harmony with the rural character of the site and waterfront. The project is located on approximately 47 acres of private property within the City of Peshastin's UGA (Attachment 1).

Upland Habitat Enhancements

- Enhance an estimated five (5) acres of open space for wildlife by restoring vegetation by removing two roads (1/2 mile) with large turn-outs.
- Provide wildlife viewing opportunities (amenities may include a picnic area, wildlife viewing stations, and educational kiosk).
- Plant primarily native plants such as chokecherry, bitter cherry, elderberry, service berry, and wild dill for wildlife throughout the entire project site.
- Plant primarily native but also cultivate plants for wildlife and commercial use including but not limited to chokecherry, bitter cherry, elderberry, service berry, and wild dill; respectively
- Protect existing native vegetation where feasible including wild rose, huckleberry, and currant; to name a few.

 Develop an outlook structure less than 300 square feet at north end of the property on the hill for viewing of the valley.

Infrastructure

- Maintain and/or improve existing roads within the project area to further accommodate emergency vehicle access/turn-around radius needs and provide access (i.e. paving and culvert replacement if damaged/old).
- Remove an estimated ½ mile of road and replant with native vegetation per consultation with WDFW lands staff.
- o Install a water efficient irrigation system for open space enhancements and landscaping.

Building Development

- Provide an estimated 63,250 square feet of work area/light industrial area with an eco-friendly design such as but not limited to green roof, climate controls, EV charging stations, enhanced vegetation and green space to capture stormwater, and eco-safe building materials; uses will include general office space and/or light manufacturing such as agricultural technology or recreational product advancement.
- Work Areas will be placed at a distance from existing roads that comply with fire safety requirements.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

- The proposed project is in Peshastin, Chelan County, Washington State and is privately owned by Bill and Jenny Goebel
- Parcels include: 241808340100; 241808340105; 241808340110; and 241808340115.
- Section 8; Township 24N; Range 18E
- Site Plan (Figure 1; Figure 2)
- Vicinity Map (Figure 3)
- Topographic Map (Figure 4)

Parcel Legal Description		Legal Acres
241808340110	Parcel A of Chelan County BLA No.	20.16
	2016-099, recorded Auditor's File No.	
	2437689, records of Chelan County,	
	WA	
241808340115	Parcel B pf Chelan County BLA No.	1.4
	2016-099, recorded at Auditor's File	
	No. 2437689, records of Chelan	
	County, WA	
241808340100	Parcel B of Chelan County BLA No.	14.01
	2014-371, recorded at Auditor's File	
	No. 2412101, records of Chelan	
	County, WA	
241808340105	Parcel C of Chelan County BLA No.	11.46
	2014-371, recorded at Auditor's File	

 Table 1. Legal description of the proposed site, Peshastin, WA per Statutory Warrantee Deed:

	No. 2412101, records of Chelan		
_	County, WA		
241817130050	Govt. Lots 8,9, and 10 of	2.67	
	S17;T24N;R18E.W.M, Chelan County,		
	WA and a portion of Lot 7 (deeds		
	recorded June 3, 2003, recorded at		
	Auditor's File No. 2145550 and		
	2145551.		

B. Environmental Elements

1. **Earth**

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

- b. What is the steepest slope on the site (approximate percent slope)?
 - 25% is steepest slope within the proposed, project boundary only incudes the primitive, nonmotorized path to the outlook structure.
- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.
 - Burch fine sandy loam, 0-3 % slopes (97.8%)
 - Burch fine sandy loam, 3 to 8% slopes (1.0%)
 - Peshastin stony loam, 0-25% slopes (1.2%)
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
 - No. Chelan County GeoHazards GIS database does not indicate unstable slopes within the proposed project area.
- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.
 - Any fill required is available on-site. Since this is an old mill site, there are layers of introduced fill, wood chips, rock, and gravel at the site. This material will be used for any fill/grading necessary. An estimated 20% of the site may be graded/leveled to support open space enhancement, road maintenance and improvements, work area, and other improvements/development. The site is "lumpy" from mill site debris, mostly layers of long-standing woodchips.
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
 - Minimal erosion may occur because of sediment exposure to wind and a short section of the primitive, non-motorized path leading to the proposed outlook structure. The path will be designed and constructed by certified trail builders with expertise in erosion control/slope stabilization.

- It is expected revegetation of an estimated 5 acres, which includes removal of up to ½ mile of road will also reduce existing wind erosion.
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
 - Less than 10% of the site will be covered with impervious surfaces.
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
 - Best Management Practices will be developed by a Certified Erosion Control lead to ensure erosion is reduced/controlled to avoid unnecessary impacts to the earth.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
 - Minor emissions from vehicles and equipment used during construction, operation, and maintenance of the site. Emissions are not expected to impact air quality.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

- No
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
 - All vehicles/equipment not in use will be turned off to avoid unnecessary emissions from idling.

3. Water

- a. Surface Water:
 - 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
 - Yes. The Project Site receives indirect upslope flows from un-named side tributaries within the HUC and upslope surface irrigated farmland, but these flow contributions are potentially impacted by an intervening aqueduct that borrows water from the Wenatchee River west of Posey Canyon near Leavenworth, then conducts that water around the site, crossing side streams along the toe slope northeast of the site for several miles. Flow from upslope is also affected by the irrigation canal located about 1,300 feet to the east; it captures flow from the Wenatchee River near Leavenworth and conducts that water along the toe slope of uplands around the site providing surface irrigation water to the orchards. The canal crosses the upslope drainages and may capture or affect that flow as well.
 - Wetlands and streams onsite were assessed and/or delineated on May 9, 2018. One Palustrine Scrub-Shrub/ Palustrine Emergent (PSS/PEM) wetland area was identified and flagged in the northeastern corner of the Project Site. This system appears to receive some flow at its southern end from a seasonal

stream, a which also feeds into the northern of the two seasonal stream/ditch systems onsite. Both the wetland and the northern stream are fed by a combination of toe slope seepage and flow from the small stream that enters the site from a culvert below the railroad tracks to the northeast and flows along the southern edge of the wetland system. The wetland rating results indicate that the system has Moderate Site and Landscape Potential for improving water quality and for hydrologic functions (flood storage). However, it has High Value for Water Quality treatment due to proximity to pollution sources (i.e., orchard runoff), but Low Value for Flood Storage due to the lack of significant flooding problems on or near the site. The wetland scored Moderate too Low for providing Potential habitat functions and scored a Moderate Value for providing habitat functions – mainly because the wetland is relatively isolated from other habitats with higher function. The final combined score was 17 points – a Category III wetland system. Per code, a Category III wetland adjacent to High Intensity Development (Campus Industrial zoning) is assigned a standard buffer of 150 feet.

St 19-006 determined that the two streams on site are "NS" type.

- The hydrology source for the onsite wetland is from seasonal precipitation and snowmelt, which feeds the groundwater and surface water systems. Groundwater seeps from toe slope to feed the northern portion of the wetland, but seasonal surface flow along the southern end of the wetland is fed by a seasonal stream that emanates from below the railroad tracks near the NE project Site corner.
- See attached Critical Areas Report and Wetland Delineation for details (SCJ Alliance 2019).
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
- Yes. Road maintenance, including paving will occur within 200 feet to the Wenatchee River.
- Yes, Road maintenance, including paving and potentially culvert replacement will occur within 200 feet of an unnamed, seasonal stream. The 12-inch culvert will be replaced (if damaged/old) with a "like" 12-inch culvert.
- WAC 173-27-040(2)(b) exempts normal maintenance and normal repair if comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Paving the road will reduce on-going maintenance and wind erosion.
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
- NA
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
- No.
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
- No.
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

- No.
- b. Ground Water:
 - 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.
 - No.
 - 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
 - NA.
- c. Water runoff (including stormwater):
 - Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
 - An existing wetland on-site collects water from a seasonal run-off and upland surface irrigation.
 - Seasonal run-off at the site will continue to be controlled "as is" by small retention ponds that
 were dug when the site operated as a mill. Several man-made ditches convey seasonal runoff to
 existing water retention areas; seasonal run-off is only observable for about 4 weeks during early
 spring.
 - There are several, twelve (12) inch culverts embedded within the gravel roads to allow temporary run-off to reach the Wenatchee River; runoff flows only occur a few weeks in the spring.
 - 2) Could waste materials enter ground or surface waters? If so, generally describe.
 - None that are known.
 - 3) Does the proposal alter or otherwise affect drainage patterns near the site? If so, describe.
 - No. A stormwater evaluation and plan will be submitted to the County when applying for permits.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

• Use Best Management Practices and monitor effectiveness during construction and operations.

4. Plants

a. Check the types of vegetation found on the site:

_X_deciduous tree: alder, maple, aspen, other

X_evergreen tree: fir, cedar, pine, other

_X__shrubs

_X_grass

____pasture

____crop or grain

_X __ Orchards, vineyards or other permanent crops. Chokecherry

_X__ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

water plants: water lily, eelgrass, milfoil, other

X_other types of vegetation current, wild rose, and elderberry

Wetland species include:

Trees

Black cottonwood (Populus balsamifera)

Shrubs

Sitka alder (Alnus viridis) Sitka willow (Salix sitchensis) Russian olive (Elaeagnus angustifolia) Serviceberry (Amelanchier alnifolia) Twinberry (Lonicera-involucrata) Red osier dogwood (Cornus sericea) Chokecherry (Prunus virginiana) Wild crabapple (Malus fusca) Cascara (Frangula purshiana)

Herbs, Ferns and Vines

Reed canarygrass (*Phalaris arundinacea*) Cattail (*Typha latifolia*) Climbing nightshade (*Solanum dulcamara*) Watercress (*Nasturtium officinale*) Water parsley (*Oenanthe sarmentosa*) Sedge spp (*Carex spp*) Small-fruited bulrush (*Scirpus microcarpus*) Horsetail (*Equisetum spp*) Mint species (*Mentha arvensis*)

Upland species include:

Trees Ponderosa pine (Pinus ponderosa) Bigleaf maple (Acer macrophyllum)

Shrubs

Oregon grape (Mahonia aquifolium) Oceanspray (Holodiscus discolor) Serviceberry (Amelanchier alnifolia) Blue elderberry (Sambucus caerulea) Snowberry (Symphoricarpos albus) Sitka alder (Alnus viridis) Chokecherry (Prunus virginiana) Cascara (Frangula purshiana) Mountain big sagebrush (Artemisia tridentata subsp. Vaseyana)

<u>Herbs, Ferns and Vines</u> Arrow leaf balsamroot (*Balsamorhiza sagittate*) Fireweed (*Chamerion angustifolium*) Lupine (*Lupinus spp*)

b. What kind and amount of vegetation will be removed or altered?

• An estimated 3 acres of upland vegetation will be removed or altered to accommodate the proposed project with a minimum of 5 acres to be revegetated/enhanced for open space.

Landscape designs will incorporate native plants. Up to ½ of a mile of gravel road will be revegetated with native plants. It is estimated there will be a net gain of 2½ acres of revegetated upland areas within the project area. Primarily, evergreen trees, shrubs, and grasses will be removed in areas identified for phases development but will be avoided if possible.

- b. List threatened, and endangered species known to be on or near the site.
 - There are no, known listed or endangered plant species on or near the site.
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
 - An element of the proposed project is replant disturbed areas with native vegetation and/or fruit bearing trees. The objective of the project is to maintain the natural character of the site.
 - A landscape plan will be developed by a landscape architect which will incorporate native, drought tolerant plants where appropriate to maintain the natural character of the site. The more formally landscaped areas will include use of native plants – which will be more drought tolerant and adapted to local climate conditions.
- e. List all noxious weeds and invasive species known to be on or near the site.
 - There are no known invasive species at or near the site.
 - Noxious weeds are minimal at the site but include knapweed, tumbleweed, and goat heads. The land will be managed to monitor and remove noxious weeds to protect the natural character of the site and reduce noxious weeds spreading across other landscapes.

5. Animals

a. <u>List</u> any birds and <u>other</u> animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds other: red winged blackbird mammals: deer, pear, elk, beaver, other: mice fish: bass, salmon, trout, herring, shellfish, other _____

- b. List any threatened and endangered species known to be on or near the site.
 - There are no known threatened or endangered species known to be on or near the site. A query of the WDFW Priority Habitat and Species database did not reveal any state priority, threatened, or endangered species at the site. Due to historic mill operations the site has been highly disturbed.
- c. Is the site part of a migration route? If so, explain.
 - No.

- d. Proposed measures to preserve or enhance wildlife, if any:
 - Remove up to ½ mile of gravel road and restore with native vegetation for habitat and enhanced wildlife viewing.
 - Enhance up to 5 acres of open space with native vegetation.
 - Plant trees, primarily for seed-eating birds and harvest.
 - Landscape design will include native vegetation and tree fruit.
- e. List any invasive animal species known to be on or near the site.
 - There are no known invasive animal species at or near the site.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
 - Utilities will be placed in existing easements and/or on private property. Solar may be incorporated into development designs. EV charging stations may be installed.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
 - No.
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
 - All development will be designed with eco-friendly elements to reduce heating/cooling energy consumption when appropriate. Landscape designs will include drought tolerant, native plants and irrigation systems will be designed using water efficiency technologies.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
 - 1) Describe any known or possible contamination at the site from present or past uses.
 - No. Areas identified having contaminated soils from mill operations are known, flagged, fenced and will be avoided. The two areas of contamination are in the covenants restricting activity in this area.
 - Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

- Ground disturbing activities will not occur on or near soils identified in the Environmental Assessment – areas are flagged, fenced, and will be avoided.
- Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
- NA
- 4) Describe special emergency services that might be required.
- Existing roads will be improved and enhanced to ensure adequate emergency vehicle access and access to fire hydrants.
- The applicant will continue to collaborate with Public Works and the Fire department during the building permit process.
- 5) Proposed measures to reduce or control environmental health hazards, if any:
- No environmental health hazards are anticipated to occur. However, professional staff (Aspect) will be on-site to observe all material excavated during construction. Any material with visual or olfactory evidence of potential contamination will be segregated for chemical testing by qualified personnel to confirm presence/absence of contamination. All excavated material without evidence of potential contamination will be regraded on site. All material confirmed to be contaminated will be disposed of at the Greater Wenatchee Regional Landfill.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
 - Temporary noise from site clearing and equipment use.
 - Long-term, typical work area noise during business hours (Monday Friday 8-5pm)
 - Seasonal noise from visitors including voices and vehicles.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

- Noise will occur during normal business hours (M-F 8-5pm) for development and is expected to be minimal for both the short and long-term.
- Long-term noise will include voices from visitors/trail users and some minor noise is expected in the developed areas such as vehicles. The property is bordered by the River and Railroad, which will likely create a buffer from any long-term noise created as a result of the project.
- 3) Proposed measures to reduce or control noise impacts, if any:

• NA.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.
 - The area is open-space that has been highly disturbed by past mill site operations. A sizeable element of the project will be to enhance the natural character of the site.
 - Adjacent land is owned and maintained by WDFW for low-impact recreation including walking and wildlife viewing on the west side, the east side of the property is bordered by an active railroad (BNSF).
 - The project will not impact current land uses or nearby or adjacent properties that are known at this time.
- d. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?
 - No. The site was previously used as a lumber mill. The site is zoned Campus-Industrial and Light Industrial.
 - 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:
 - No.
- c. Describe any structures on the site.
 - The only structures on the site include:
 - o Small outbuilding for a tractor
 - o Chelan County PUD distribution line
- d. Will any structures be demolished? If so, what?
 - No.
- e. What is the current zoning classification of the site?
 - Campus-Industrial and Light Industrial
- f. What is the current comprehensive plan designation of the site?
 - Campus-Industrial and Light Industrial City of Peshastin UGA
- g. If applicable, what is the current shoreline master program designation of the site?

- NA. The WDFW lands adjacent to the property are designated as rural.
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
 - No.
- i. Approximately how many people would reside or work in the completed project?
- An estimated 12-45 people may work on the site depending on if it is a weekday or a weekend. However, an estimated 155 people may be on site as visitors/short-term residential visits.
- j. Approximately how many people would the completed project displace?
 - None
- k. Proposed measures to avoid or reduce displacement impacts, if any:
 - None
- L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
 - The proposed project is compatible with the Chelan County Comprehensive Plan and current zoning codes. The property is within the City of Peshastin's UGA.
- m. Proposed measures to reduce or control impacts to agricultural and forest lands of longterm commercial significance, if any:
 - NA

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
 - None at this time. There are no primary residential accommodations planned. However, existing zoning code allows for up to 10% of the space to be used for residential occupancy at the site.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
 - NA.
- c. Proposed measures to reduce or control housing impacts, if any:
 - NA.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
 - The tallest structure is not expected to exceed 35 feet per development regulations, the principle exterior materials proposed include concrete, steel, and/or wood. The architect will ensure designs are aesthetically compatible with the natural hues of the site to maintain the natural character of the site.
- b. What views in the immediate vicinity would be altered or obstructed?
 - NA. The property is upland from the WDFW Wenatchee River property and bordered by the railroad tracks which sit above the property.
- e. Proposed measures to reduce or control aesthetic impacts, if any:
 - Accommodations and work areas will be designed to incorporate the natural character of the site, including landscape design.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
- A licensed architect will ensure light or glare will be minimally to protect the natural character of the area/dark skies and within existing zoning requirements for downward lighting.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
 - No.
- c. What existing off-site sources of light or glare may affect your proposal?
 - None that are known at this time.
- d. Proposed measures to reduce or control light and glare impacts, if any:
 - A lighting plan will be designed by a licensed architect to reduce or control light and glare, if any. Compliance with Lighting Code (Section 11.22.040(12)

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

- The WDFW owns the adjacent land. There is a 1-mile long trail at that site used primarily by walkers. WDFW is working on a trailhead parking design to accommodate existing uses.
- The Wenatchee River is used for fishing, wildlife viewing, swimming and rafting.
- b. Would the proposed project displace any existing recreational uses? If so, describe.

- No.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
 - None.

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.
- There are no, known historic resources on the site that are eligible for listing (Cultural Resource Consultants, 2018).
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.
- There are no known, cultural resource sites and/or known archaeological sites on or near the area (Cultural Resource Consultants, 2018)
- Cultural Resource Consultants (2018) "Background research did not identify any recorded historic-era or precontact cultural resources within the project."
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.
- NA. Cultural Resource Consultants (2018) "Background research did not identify any recorded historic-era or precontact cultural resources within the project."
- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.
- NA. Cultural Resource Consultants (2018) "Background research did not identify any recorded historic-era or precontact cultural resources within the project."

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.
- The property is currently accessed by Peshastin Mill Road. The Peshastin Mill Road is a Chelan County road for several hundred yards from Main Street, then turns into a private gravel road

owned by Bill and Jenny Goebel. There are no changes proposed for access as the current roads are wide enough to accommodate dual vehicles and/or emergency vehicles. As mentioned previously, the intent of the proposal is to promote uses that maintain the natural character of the site without substantial vehicle use.

- c. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?
- No. There is a link transit stop located on the intersection of Main Street and Peshastin Mill Road approximately ¼ mile from the start of the private access road to the site.
- d. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?
- Based on the type of use proposed at the site (industrial, office space, etc.), it is estimated that 155 parking spaces will be necessary. Building permit requirements will better define parking space requirement per applicable development code as it relates to type of use.
- e. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).
- This phase of the project will be improving existing roads within private property and eliminating up to ½ mile of an existing gravel road to revegetate for open space and wildlife viewing amenities such as a picnic table and educational/wildlife kiosk.
- The property is adjacent to WDFW lands that were purchased to accommodate existing foot traffic and protect wildlife habitat; it is necessary to maintain the natural character of this proposal to compliment WDFW lands.
- f. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
- No. However, WDFW lands are adjacent to the project site and may provide for limited river access. There are no proposed used of rail adjacent to the property.
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?
 - The proposed project has been designed to limit traffic to/from the site. The design is intended to
 integrate with the natural environment and maintain a small environmental footprint. Daily trip
 generations for the proposed project was estimated using trip generation rates contained in the *Institute of Transportation Engineers (ITE)* <u>Trip Generation Manual, 10th Edition</u>. An estimated
 396 weekday daily trips are expected; less trips are expected during the weekend when
 businesses are not open.
 - Less than 25% of the trip generations estimated are expected to be from small, commercial vehicles. The rest will be from employees and/or visitors.
 - A Traffic Impact Study (TIS) will be conducted by SCJ Alliance staff per Chelan County Code, Title 15.30, Article IX.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.
 - No.
 - g. Proposed measures to reduce or control transportation impacts, if any:
 - None at this time.

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.
- No. There is an existing public transit station near the site.
- b. Proposed measures to reduce or control direct impacts on public services, if any.
 - NA.

16. Utilities

- a. Circle utilities currently available at the site: etectricity> natural gas, water, refuse service, telephone, sanitary sewer, septic system, other ______
- f. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
 - The property is within the UGA and will connect to city water/sewer. There are distribution lines
 on the property that are managed by Chelan County PUD. Prior planning for development on
 site was factored into water and sewer facilities for the city of Peshastin.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:	Chope Dur-
Name of signee	Charity Duffy

Position and Agency/Organization Planner on behalf of Bill and Jenny Goebel, SCJ Alliance

Date Submitted: <u>03/29/2019</u>

FIGURES



Figure 1. Site map illustrating ownership, property lines, and easements at Peshastin Mill Site, central Washington.





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		1	PESHASTIN MILL SITE PLAN	SCJ ALLIANCE		+
		ŧ	PESHASTIN, WASHINGTON THE GOEBEL COMPANY	8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516 P: 360.352.1A65 F: 360.352.1509 SCIALLIANCE.COM		
ł						



Figure 3. Project location, Historic Peshastin Mill Site, central Washington State.



Figure 4. Topographic Survey Mapping, Peshastin, WA

March 2019 SEPA Environmental checklist (WAC 197-11-960)

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STATION A 108+00

DATE BY	
A REVISIONS	
	SCJ ALLIANCE consulting services 8730 TALLON LANE NE, SUITE 200, LACEY, WA 98516 P: 360.352.1465 F: 360.352.1509 SCJALLIANCE.COM
SHEET TITLE:	PROJECT NAME: PESHASTIN, MILL SITE PLAN PESHASTIN, WASHINGTON THE GOEBEL COMPANY
SEAL: DESIGNER: - DRAWN BY: - DATE: JANUARY JOB NO: 2549.01 DRAWING FILE	/-/ : / 2019 NO:

Chelan County Natural Resource Department 411 Washington Street, Suite 201, Wenatchee, WA 98801 Phone (509) 667-6346 Fax (509) 667-6527

April 16th, 2019

Stream Typing for Parcel 241808340110:

On April 15th, 2019 a site visit was made to Chelan County parcel **#241808340110**, at the request of Charity Duffy with SCJ Alliance in representation of the landowner in order to determine the stream type for two streams identified on the parcel. According to the Washington Department of Natural Resources (DNR) FPARS website, there are two streams present on the parcel (See attached map). The first titled "Stream 1" on the attached map identified as "U" meaning unknown and the other to the west titled "Stream 2" on the attached map identified as "Ns" meaning non-fish seasonal, which lies on the property boundary between this and the neighboring property.

Upon inspection of "Stream 1" shown on the map, there was no water present but there was a defined channel depression with evidence of overland seasonal flow conveyed through a culvert and dispersed on the downstream side. Although there was no water present within "Stream 1," it is possible that during high flows and seasonal rain-on-snow events that these waters may connect with the Wenatchee River down-gradient. However, the slope between "Stream 1" and the Wenatchee River exceeds 20% resulting in it being a natural barrier to fish passage as defined by the Washington Department of Fish and Wildlife.

Upon inspection of "Stream 2" shown on the map, water was present within a defined channel and conveyed through a culvert down gradient. However upon further inspection downstream, current flows dispersed in an open forested area before reaching the Wenatchee River, therefore did not have any current connection point with these waters. Although current flows were infiltrating, it is possible that during high flows and seasonal rain-on-snow events that these waters may connect with the Wenatchee River down-gradient. Similar to "Stream 1" the steep surrounding topography restricts fish presence.

Based on these field observations, it is recommended that "stream 1" be designated as "Ns" non-fish seasonal and "Stream 2" maintain its designation as "Ns" non-fish seasonal therefore do not carry the same setbacks for a fish bearing stream under Chelan County Code 11.78.090.

It should be noted that these "streams" *do* outline the conveyance of overland seasonal flow and should therefore be avoided in all future building envelopes. Please see attached map.

If there are any questions please feel free to contact me @ 509-667-6346 or Hannah.pygott@co.chelan.wa.us

Sincerely,

ApyA

Hannah Pygott Natural Resource Specialist

*Looking upgradient at source of "stream 1." Channel depression and culvert under road but no water present.

*Looking down-gradient on other side of culvert. Slight depression and no water present. Gradient between this point and the Wenatchee River exceeds 20% slope. Normal seasonal runoff likely infiltrates, but during high flows and large rain on snow events water may be present and could potentially connect to the Wenatchee River. Maintain current "U" designation.

*Looking up gradient towards source of "stream 2." Slight flows present in channel, culver is undersized with a negative slope limiting flow conveyance. Some riparian vegetation present.

*Looking down gradient towards the Wenatchee River. Some flow conveyance through culvert but at current flow is infiltrating down gradient before reaching the Wenatchee River. Connection to surface water is possible during seasonal high flows and large rain-on-snow events but is not fish bearing. Maintain current designation of "Ns" for non-fish bearing seasonal.

Stream Typing Parcel 241808340110 April 16th, 2019 The County makes no warranty, expressed or implied, concerning the data's content, accuracy, currency or completeness, or concerning the results to be obtained from queries or use of the data. All data is expressly provided "AS IS" and "WITH ALL FAULTS". The County makes no warranty of fitness for a particular purpose, and no representation as to the quality of any data. The Requester shall have no remedy at law or equity agaisnt the county in case the data provided is inaccurate, incomplete or otherwise defective in any way.

0	275	550	1,100
			Feet

Peshastin Business Park Critical Area Report

The Goebel Company Chelan County

March 2019

Peshastin Business Park Critical Area Report

Project Information

Project:	Peshastin Business Park Critical Areas Report		
Prepared for:	Bill Goebel 12486 Prowell Street Leavenworth, WA 98826 <u>bill@goebeletc.com</u>		
Reviewing Agency			
Jurisdiction:	Chelan County Community Development 316 Washington Street, Suite 301 Wenatchee, WA 98801		
Project Representative			
Prepared by:	SCJ Alliance 25 N Wenatchee Avenue, # 238 Wenatchee, WA 98801 509-888-3556		
Contact:	Charity Duffy, Environmental Planner Lisa Palazzi, CPSS, PWS		
Project Reference:	SCJ #2549.01		

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APPENDICES

Appendix A – Wetland Rating Figures and Forms

1. INTRODUCTION

1.1 **PROJECT OVERVIEW**

The Goebel Company is proposing a mixed-used development at the site of the old Peshastin Mill, which lays between the railroad and the north shore of the Wenatchee River, a 47-acre site about 1.25 miles northwest of Peshastin, WA. The Project Site is located within the Peshastin Urban Growth Area and is zoned Campus Industrial:

"Campus Industrial (I-C). The I-C classification is for areas which are or will become primarily used for the technology industry and light industrial activities."

There is no street address assigned to these parcels on the Chelan County website, however, they are located adjacent to a residential parcel at 8701 North Road, Peshastin, WA (Figure 1).

Table 1. Project Parcels1					
Parcel name	Property ID	Parcel number	TSR	Acres	
Parcel B (North)	30358	241808340100	T24N, R18E, S 08	14.01 acres	
Parcel C (Central)	65218	241808340105	Same	11.46 acres	
Parcel D (South, large)	65219	241808340110	Same	20.16 acres	
Parcel E (South, small)	65220	241808340115	Same	1.40 acres	

The Project Site includes four parcels (Table 1).

The purpose of this report is to describe wetlands, streams, and associated habitat conditions on the Project site. This information will be used to inform decisions with site layout and design.

Figure 1. Location of the proposed project, Peshastin Mill site, NW of Peshastin, WA

¹ Parcel boundaries and number are from the Chelan County GIS system

On May 9, 2018 SCJ Alliance staff assessed wetland and surface hydrology conditions throughout the site, and delineated a wetland system in the far northwest corner of the site. Two realigned and ditched seasonal stream systems cut across the site from northeast to southwest, draining to the Wenatchee River when flowing, particularly in the spring. They were evaluated for flow and riparian habitat conditions.

Weather on the day of the field visit was cool and sunny with occasional cloud cover. Hydrology was fully expressed and conditions for effective wetland delineation and stream assessment were acceptable.

2. METHODS AND MATERIAL

2.1 WETLAND DELINEATION REGULATIONS (FEDERAL AND STATE)

Under the Washington Administrative Code (WAC) section 173-22-035, the Washington State Department of Ecology (Ecology) requires wetland identification and delineation be completed following the approved federal wetland delineation manual and applicable regional supplements, including but not limited to the 1987 Corps of Engineers Wetland Delineation Manual and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast (WMVC) Region (Version 2.0)* (U.S. Army Corps of Engineers 2010) (Figure 2).

Figure 2. Showing that Peshastin falls in region assessed under the WMVC supplement.

2.2 WETLAND RATING, CLASSIFICATION, AND BUFFERS (COUNTY)

Chelan County Code defines wetland protection standards in Chapter 11.80 Wetland Areas Overlay District (WOD), which includes requirements for rating the wetland and making buffer width determinations based on rating score results. Standard mitigation sequencing applies.

As required by Chelan County code, the Washington State Wetland Rating System for Eastern Washington (WRSEW) has been applied. The version of the WRSEW referenced in code was Hruby 2004a but code also indicates "as amended" therefore wetlands associated with the project site were rated according to the 2014 WRSEW (Ecology Publication #14-06-030).

Wetlands identified as part of this project were classified according to the USFWS Cowardin classification system (Cowardin et al. 1979) and the USACE Hydrogeomorphic (HGM) classification system (Brinson 1993). Wetland buffers width are assigned relative to Wetland Category rating results, as provided below in Table 2.

Table 2. Wetland buffer widths required per wetland category.		
	Buffer Width (feet)	
Wetland Category	High Intensity (feet)	Low Intensity (feet)
Category 1	300	200
Category 2	200	100
Category 3	150	75
Category 4	50	50

2.3 HABITAT MANAGEMENT PLAN REGULATIONS (COUNTY)

The Chelan County Critical Areas Ordinance, Chapter 11.78, Fish and Wildlife Habitat Conservation Areas Overlay District (FWOD) regulates development located within a Fish and Wildlife Habitat Conservation Area (FWHCA) or within 1000 feet of a mapped point location of a priority species. Standard mitigation sequencing applies.

FWHCAs include streams, riparian areas, mapped point locations of priority species wildlife habitat, and mule deer and/or elk winter range and migration corridors. Wetlands are included in the definition of Class II FWHCAs, but wetlands are generally regulated primarily through Chapter 11.80, Wetlands Overlay District.

Class I FWHCAs include or are within 1000 feet of documented habitat for state or federally listed species; Class II FWHCAs include or are within 1000 feet of documented habitat for priority species. Report requirements for a Habitat Management and Mitigation Plan are outlined in Section 11.78.100.

Stream buffers width are assigned based on Stream Type, as provided below (Table 3). Stream Type S is a Shoreline, a large, fish-bearing river system, which is also regulated under the County Shoreline Master Plan. Stream Type F is a smaller fish-bearing stream, relative to a Type S. Stream Type Np is not fish bearing but flows year-round (is a perennial stream). Stream Type Ns is a seasonal stream, with no fish.
Table 3. Stream type buffer widths.					
	Buffer Width (feet)				
Stream Type	High Intensity (feet)	Low Intensity (feet)			
Type S	250	200			
Type F	200	150			
Type Np	150	100			
Type Ns	50	50			

2.4 BACKGROUND MATERIALS

To help determine the site conditions that might affect stream type assessment, wetland delineation and rating results SCJ Alliance staff reviewed the following information:

- Chelan County GIS mapping database
- US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI)
- US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic database online Web Soil Service
- Precipitation data (US Climate Data 2018)
- Washington State Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) Database (WDFW PHS 2018)
- Washington State Department of Natural Resources (DNR) FPARS stream mapping system 2018
- Google Earth historic timeline aerial photos of the project area

3. RESULTS AND DISCUSSION

3.1 PROJECT AND SITE DESCRIPTION OVERVIEW

The Project Site is in Section 8, Township 24N, Range 18E, four parcels, totaling 57 acres (Figure 1). The Goebel Company is proposing to redevelop the old Peshastin Mill site with mixed uses, which include applying environmental design concepts that incorporate the onsite wetland and the previously ditched seasonal stream systems. The purpose of this report is to describe soils, geology, hydrology, wetland, stream, and wildlife habitat conditions within the proposed Project Site.

The Project Site is located northwest of Peshastin WA along the north shore of the Wenatchee River, although the site is separated from the river by a strip of land owned by the Washington State Department of Fish and Wildlife (WDFW). The WDFW land ranges from as narrow as 40 feet up to about 260 feet and covers the steep, forested side slope of the river. It functions as both a natural transition and as a barrier between the future Peshastin Mill site development and the river. The upland side of the parcel to the northeast is bounded by the BNSF railroad ROW. The Project Site property is accessed via Peshastin Mill Road from the south, which forks west from North Road about ½ mile south of the site.

3.1.1 Summary of Land Use and Resource Management

Current Land Use

The site is not currently developed, but is proposed to be restructured into a mixed-used development. Historically, the site was the location of the Peshastin Mill. As a result, the site is heavily impacted by past mill operations. Site run-off was sent to the Wenatchee River via cross-site ditches that received seasonal flow from upslope, but were typically dry by early summer. The old mill infrastructure was demolished and removed from the site at some point prior to 1998. None remains aside from some remnant interior roads.

As a result of past mill operations, woodchip debris still persists in some areas, giving the surface a "lumpy" appearance in those zones. The site was evaluated for potential contamination in the past – in 1991 and 1996 by Forsgren Associates; in 2014 and 2016 by RH2 Engineering, Inc., and in 2016 by GeoEngineers. Past soil remediation actions included excavation and removal of Petroleum Contaminated Soils (PCS) from two areas onsite.

According to additional soil and water testing and the Geoengineers December 2016 report², combined site investigation activities by RH2 in 2014 and Geoengineers in 2016 included extensive assessment of petroleum hydrocarbons, a wide range of organic compounds, pesticides, herbicides, and heavy metals in soil, groundwater and surface water. Results of this soil and water testing indicated that some soils in one sample collected in the eastern portion of the site had residual concentrations of petroleum hydrocarbons (gasoline, diesel and oil) above the cleanup level; Arsenic (As) concentrations above the cleanup level were documented in one shallow soil sample near the middle of the site; and Arsenic

² Responding to a State Dept. of Ecology letter dated July 18, 2016: "Re: Further Action at a Property associated with a Site: Peshastin Mill Site, Mill Road, Peshastin," issued to Raylene Dowell with the Port of Chelan County in response to 2016 RH2 Engineering Phase 1/ Phase 2 Report.

concentrations above the cleanup level were documented in one groundwater sample in the western portion of the site.

Further sampling and analysis by GeoEngineers indicated that the level and location of petroleum hydrocarbons in the single soil sample would not affect groundwater quality, and risks associated with direct ingestion of soil and dermal contact with soil were within "acceptable" levels.

The area with Arsenic concentrations in soil above the cleanup level levels was proposed to be excavated or capped. The <u>source</u> of Arsenic in the single groundwater well was not identified, "*despite numerous and widespread collection of soil samples*", and none of the other onsite wells contained detectable levels of Arsenic. However, GeoEngineers reported that Arsenic had been detected in samples collected from nearby offsite wells, indicating that the source could be from offsite, and thus may be a regional problem associated with nearby land uses.

In summary, Geoengineers stated that "the remnant petroleum and arsenic issues generally are isolated and at low concentrations."... "potential future remedial actions to remove or permanently cap remaining arsenic in soil and restricting the use of Site groundwater are the preferred remedial options."

The final notice in the Ecology Voluntary Cleanup Program website as of September 28, 2018 is a letter from Ecology stating that the site status is listed as "Cleanup Started". This letter stated that based on the December 2016 GeoEngineers report, "a limited amount of additional effort may be needed to achieve a No Further Action (NF A) determination for the Site."

3.2 SOIL AND GEOLOGY MAPPING

3.2.1 Soil Mapping (Chelan County NRCS Soil Survey)

The dominant soil types mapped on and near the site north of the river are the Burch loams and Burch fine sandy loams (Figure 3; Table 4). According the the NRCS standard soil series descriptions, both Burch soil series are typically "deep, well drained soils that formed in valley fill material. Burch soils are on terraces and have slopes of 0 to 45 percent. Average annual precipitation is about 10 inches and average annual temperature is about 49 degrees F."

The primary difference between the two soil types is soil texture – with one being more sandy and one more silty. These soils form in alluvium that derives mostly from sandstone bedrock along the edge of the river. Burch soils tend to be well-drained, which means they are not expected to have a water table within 60 inches of the surface at any time of the year. However, they can be fine textured and prone to compaction, and -- like any Soil Map Unit -- toeslopes, depressions and swale inclusions in the map unit may contain wetlands and near-surface hydrology.

Other nearby alluvium-sourced soil map units are the Peshastin stony loam, 0-25% slopes (PID, mapped along the WDFW owned sloped edge of the river terrace to the southwest), Wenatchee silt loams, and some of the Cashmont sandy loams. Other nearby soils are of glacial origin, such as the Peshastin loam, 8-15% slopes, and some of the Cashmont sandy loams. Soils farther upslope to the east form in sandstone residuum and colluvium, such as the Varelum silt loams, 15-25% slopes, Nard silt loams, 25-45% slopes and Cle Elum-Rock outcrop complex, 25-65% slopes, which includes sandstone cliff outcrops.

The onsite soils are relatively sandy and well-drained, but they have enough fines that they will be prone to compaction and erosion if not managed properly during construction periods. They have high ratings for growing grapes or hops, which might be of interest when developing the overall site plan. Toeslope depressions to the NE collect water that drains from upslope areas, and then surface flows toward the river through a couple of realigned and ditched stream channels, described in more detail below.



Figure 3. Soil Survey Map of area in and around Project Site.

Table 4. Son Survey wapping of Project Area				
SMU	Soil Map Unit Title	Description		
BuA (B, C, D, E)	Birch fine sandy loam, 0-3%, (3-8%, 8-15%, 15-25%, 25-45%) Coarse-loamy, mixed, superactive, mesic Aridic Haploxerolls	Deep, well drained soils that formed in valley fill material on terraces.		
BvB (C, D, E	Birch loam, 3-8%, (8-15%, 15-25%, 25- 45%) Same as above	Deep, well drained soils that formed in valley fill material on terraces.		
СсВ	Cashmont sandy loam, 3-8%, Aridic Haploxeroll	Very deep, well drained soils that formed in glacial till, glaciofluvial, or alluvial deposits on alluvial fans, till plains, and terraces.		
PhC	Peshastin Ioam, 8-15%, Calcidic Haploxeroll	Very deep, well drained soils formed in ablation glacial till and glacial outwash derived mainly from granite, schist, gneiss, and sandstone with a component of loess and volcanic ash in the surface on glacial moraines and level to steep terraces.		
PID	Peshastin stony loam, 0-25%, Calcidic Haploxeroll	Very deep, well drained soils formed in ablation glacial till and glacial outwash derived mainly from granite, schist, gneiss, and sandstone with a component of loess and volcanic ash in the surface on glacial moraines and level to steep terraces.		
Ro	Rock outcrop	NA		
Те	Terrace escarpments3	NA		
VaC (D, F)	Valerum silt loam, 3-15% (15-25%, 45- 65%), Ultic Haploxeralfs	Deep, well drained soils formed in residuum and colluvium from sandstone on foothills and mountain slopes.		
WeA (B)	Wenatchee silt loam, 0-3%, (3-8%), Aridic Argixeroll	Deep, well drained soils formed in old alluvium mixed with loess and small amounts of volcanic ash. Wenatchee soils are on terraces and fans		

Table 4 Soil Survey Manning of Project Area

³ Escarpment: a long, steep slope, especially one at the edge of a plateau or separating areas of land at different heights.

3.2.2 Geology Mapping

The dominant geology mapping (Figure 4, Table 5) on and near the site is defined as various types of Quaternary alluvium affected by local glaciation outwash and lakebed deposits. Uplands to the east are older sedimentary rocks that date from the Eocene Epoch (the period just after the dinosaur extinction) in contrast to more recent volcanic events mapped in uplands to the west, which are dated to the period of transition just before the most recent Ice Age – about 1.65 million years ago.



Figure 4. Geology of the surrounding area.

Table 5. Geology Map Units Descriptions					
Geologic Map Unit	Name	Description			
Qa	Quaternary Alluvium	Moderately sorted cobble gravel along rivers grading to poorly sorted gravelly sand along small tributary fans. (Pleistocene)			
Qbs	Quaternary Bedded Silt	Ranges from veryfine sand to clay, distinctly interbedded; common ice-rafted dropstones. Polygenic lacustrine deposits.(Pleistocene)			
Qtg	Quaternary Terrace gravel	Moderately sorted cobble to pebble gravel, fill grading to moraines upvalley. (Pleistocene)			
Qls	Quaternary Landslides	Diamicton of angular clasts of bedrock and surface deposits derived from upslope. (Pleistocene)			
Qgd	Quaternary Glacial drift	Ranges from till in uplands to gravelly outwasg on valley floors; interbedded with till and lacustrine sediment (mostly Pleistocene)			
Kmsd	Mount Stuart Batholith	(Pre-Tertiary) Hornblend diotrite and gabbro with variable amoutns of hypersthene and/or augite			
Тс	Chumstuck Formation	(Eocene, early Tertiary) Sandstone (tuffaceous, micaeous, feldspathic to lithofeldsathic), shale (minor) and conglomerate bedrock.			

3.3 WATERSHED AND STREAM MAPPING

The Project Site is within the Derby Canyon- Wenatchee River Hydrologic Cataloging Unit -- HUC# 170200110706 (Figure 5). This HUC includes the Peshastin and Leavenworth areas, and the reach of the Wenatchee River from the drainage divide between Derby Canyon and Williams Canyon (to the south) and Stromberg Canyon (Chumstick Creek) to the northwest.

The Project Site receives indirect upslope flows from un-named side tributaries within the HUC and upslope surface irrigated farmland. These flow contributions are potentially impacted by an intervening aqueduct that borrows water from the Wenatchee River west of Posey Canyon near Leavenworth, then conducts that water around the site, crossing side streams along the toeslope northeast of the site for several miles.



Figure 5. Derby Canyon – Wenatchee River Watershed (12-digit HUC Unit).

3.3.1 WDNR Stream Type Mapping

WDNR Stream Type maps were consulted to provide an assessment of potential water sources feeding the two onsite stream systems. The mapping shows that there are two small drainages from the northeast that flow under North Road and the railroad, then cross the Project Site (Figure 6). The stream systems were ditched in the distant past, presumably to minimize impacts to Peshastin Mill activities. Neither system is fish-bearing, and the southern system has a smaller contributing basin, so has less flow than the northern system.

Both streams are non-fish, seasonal streams, and thus are assigned a standard buffer of 50 feet. Because these systems have been severely impacted from ditching and realignment in the past by mill operations, some of the ditched system could be realigned to provide some improved habitat function if needed for mitigation of site development impacts.



Figure 6. Project Site, showing upslope sources of two cross streams onsite.

3.3.2 Wetland System Description

Wetlands and streams onsite were assessed and/or delineated by SCJ Alliance staff on May 9, 2018. One Palustrine Scrub-Shrub/ Palustrine Emergent (PSS/PEM) wetland area was identified and the SW edge was flagged in the northeastern corner of the Project Site (Figure 7). This system appears to receive some inflow from toeslope seeps and at its southern end from a seasonal stream, which continues through the wetland and feeds into the northern of the two seasonal stream/ditch systems onsite. Thus, both the wetland and the northern stream are fed by a combination of toeslope seepage and flow from the small stream that enters the site from a culvert below the railroad tracks and then flows along the southeastern edge of the wetland system (stream systems are described above and shown in Figure 7).

Flagging for the wetland started at the southern downslope edge (near the northwest property corner of an adjacent residential parcel) and continued northwest along the rather diffuse downslope wetland edge to the northern property line. The upslope edge was not flagged because its buffer would have no bearing on site development, and therefore, that edge is approximated from aerial photos. This upper edge was also described in earlier wetlands reports as being located at the toeslope. The downslope edge location is partially affected by past filling and ditching activities from when the mill was operational, but also by the permeability of the downslope materials, as the water sinks into the ground as it drains downslope. As a result, the downslope edge is diffuse and transitional, and will expand downslope and contract upslope with the season and in response to periodic storms.

Applying the Hydrogeomorphic Classification System, this is a Slope wetland system, but has an internal depression, and thus is rated using the Depressional Rating system forms. Applying the Cowardin Wetland Classification System, the perimeter of the wetland is a Palustrine Scrub-Shrub vegetation community and the interior is a Palustrine Emergent vegetation community. There are some trees around the perimeter, but not enough inside of the wetland for it to qualify as a Palustrine Forested vegetation class.

3.3.3 Vegetation Community

As described above, the exterior of the wetland was predominantly a Palustrine Scrub-Shrub vegetation community, but included some Palustrine Emergent areas (Figures 8 and 9). The interior was difficult to access, and therefore, the species list for the interior is incomplete, but was dominated by emergent plant species.



Figure 7. Showing location of toeslope Wetland and two ditched stream systems.

Wetland species include:

Trees

Black cottonwood (Populus balsamifera)

<u>Shrubs</u>

Sitka alder (Alnus viridis)	FACW
Sitka willow (Salix sitchensis)	FACW
Russian olive (<i>Elaeagnus angustifolia</i>)	FAC
Serviceberry (Amelanchier alnifolia)	FACU
Twinberry (Lonicera-involucrata)	FAC
Red osier dogwood (Cornus sericea)	FACW
Chokecherry (<i>Prunus virginiana)</i>	FAC
Wild crabapple (Malus fusca)	FAC
Cascara (Frangula purshiana)	FACU
Herbs, Ferns and Vines	
Reed canarygrass (Phalaris arundinacea)	FACW
Cattail (Typha latifolia)	OBL
Climbing nightshade (Solanum dulcamara)	FAC

Watercress (Nasturtium officinale)	OBL
Water parsley (Oenanthe sarmentosa)	OBL
Sedge spp (Carex spp)	FAC
Small-fruited bulrush (Scirpus microcarpus)	OBL
Horsetail (Equisetum spp)	FAC
Mint species (Mentha arvensis)	FACW
Upland species include:	
Trees	
Ponderosa pine (Pinus ponderosa)	FACU
Bigleaf maple (Acer macrophyllum)	FAC
<u>Shrubs</u>	
Oregon grape (Mahonia aquifolium)	UPL
Oceanspray (Holodiscus discolor)	FACU
Serviceberry (Amelanchier alnifolia)	FACU
Blue elderberry (Sambucus caerulea)	FACU
Snowberry (Symphoricarpos albus)	FACU
Sitka alder (Alnus viridis)	FACW
Chokecherry (Prunus virginiana)	FAC



Figure 8. Photo of PEM wetland edge near southern end.

Cascara (Frangula purshiana)	FACU
Mountain big sagebrush (Artemisia tridentata subsp. Vaseyana)	
Herbs, Ferns and Vines	
Arrow leaf balsamroot (Balsamorhiza sagittate)	NI
Fireweed (Chamerion angustifolium)	FACU
Lupine (<i>Lupinus spp</i>)	NI



Figure 9. View through PSS into PEM wetland interior from along the northwestern edge.

3.3.4 Hydrology

The hydrology source for the onsite wetland is from seasonal precipitation and snowmelt, which feeds the groundwater and surface water systems. Groundwater seeps from the NE toeslope provide hydrology to the northern portion of the wetland, but seasonal surface flow through the southern end of the wetland is fed by a seasonal stream that emanates from below the railroad tracks near the NE Project Site corner (Figure 10).

The source of that surface flow is not easily defined, as the upslope stream systems (indicated in hydrology maps provided above) have all been piped for crossing orchards to the east. Flow from upslope is also affected by the irrigation canal located about 1,300 feet to the east; it captures flow from the Wenatchee River near Leavenworth and conducts that water along the toeslope of uplands around the site – providing surface irrigation water to the orchards. The canal crosses the upslope drainages, and may capture or affect that flow as well.

In any case, wetlands hydrology was fully developed on the day of the May 9, 2018 field work with water at or near the surface along the delineated edge. Some of the seepage and flow from the seasonal stream entering along the southern wetland edge was redirected in the past in ditches around the edge of the offsite residential parcel into the northern ditch/stream system, as displayed in Figure 7.



Figure 10. Showing groundwater seepage and seasonal surface flow through the wetland near its southeastern end.

3.3.5 Soil Conditions

As described above, soils within the Project Site were mapped as Burch fine sandy loam (fsl), slope classes 0-3%, 3-8% across the flatter terrace portions, and Burch fsl, 25-45% slope is mapped on the upper hillslope behind the wetland area. A small portion of Burch loam, 15-25% slope is mapped directly upslope from the wetland.

The Burch soils are not typically wetland soils; however, the Burch map unit may contain wetland and stream areas where terrain directs seasonal flow and snow melt to collect in or flow through low lying areas.

Soils within the wetlands expressed a variety of hydric soil indicators, ranging from A11 (Depleted Below Dark Surface), to A4 (Hydrogen sulfide) to F6 (Redox Dark Surface). However, many areas showed evidence of past impacts from mill operations remnant wood chips (Figure 11).



Figure 11. Showing soil conditions along the downslope wetland edge impacted by past mill operations.

3.4 WETLAND RATING RESULTS

The wetland was rated using the 2014 Eastern Washington Rating System, as required in Chelan County code. The wetland rating results indicate that the system has **Moderate** Site and Landscape **Potential** for improving water quality and for hydrologic functions (flood storage). However, it has **High Value** for Water Quality treatment due to proximity to pollution sources (i.e., orchard runoff), but **Low Value** for Flood Storage due to the lack of significant flooding problems on or near the site.

The wetland scored **Moderate** to **Low** for providing **Potential** habitat functions, and scored a **Moderate Value** for providing habitat functions – mainly because the wetland is relatively isolated from other habitats with higher function. The final combined score (Water Quality plus Hydrology plus Habitat scores) was 17 points – a Category III wetland system. Per code, a Category III wetland adjacent to High Intensity Development (Campus Industrial zoning) is assigned a standard buffer of 150 feet.

3.4.1 Wetland and Stream Buffer Impacts

As described above, the standard wetland buffer is 150 feet, and the standard Type Ns stream buffer for this site is 50 feet (Figure 12). There are pre-existing road stream crossings with existing 12-inch culverts.

There is no new development proposed within the wetland or stream buffers. The only work contemplated is within the buffer of Stream #2. The road will be paved for long-term maintenance and



Figure 12. Showing wetland and stream overlays with approximate standard buffer impacts.

the 12-inch culvert at that location will be replaced if damaged . There is no mitigation proposed for this project.

3.5 WILDLIFE HABITAT CONDITIONS

Chelan County Code, Chapter 11.78, Fish and Wildlife Habitat Conservation Areas, Section 11.78.100, Critical Areas Ordinance, requires a wildlife habitat mapping and management plan. The Washington State Department of Fish and Wildlife (WDFW) will need to approve the habitat management and mitigation plan within the context of the scope of the project footprint. This section of the report is organized to align with Section 11.78.100 requirements.

Please refer to the previous section for site maps, land use descriptions, topography and discussion about stream and wetland habitat systems.

3.5.1 Regional Wildlife and Recreation Access Management Plans

The Washington State Department of Fish and Wildlife (WDFW) owns the sloped riverbank property between the Project Site and the shoreline of the Wenatchee River to the southwest. The Project Site boundary is adjacent to an interior private road. WDFW manages the land by the river for low-impact recreation. WDFW may provide trailhead parking in the future on the south-end of their parcel, with added ADA access.

3.5.2 Habitat Improvements and Enhancements

There are no habitat improvements and/or enhancements in wetlands, streams, or buffers. Except for the already existing road crossings at Streams 1 and 2, all development will be located outside all buffers.

3.5.3 Water Bodies – Wenatchee River and Irrigation Canal upslope

The Wenatchee River runs parallel to the Project Site but is isolated from the site by a wide swath of WDFW-owned and managed land along the sloped river bank. The WDFW parcel riparian zone is naturally vegetated, and includes some public trail systems (described previously).

Substantial surface irrigation occurs on orchards located upslope and northeast from the Project Site. Irrigation water for the orchards comes from an irrigation canal that runs along the northern edge of the ancient valley floor floodplain from Leavenworth almost to Williams Canyon near Wenatchee. The nearest section of the canal is about 1,550 feet northeast of the Project Site along the nearby Wenatchee National Forest mountains toeslope.

Run-off that collects from seasonal precipitation and overflow from upland surface irrigation drains to the site, feeding the wetland in the northeast corner of the site and eventually flowing through and into the ditched stream systems onsite, and subsequently to the Wenatchee River through the WDFW-owned parcel.

3.5.4 Location of Priority Habitat Types and Priority Species Point Locations

A query of the WDFW Priority Habitat and Species database did not document any priority habitat types or priority species on the site. However, wetlands – which do occur onsite -- are considered priority habitats, even if not specifically mapped, and some priority species are mapped as occurring nearby.

Table 6. Fish species in the Wenatchee River					
Fish species/variety and listing status (common name)	Scientific name	Habitat type			
Spring chinook (Fed – End.)	Oncorhynchus tshawytscha	Breeding area			
Summer chinook (Fed – End.)	Oncorhynchus tshawytscha	Breeding area			
Bull trout (Dolly Varden) (Fed – Thr.)	Salvelinus malma	Breeding area			
Rainbow trout (resident)	Oncorhynchus mykiss	Migration			
Summer steelhead (Fed – Thr.)	Oncorhynchus mykiss	Breeding area			
Sockeye	Oncorhynchus nerka	Migration			
West-slope cutthroat	Oncorhynchus clarki lewisii	Migration			

Priority fish species documented in the adjacent Wenatchee River include:

Other priority species mapped nearby include the spotted owl (Strix occidentalis), with potential habitat in densely forested areas in the Wenatchee National Forest far offsite to the northeast, and the sharp-tailed snake (Contia tenuis), which has been documented near Leavenworth. Neither species has been documented near the Project Site.

4. SUMMARY

The Goebel Company is proposing a mixed use development in the Peshastin UGA on lands currently zoned as Campus-Industrial and Light Industrial. All new development will be located outside of all wetlands, streams, and buffers. Hydraulic Project Approval from WDFW may be necessary to replace the 12-inch culvert at the Stream 2 crossing with the same size culvert if damaged during road paving activities. Best management practices will be in place prior to paving; paving will occur when the steam is dry, which is typically by the end of April.

The project site was historically operated as a lumber mill, which severely impacted the natural character of the area. Some of the upland open space areas onsite that were previously impacted from mill operations will be revegetated, using native plant species selected to improve forage, nesting and breeding opportunities for birds and mammals that inhabit the site and nearby natural areas along the Wenatchee River.

Unnecessary relic roads left behind from mill operations will be removed and some of the areas will be retained as open space and restored to native vegetation. As a result of this restoration work, the 47-acre site will include a minimum of 5 acres of naturally vegetated open space. In addition, the more formally landscaped areas will include use of native plants – which will be more drought tolerant and adapted to local climate conditions.

5. REFERENCES

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US Fish and Wildlife Service National Wetlands Inventory Mapper, 2018 (for NWI wetland mapping): http://www.fws.gov/wetlands/Data/Mapper.html .

USDA Natural Resources Conservation Service Plants Database, 2018 (for hydrophytic plant classification): <u>http://plants.usda.gov/</u>.

Washington Department of Fish and Wildlife Priority Habitats and Species Maps 2018 <u>http://wdfw.wa.gov/mapping/phs/</u>.

Washington State Department of Natural Resources FPARS mapping system, 2018 (for stream typing): http://fortress.wa.gov/dnr/app1/fpars/viewer.htm.

Washington State Department of Natural Resources WRIA mapping database.

APPENDIX A

Wetland Rating Figures and Forms



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Figure A-16. Wetland Basin Area











Figure A-18. 303D Waters map



WQ Improvement Projects
Approved
In Development

Figure A-19. TMDL Projects Mapping

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Peshastin Site Wetland		Date of site visit: <u>5/9/201</u> 8
Rated by Lisa Palazzi, PWS, CPSS	Trained by Ecology?	Yes No Date of training 2014

HGM Class used for rating Depressional Wetland has multiple HGM classes?

NOTE: Form is not complete without the figures requested (*figures can be combined*). Source of base aerial photo/map <u>Google Earth</u>

OVERALL WETLAND CATEGORY []] (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 22-27

_____Category II – Total score = 19-21

xx Category III – Total score = 16-18

Category IV – Total score = 9-15

FUNCTION	lr Wa	nprov ter Q	/ing uality	H	ydrolo	ogic		Habita	at	
		Circle the appropriate ratings								
Site Potential	Н	M	L	Н	M	L	Н	M	L	
Landscape Potential	Н	M	L	Н	M	L	Н	Μ	L	
Value	H	Μ	L	Н	Μ	L	Н	M	L	ΤΟΤΑ
Score Based on Ratings	7			5			5			17

ratings (order of ratings is not important) 9 = H,H,H 8 = H,H,M 7 = H,H,L 7 = H,M,M 6 = H,M,L 6 = M,M,M 5 = H,L,L 5 = M,M,L 4 = M,L,L

Score for each function based

on three

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY Circle the appropriate category		
Vernal Pools	II III		
Alkali	Ι		
Wetland of High Conservation Value	I		
Bog and Calcareous Fens	I		
Old Growth or Mature Forest – slow growing	I		
Aspen Forest	Ι		
Old Growth or Mature Forest – fast growing	II		
Floodplain forest	II		
None of the above			

Maps and figures required to answer questions correctly for Eastern Washington Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	A-13
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	A-14
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	A-14
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A-15
Map of the contributing basin	D 5.3	A-16
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	A-17
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	A-18
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	A-19

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	Н 1.1, Н 1.5	
Hydroperiods	Н 1.2, Н 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream (can be added to another figure)	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	Н 1.1, Н 1.5	
Hydroperiods	Н 1.2, Н 1.3	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S 4.1	
(can be added to figure above)		
Boundary of area within 150 ft of the wetland (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including	H 2.1, H 2.2, H 2.3	
polygons for accessible habitat and undisturbed habitat		
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

HGM Classification of Wetland in Eastern Washington

	For questions 1-4, the criteria described must apply to the entire unit being rated.
	If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.
1.	Does the entire unit meet both of the following criteria? The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size At least 30% of the open water area is deeper than 10 ft (3 m)
	NO – go to 2 🖌 🛛 YES – The wetland class is Lake Fringe (Lacustrine Fringe)
2.	 Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (<i>slope can be very gradual</i>), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks; The water leaves the wetland without being impounded.
	NO - go to 3 YES – The wetland class is Slope NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).
3.	 Does the entire wetland unit meet all of the following criteria? The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river; The overbank flooding occurs at least once every 10 years.
	NO - go to 4 YES – The wetland class is Riverine NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.
4.	Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. <i>This means that any outlet, if present, is higher than the interior of the wetland.</i>

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

Wetland Rating System for Eastern WA: 2014 Update Rating Form – Effective January 1, 2015

NO – go to 5

VES – The wetland class is **Depressional**

NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the wetland unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM Class to use in rating	
Slope + Riverine	Riverine	
Slope + Depressional	Depressional	
Slope + Lake Fringe	Lake Fringe	
Depressional + Riverine (the riverine portion is within	Depressional	
the boundary of depression)		
Depressional + Lake Fringe	Depressional	
Riverine + Lake Fringe	Riverine	

If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as Depressional for the rating.

DEPRESSIONAL WETLANDS Water Quality Functions - Indicators that the site functions to improve water quality	Points (only 1 score per box)
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: points = 5 Wetland has no surface water outlet points = 5 Wetland has an intermittently flowing outlet points = 3 Wetland has a highly constricted permanently flowing outlet points = 3 Wetland has a permanently flowing, unconstricted, surface outlet points = 1 D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions of soils)	3
YES = 3 NO = 0VES = 3 NO = 0D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)Wetland has persistent, ungrazed, vegetation for $>^2/_3$ of areapoints = 5Wetland has persistent, ungrazed, vegetation from $^1/_3$ to $^2/_3$ of areapoints = 3Wetland has persistent, ungrazed vegetation from $^1/_{10}$ to $<^1/_3$ of areapoints = 1Wetland has persistent, ungrazed vegetation $<^1/_{10}$ of areapoints = 0	5
D 1.4. Characteristics of seasonal ponding or inundation:This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.Area seasonally ponded is > ½ total area of wetlandArea seasonally ponded is ¼ - ½ total area of wetlandArea seasonally ponded is ¼ - ½ total area of wetlandArea seasonally ponded is < ¼ total area of wetland	1
Total for D 1Add the points in the boxes above	9
Rating of Site Potential If score is: 12-16 = H Image: 6-11 = M 0-5 = L Record the rating on the standard stan	ie first page
D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?Yes = 1No = 0D 2.3. Are there septic systems within 250 ft of the wetland?Yes = 1No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1- D 2.3? SourceYes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2
Rating of Landscape Potential If score is B or 4 = H I or 2 = M 0 = L Record the rating on the standard	ie first page
D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (<i>answer YES if there is a TMDL for the drainage or basin in which the wetland is found</i>)? Yes = 2 No = 0	2
Total for D 3 Add the points in the boxes above	4

DEPRESSIONAL WETLANDS Hydrologic Functions - Indicators that the site functions to reduce flooding and erosion.		
D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. <u>Characteristics of surface water outflows from the wetland</u> : Wetland has no surface water outlet p Wetland has an intermittently flowing outlet premanently flowing outlet p Wetland has a highly constricted permanently flowing outlet p	points = 8 points = 4 points = 4	4
Wetland has a permanently flowing unconstricted surface outlet points = 0 (If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing") points = 0		
 D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry). Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding. The wetland is a headwater wetland seasonal ponding: 1 ft - < 2 ft Estimated, as we could not access directly Seasonal ponding: 6 in - < 1 ft 	for points = 8 points = 6 points = 4 points = 4 points = 2	4
Seasonal ponding: < 6 in or wetland has only saturated soils p	points = 0	
Total for D 4 Add the points in the box	kes above	8
Rating of Site Potential If score is: 12-16 = H 🗹 6-11 = M0-5 = L Record the re	ating on th	ie first page

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?			
D 5.1. Does the wetland receive stormwater discharges? From culvert below RR Yes = 1 No = 0			
D 5.2. Is > 10% of the area within 150 ft of the wetland in a land use that generates runoff? Yes = 1 No = 0			
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses? Yes = 1 No = 0			
Total for D 5 Add the points in the boxes above			
Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the			

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
 D 6.1. <u>The wetland is in a landscape that has flooding problems</u>. Choose the description that best matches conditions around the wetland being rated. <i>Do not add points</i>. <i>Choose the highest score if more than one condition is met</i>. The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds). AND 	0	
Flooding occurs in sub-basin that is immediately down-gradient of wetlandpoints = 2Surface flooding problems are in a sub-basin farther down-gradientpoints = 1The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. <b< td=""><td></td></b<>		
D 6.2. Has the site has been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0		
Total for D 6 Add the points in the boxes above		

Rating of Value If score is 2-4 = H 1 = M 0 = L

Record the rating on the first page

These questions apply to wetlands of all HGM classes.		
H 1.0. Does the wetland have the potential to provide habitat for many species?	DOX)	
H 1.1. Structure of the plant community: Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is >= ¼ ac or >= 10% of the wetland if wetland is < 2.5 ac. ✓Aquatic bed	2	
Emergent plants 0-12 in (0-30 cm) high are the highest layer and have > 30% cover Emergent plants >12-40 in (>30-100 cm) high are the highest layer with >30% cover Emergent plants > 40 in (> 100 cm) high are the highest layer with >30% cover Scrub-shrub (areas where shrubs have >30% cover) 4 or more checks: points = 3		
Forested (areas where trees have >30% cover) 3 checks: points = 2 2 checks: points = 1 1 check: points = 0		
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	1	
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac OR 10% of its area during the March to early June OR in August to the end of September? Answer YES for Lake Fringe wetlands. Yes = 3 points & go to H 1.4 NO = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? Answer yes only if H 1.3.1 is No. Measured at 11% Yes = 3	3	
H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft ² . Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk) # of species 15 Scoring: 9 species: points = 1 < 4 species: points = 0	2	
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.	Figure	
None = 0 points Low = 1 point Moderate = 2 points	2	
All three diagrams in this row are High = 3 points		

H 1.6. Special habitat features	3
Check the habitat features that are present in the wetland. The number of checks is the number of points.	0
Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface	
ponding or in stream.	
Cattails or bulrushes are present within the wetland.	
Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge.	
Emergent or shrub vegetation in areas that are permanently inundated/ponded.	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree	
slope) OR signs of recent beaver activity	
✓ Invasive species cover less than 20% in each stratum of vegetation (canopy, sub-canopy, shrubs,	
herbaceous, moss/ground cover)	
Total for H 1Add the points in the boxes above	13

Rating of Site Potential If score is: 15-18 = H 1-7-14 = M 0-6 = L Record the rating on the first page

H 2.0. Does the landscape have the potential to support habitat functions of the site?		
H 2.1. Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is:	0	
<i>Calculate:</i> % undisturbed habitat 0_{+} + [(% moderate and low intensity land uses)/2] $0.25 = 0.25_{-}$ %		
> ¹ / ₃ (33.3%) of 1 km Polygon points = 3		
20-33% of 1km Polygon points = 2		
10-19% of 1km Polygon points = 1		
<10% of 1km Polygon (points = 0)		
H 2.2. Undisturbed habitat in 1 km Polygon around wetland.	1	
<i>Calculate:</i> % undisturbed habitat $\frac{13.7}{10.7}$ + [(% moderate and low intensity land uses)/2] $\frac{6.5}{10.7}$ = $\frac{20.2}{10.7}$ %		
Undisturbed habitat > 50% of Polygon points = 3		
Undisturbed habitat 10 - 50% and in 1-3 patches points = 2		
Undisturbed habitat 10 - 50% and > 3 patches points = 1		
Undisturbed habitat < 10% of Polygon points = 0		
H 2.3. Land use intensity in 1 km Polygon:	-2	
> 50% of Polygon is high intensity land use points = (- 2)		
Does not meet criterion above points = 0		
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by		
irrigation practices, dams, or water control structures. Generally, this means outside boundaries of		
reclamation areas, irrigation districts, or reservoirs Yes = 3 No = 0		
Total for H 2 Add the points in the boxes above	-1	
Rating of Landscape Potential If score is 4-9 = H 1-3 = M 1-3 = M 1-3 = K Record the rating on the first page		

H 3.0. Is the habitat provided by the site valuable to society? H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose the highest score 1 that applies to the wetland being rated Site meets ANY of the following criteria: points = 2— It has 3 or more priority habitats within 100 m (see Appendix B) - It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) - It is mapped as a location for an individual WDFW species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources — It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) points = 1 Site does not meet any of the criteria above points = 0

Rating of Value	If score is:	2 = H	~	1 = M		0 = L
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Record the rating on the first page

Appendix B: WDFW Priority Habitats in Eastern Washington

<u>Pric</u> four <u>httr</u> <u>httr</u>	ority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be nd, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. o://wdfw.wa.gov/publications/00165/wdfw00165.pdf or access the list from here: o://wdfw.wa.gov/conservation/phs/list/)
Cou of ti	In thow many of the following priority habitats are within 330 ft (100 m) of the wetland: NOTE: This question is independent the land use between the wetland and the priority habitat. Aspen Stands: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
	Biodiversity Areas and Corridors : Areas of habitat that are relatively important to various species of native fish and wildlife (<i>full descriptions in WDFW PHS report</i>).
	Old-growth/Mature forests: <u>Old-growth east of Cascade crest –</u> Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. <u>Mature forests –</u> Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.
	Oregon White Oak: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS report p. 158 – see web link above</i>).
	Riparian : The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
	Instream: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
	Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
_	Cliffs: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
	Talus: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
	Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 12 in (30 cm)in eastern Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
	Shrub-steppe: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).
	Eastside Steppe: Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (<i>Pseudoroegneria spicata</i>) is often the prevailing cover component along with Idaho fescue (<i>Festuca idahoensis</i>), Sandberg bluegrass (<i>Poa secunda</i>), rough fescue (<i>F. campestris</i>), or needlegrasses (<i>Achnatherum</i> spp.).
	Juniper Savannah: All juniper woodlands.
Not else	e: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed where.
We Effe App	tland Rating System for Eastern WA: 2014 Update 1 ective January 1, 2015 bendix B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All wetlands should also be characterized based on their functions.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	
SC 1.0. Vernal pools Is the wetland less than 4000 ft ² , and does it meet at least two of the following criteria? Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input. Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool. The soil in the wetland is shallow [< 1 ft (30 cm)deep] and is underlain by an impermeable layer such as basalt or clay.	NA
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)? Yes = Category II No = Category III	Cat. II Cat. III
SC 2.0. Alkali wetlands	
Does the wetland meet one of the following criteria? The wetland has a conductivity > 3.0 mS/cm. The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems). If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt. OR does the wetland unit meet two of the following three sub-criteria?	
Salt encrustations around more than 75% of the edge of the wetland	
More than ¾ of the plant cover consists of species listed on Table 4 A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. Yes = Category I No= Not an alkali wetland	Cat. I
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 3.2 No – Go to SC 3.3 SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I Yes = Category I No = Not a WHCV SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf Yes – Contact WNHP/WDNR and go to SC 3.4 No = Not a WHCV SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and it is listed on their website? Yes = Category I No =Not a WHCV	Cat. I NA

SC 4.0 Bogs and Calcareous Fens		
Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or		
calcareous fens? Use the key below to identify if the wetland is a bog or calcareous fen. If you answer yes		
you will still need to rate the wetland based on its functions.		
SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or		
mucks, that compose 16 in or more of the first 32 in of the soil profile? See Appendix C for a field key to		
<i>identify organic soils.</i> Yes – Go to SC 4.3 No – Go to SC 4.2		
SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over		
bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or		
pond? Yes – Go to SC 4.3 No = Is not a bog for rating		
SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of		
the total plant cover consists of species in Table 5? Yes = Category I bog No – Go to SC 4.4		
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion		
by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0		
and the plant species in Table 5 are present, the wetland is a bog.		
SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western		
hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species	Cat I	
(or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?	Cut. I	
Yes = Category I bog No – Go to SC 4.5		
SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and		
mucks? Yes = Is a Calcareous Fen for purpose of rating No – Go to SC 4.6		
SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks,		
AND one of the two following conditions is met:		
Marl deposits [calcium carbonate (CaCO ₃) precipitate] occur on the soil surface or plant stems	Cat. I	
\square The pH of free water is \geq 6.8 AND electrical conductivity is \geq 200 uS/cm at multiple locations within the		
wetland Yes = Is a Category I calcareous fen No = Is not a calcareous fen		

SC 5.0. Forested Wetlands	
Does the wetland have an area of forest rooted within its boundary that meets at least one of	
the following three criteria? (Continue only if you have identified that a forested class is present	
i <u>n q</u> uestion H 1.1)	
The wetland is within the 100 year floodplain of a river or stream	
Aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species	
L-IThere is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or	
"old-growth" according to the definitions for these priority habitats developed by WDFW	
(see definitions in question H3.1)	
Yes – Go to SC 5.1 No = Not a forested wetland with special characteristics	
SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow	Cat. I
growing pative trees (see Table 7)? $Vac = Category I. No. Cate SC C 2$	
fes = Category I No - Go to SC 5.2	
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover	Cat. I
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I No – Go to SC 5.2 Yes = Category I No – Go to SC 5.3	Cat. I
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I No – Go to SC 5.3 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by	Cat. I Cat. II
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I NO - Go to SC 5.2 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)? Yes = Category I NO - Go to SC 5.3	Cat. I Cat. II
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I NO - Go to SC 5.2 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)? Yes = Category I NO - Go to SC 5.3 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category I NO - Go to SC 5.4	Cat. I Cat. II Cat. II
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I No – Go to SC 5.2 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)? Yes = Category I No – Go to SC 5.3 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category II No – Go to SC 5.4	Cat. I Cat. II Cat. II
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I No – Go to SC 5.3 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)? Yes = Category I No – Go to SC 5.3 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category II No – Go to SC 5.4 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category II No = Not a forested wetland with special characteristics Category of wetland based on Special Characteristics Yes = Category II No = Not a forested wetland with special characteristics	Cat. I Cat. II Cat. II
SC 5.2. Does the wetland have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species? Yes = Category I No – Go to SC 5.2 SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (<i>see Table 7</i>)? Yes = Category I No – Go to SC 5.3 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category II No – Go to SC 5.4 SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream? Yes = Category II No = Not a forested wetland with special characteristics Category of wetland based on Special Characteristics Choose the highest rating if wetland falls into several categories	Cat. I Cat. II Cat. II

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